The Effect of Relationship Learning in Driving Green Innovation, Green Customer Capital and Firm's Competitive Advantage

Sri Juniati[#1], Obsatar Sinaga[2], Kharisya Ayu Effendi[#3], Aimi Zulhazmi Abdul Rashid[4]
[#]Widyatama University
[1]Sri.juniati@widyatama.ac.id
[2]Padjajaran University
[2]Obsatar.sinaga@padjajaran.ac.id
[3]Kharisya.ayu@widyatama.ac.id
[*]Universiti Kuala Lumpur
[4]*aimizulhazmi@unikl.edu.my*

***Abstract*— In this study we are utilizing the advanced methodology of PLS-SEM, the motivation of the current study is to explore the role of relationship learning in driving Malaysian manufacturing industry's prospect of green innovation, customer capital and competitiveness. The selection of the sampled industry is done that established that auto-manufacturing sector possesses higher knowledge intensity, invention & customer driven. Hence, in order to collect sample, the study opted 165 organizations within the industry by sending the questionnaire to the various outlets in all fourteen states of Malaysia. The results of PLS-SEM confirm that green product innovation, green process innovation and green customer capital have significantly and positively influenced by relationship learning. Moreover, the results of structural equation modelling also confirm that, green process innovation has significant and positive effect on green customer capital. However, green product innovation has also a positive and significant impact on green customer capital. Finally, the results further prescribed that green customer capital has a positive and significant effect on competitive advantage. The ultimate model clarifies 57.28% change of competitive advantage by the four factors that are relationship learning, green product innovation, green process innovation and green customer capital.**

***Keywords*—** *Relationship learning, green innovation, green customer capital, competitive advantage.*

1. Introduction

The rise of green business evolution enable organization to contribute in environmental performance and help reducing ecological pressures. The awareness regrading green practices emerged to play a critical role after the growing international regulations focusing on smart growth [1]. In the similar context, environmental management in also considered important due to inter-countries trade as a result of internationalization [2]. As the World is continuously progressing towards the age of information technology, the significance of green technological advancements has also witnessed increasing acceptance [3].

In the existing environmental era, green innovations have been regarded as the vital strategic tools of attaining sustainability in businesses and economies especially in the prevailing industrial revolution when the substantial allocation of organizations' capital is consumed for safeguarding sustainability [4]. In this regard, the aspect of going green is getting popular in both corporate practices and economic development. As businesses are encouraging green management and green innovation, the economies are also striving to convert their selves from *brown* fossil-fuel based operations to *green* low-carbon methods. Hence the label 'green' designate that companies are motivated for bringing ecological sustainability through eco-innovations for enhancing firm's performance and competitive advantage [5].

In organizations' transmission to green business, the role of green customer capital is noteworthy. The allocation of green customer capital may assist the organizations in ensuring sustainability [6]. Along with human & structural capital, customer capital is often regarded as the crucial driver of firm's competitiveness and performance. It is therefore considered as the viral form of organizations' intellectual capital for linking the critical association between the organizations and its consumers [7]-[8]. At present, there exists the rising demand in customers and society at large for sustainable goods and services [1]-[9]. This stimulates the interest in businesses for augmenting organizations' flexibility and responsiveness towards consumers' demand. Hence, the frequency of organizations that consider themselves accountable for ensuring environmental sustainability by causing minimum damage to atmosphere is increasing due to enhanced societal pressure [4]. Similarly, governments are also exerting higher pressure on firms to curtail the adversity in business operations that is causing them to alter their conventional methods and encouraging to retort customer's societal concerns.

In compliance to the prevailing adversity in the environment due to rising degradation and global warming, organizations are prone to adopt preventive strategies to curtail the negative effects on the atmosphere. The use of technological inventions in this regard are considered an efficient way of executing environmental management. The rising efficiencies

Copyright © ExcelingTech Pub, UK (http://excelingtech.co.uk/)

resulted from green innovations not only helped organizations to respond to consumers' increasing demand for sustainable products and services but also present the organizations a change to attain cost conservation, new market segments and profitability [10]. This enhanced firm's economic, environmental and social performance, thereby augments organizational competitiveness [5].

Acknowledging the importance of information sharing in modern businesses, innovation and customer responsiveness are the prime forces of bringing competitive advantage [11]. However, efficient innovation is influenced by numerous ecological and contextual aspects [12], [13]. Among them, relationship learning is exemplary to compliment innovations. In the existing literature, many studies stated that relationship learning is the prime driver of innovation and customer capital [14]. Focusing on environmental aspect, [15] asserted that trusting on relationship learning mechanisms substantially impact the achievement of green innovation leading to impact green customer capital. By definition, relationship learning is a course of collaborating knowledge, experiences and information with organizations stake holders including consumers, partners, suppliers, shareholders etc. Hence, to advance invention in business operations, organizations are encouraged to involve in flourishing learning environment with the objective of improved innovation competences within the domain of technical modifications and upsurge international competitiveness [16].

Given the significance of relationship learning in driving green innovations and green customer capital, the present study aims to explore the impact of relationship learning in enhancing the green product innovation, green process innovation and green customer capital in Malaysia. Furthermore, the authors extended the domains of present investigation to examine how green customer capital influence firm's competitive advantage. Utilizing the advanced methodology of PLS-SEM, the motivation of the current study is to explore the role of relationship learning in driving Malaysian manufacturing industry's prospect of green innovation, customer capital and competitiveness. The results obtained from such exhaustive investigation will enable organizations to learn the importance of knowledge association and collaborating efforts to ensure sustainable innovations, organizational responsiveness and firm's competitive advantages.

The rest of the current study is structured as follow. Section two sheds the light on academic literature regarding relationship management, green innovation, customer capital and competitive advantages that lead to form the hypothesis development. It is followed by section three that elaborate instrument development and utilized measures information. Section four displayed data analysis and interpret the derived results and finally, section five concludes the results and provide future recommendations.

2. Literature review and hypotheses development

The theoretical rudiments of Organizational learning theory assert on the significance of information sharing resulted from prior organizational experiences that enhanced firm's knowledge related to customer demands, technological expertise and market intellect [17]. Many studies signify the importance of relationship learning in driving innovation in general [14] and green innovation in particular [18]. Hence the novelty of relationship learning in driving green innovation is considered eminent to bring positive influence in organizational sustainability prospect. At present, many companies are working on integrative efforts of mutual knowledge sharing with organizational stake holders. This enable firms to originate organizational value and competitiveness [19]. In theory, the crucial role of relationship is initially introduced in the studies of [20]-[21] that hypothesized associations as the jointly focused interface among two or more mutually devoted partners. After that the importance of relationship in evaluating association of businesses with its stake holders is regarded as the novel domain of interest.

Explaining the role of relationship learning, [22] referred it as a mutual process that involves efforts of two parties to generate greater value compared to the individual outcomes. Hence, relationship learning is a method of creating knowledge spillovers by combined efforts among business stakeholders. In this regard, [23] stated that in order to maintain efficient relations, organizations are required to position strategic alliances, joint ventures, R&D consortia, partnerships & inter-firm networks. This will enable firms to expand their existing skill set and generate superior expertise that stimulate inventive methods and advancements.

Considering the emerging acceptance of green innovation, relationship learning is used as a tool of stimulating green innovation. This include adoption of strategically inventive applications in organizational processing and product development. The aspect of green innovation was initiated from the study of [24] that defined it as the process of initiating and implementing fresh and inventive methods, procedures, systems, goods and technologies to avert or reduce ecological pressures. Hence, with superior learning management, firms can be in a better position to implement green innovation through widespread expertise and skills proficiency. In this regard the influence of learning relationship is vital to stimulate green innovation.

In this regard, [25] examined 112 auto-manufacturing firms of Spain to investigate the impact of ecological management and innovation. The result of the study suggested that relationship learning play a significant role in driving green innovation. In particular, the authors reported that greater knowledge sharing in businesses encourage the aspect of green innovation and helps in ensuring organizational sustainable prospect. Similarly, In Taiwan, [16] also investigated the contribution of relationship learning in driving green

innovation. Applying Structural Equation Modeling (SEM) approach, the findings of the study concluded that relationship learning exerted significant positive influence on organizational green innovation performance. In addition, [26] also established that green relationship learning simplifies environmental management and thus bring positive impact on green innovation.

Therefore, identifying the importance of relationship management in stimulating sustainability and innovation, the preset study hypothesizes that,

Hypothesis 1: Relationship learning is significant to influence Green product innovation.
Hypothesis 2: Relationship Learning is significant to influence Green process innovation.

Enhance learning culture in organizations strengthen organizational awareness regarding customer needs and expectations. Modern businesses largely rely on customer satisfaction as it drives organizational performance and competitiveness. Emphasizing on the importance of relationship learning is [27] stated that customer capital largely depends on organizational ability to manage customers relationship to achieve improved loyalty and gratification [28]. Hence the motive behind customer management is to generate the customer driven organizational image [29]. In the similar vein, customer capital envelops a solid part of learning about firms' consumers that increments when client connections are made and kept up throughout the years. In this regard, organizations are required to comprehend the ideal way of responding with customers' expectations to augment their loyalty and stimulate competitiveness.

Many studies in past have assessed the dynamic association of customer capital and what drives improvement to strengthen customer satisfaction and organizational competitiveness. In this regard, Chen, (2008) assessed the role of relationship learning in improving green intellectual capital. Focusing on the environmental aspect, [30] analyzed how learning relationship can improve green customer capital. The results of the study identify that improvement in organizational propensity to share and encourage learning among stakeholders brought positive impact on green customer capital. More recently, similar results are derived from the study of [6]. Hence, we hypothesized that;

Hypothesis 3: Relationship learning is significant to influence green customer capital.

Improvement in innovations drives customer capital. In similar vein, green innovation strengthens organizational responsiveness towards customers' growing need of sustainable products and therefore stimulate green customer capital. With the rising environmental pressures, organizations are striving to obtain green label. In doing so, companies are striving to assimilate green innovation to improve organizational image and thereby customer capital. In this regard, [30] investigated the connection between green innovation and customer capital. The outcomes of the study highlighted that green innovation drive customer capital and improve competitive advantage. The results of the study also concluded that green innovation mediated the association between relationship learning and customer capital. The results of the study were found consistent with the work of [6] that analyzed the association of green innovation with green customer capital. Therefore, based on the above discussion, the current study aims to test the following hypothesis.

Hypothesis 4: Green product innovation is significant to influence green customer capital
Hypothesis 5: Green process innovation is significant to influence green customer capital

The generation, improvement, and sustenance of efficient connections among firms and consumers require the need of identifying hared ecological concerns. In this regard, companies with greater adaptability towards environmental existing condition help to gain flexibility in its image and thereby considered more responsible [6]. This enhance organizational attractiveness among society and customers and improve firm's performance and competitiveness. In this regard, the allocation of organizational capital for environmental improvement softens organizational image and positively influence green customer capital enabling it to generate greater responsiveness and relationship with environment enhancing its competitive advantage. In this regard, [27] established that customers' influence on present & upcoming revenues is essential to evaluate its influence in gaining sustainable competitive advantage. Considering customer capital is driven by efficient customer relationship management, [31] also stressed that improved relationship management augments customer satisfaction and helped in achieving competitive advantage. Likewise, [32] also concluded that intellectual capital in the form of human, structural and customer capital enhanced organizational competitiveness. Hence, in the light of above, we hypothesize that;

Hypothesis 6: Green customer capital is significant to influence Firm's competitive advantage.

Presented in figure 1 is the research model of the current study.

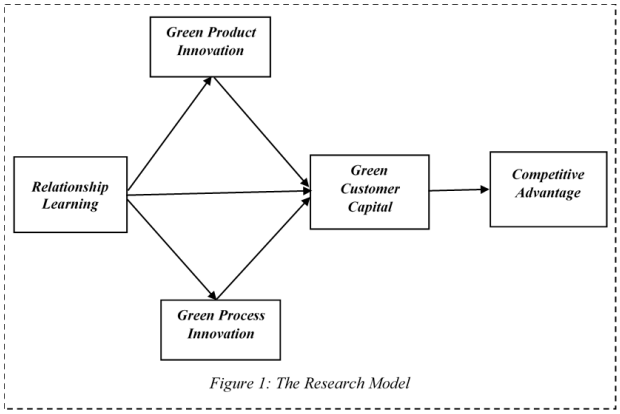

Figure 1: The Research Model

3. Methodology

3.1. Measures:

The current study examined the contribution of relationship learning in driving green innovation, green customer capital and competitive advantage. In doing so, the analysis tests the hypothesized model displayed in Fig. 1. The properties of the sampled dynamics are investigated by utilizing the Likert scale indicating 5 (Strongly Agree) to 1 (Strongly Disagree). In total, the present analysis utilized five dynamics to be investigated. They include relationship learning (RLR), green product innovation (GPD), green process innovation (GPR), green customer capital (GCC) and competitive advantage (COM). The study applied in total 20 items including four items of RLR adapted from the study of [22], four items of GCC adapted from [33]. For measuring green innovation, eight measures of GPD and GPR are adopted from the study of Chen et al., (2006). Finally, the study utilized four measures COM adopted from the study of [7].

3.2. Data Collection and Sample

The process of data collection in the present study is performed by collecting data from the automobile manufacturing companies of Malaysia. The selection of the sampled industry is done by following [6] that established that auto-manufacturing sector possesses higher knowledge intensity, invention & customer driven. Hence, in order to collect sample, the study opted 165 organizations within the industry by sending the questionnaire to the various outlets in all fourteen states of Malaysia. For greater reception, the questionnaire is selected to be written in English language and sent to the selected auto-manufacturing firms. As a result, a total of 630 questionnaire were sent using both soft copy and hard copy of the questionnaires. The process of data collection took a period of total five months and received 258 managers responses with the response rate of 41%.

4. Data Analysis

The data estimations of the current study are completed by using the SmartPLS Version 3.2.8 [34] and Statistical Package for Social Sciences (V-23). The ultimate data sample utilized in the current study is 250 in light of clearing univariate and multivariate outliers. The methodologies for recognizing of univariate and multivariate outliers are Z-test score and Mahalanobis remove (D2) by using Statistical Package for Social Sciences and the remaining of the data analysis is done by using SmartPLS. Presented Table 1 is the organization and structure of the potential answers of the gathered sample utilized in this study. Furthermore, Table 2 explain the mean, standard deviation and Pearson's Correlation of the variables utilized in the current study. Additionally, to detect the problem of multicollinearity, the current analysis using [35] argued that the majority of the attributes in the Pearson's Correlation establishment should less than 0.90 [36]. Therefore, affirm the nonappearance of multicollinearity among the variables [35]-[37]-[38].

Table-1: Descriptive Statistics

Gender			
		Frequency	Percent
Valid	Female	98	39%
	Male	151	61%
	Total	249	100%
Age			
		Frequency	Percent
Valid	20-30 years	37	15%
	31-40 years	139	56%
	41-50 years	26	10%
	51 and above	48	19%
	Total	250	100%
Working Experience			
		Frequency	Percent
Valid	1-5 years	136	54%
	6-10 years	53	21%
	11-15 years	35	14%
	More than 15 years	26	10%
	Total	250	100%
Education			
		Frequency	Percent
Valid	Undergraduate	37	15%
	Graduate	171	68%
	Post Graduate	7	3%
	Others	35	14%
	Total	250	100%
Source: Authors Estimation			

Table-2: Means, Standard Deviations, Pearson Correlations							
	MEAN	**SD**	**RLR**	**GPR**	**GPD**	**GCC**	**COM**
RLR	3.78	1.12	-				
GPR	3.09	1.08	0.40*	-			
GPD	4.12	1.03	0.41*	0.38*	-		
GCC	3.89	1.29	0.39*	0.41*	0.40*	-	
COM	3.91	1.00	0.38*	0.37*	0.42*	0.35*	-
N=300							
* Correlation is significant at the 0.01 level (2-tailed).							

Content validity is guaranteed if the items using in the study loads with maximum value in their particular factors then other items introduced in the model, while inner consistency reliability is accomplished if the estimation of composite reliability and Cronbach's alpha surpasses 0.7 [39]-[40]-[41]. Factor loadings, composite reliability, composite reliability and average variance extracted concise in Table 3 demonstrates that the majority of the items are higher loadings (more than 0.7) in their separate factors and fulfilling the expressed thresholds of above-mentioned internal consistency.

Table-3: Measurement Model Results					
		Factor Loadings	**Cα**	**CR**	**AVE**
Relationship Learning	RLR1	0.884	0.852	0.883	0.683
	RLR2	0.864			
	RLR3	0.884			
	RLR4	0.831			
Green Process Innovation	GPR1	0.829	0.873	0.891	0.701
	GPR2	0.853			
	GPR3	0.892			
	GPR4	0.804			
Green Product Innovation	GPD1	0.841	0.783	0.842	0.674
	GPD2	0.783			
	GDP3	0.801			
	GDP4	0.774			
Green Customer Capital	GCC1	0.893	0.772	0.831	0.652
	GCC2	0.801			
	GCC3	0.773			
	GCC4	0.824			
Competitive Advantage	COM1	0.823	0.801	0.854	0.683
	COM2	0.842			
	COM3	0.855			
	COM4	0.822			
Source: Authors Estimation					

Furthermore, convergent validity mentions to how much items of a specific factor combine and loaded to a similar factor where they proposed to be loaded [42]-[43]. In this investigation, convergent validity is confirmed by looking at the AVE for each factor [44]. They give cut off value of more than and equivalent to 0.5 for building up the convergent validity. Along these lines AVE in Table 3 is confirming the essential standards.

Table-4: Discriminant validity Fornell-Larcker criterion					
	RLR	**GPR**	**GPD**	**GCC**	**COM**
RLR	*0.826*				
GPR	0.458	*0.837*			
GPD	0.372	0.461	*0.821*		
GCC	0.582	0.372	0.471	*0.807*	
COM	0.424	0.562	0.482	0.561	*0.826*
Source: Authors Estimation					

Table-5: Results of Loadings and Cross Loadings					
Variables	**RLR**	**GPR**	**GPD**	**GCC**	**COM**
Relationship Learning	0.884	0.374	0.372	0.213	0.328
	0.864	0.372	0.214	0.321	0.185
	0.884	0.284	0.342	0.289	0.296
	0.831	0.593	0.532	0.349	0.309
Green Process Innovation	0.532	0.829	0.316	0.266	0.184
	0.324	0.853	0.446	0.564	0.385
	0.281	0.892	0.473	0.492	0.362
	0.185	0.804	0.240	0.362	0.471
Green Product Innovation	0.385	0.351	0.841	0.274	0.422
	0.491	0.380	0.783	0.301	0.500
	0.185	0.275	0.801	0.276	0.341
	0.287	0.361	0.774	0.185	0.481
Green Customer Capital	0.462	0.348	0.195	0.893	0.336
	0.385	0.386	0.285	0.801	0.362
	0.362	0.464	0.512	0.773	0.418
	0.290	0.501	0.375	0.824	0.395
Competitive Advantage	0.184	0.341	0.194	0.335	0.823
	0.204	0.325	0.216	0.421	0.842
	0.374	0.453	0.319	0.389	0.855
	0.125	0.428	0.402	0.447	0.822
Source: Authors Estimation					

In the next step, discriminant validity is disclosed as how much the items of a specific single factor is unique and discriminant from alternate factors [45]-[46]. As per [44], the discriminant validity is said to be built up if the square root of average variance extracted surpasses the pair wise connections of the covert factor. As appeared Table 4, inclining italic values are the square root of the average variance extracted which is surpassing the off inclining qualities which are the pair wise connections of each factors (which are RLR, GPR, GPD, GCC and COM). The Table 5 shows the consider loadings separate and different factors thus confirming the cut off benchmark. Likewise, the discriminant validity is additionally affirmed if the Hetro Trait and Mono Trait proportion is under 0.85 as recommended by [15]-[47]. The outcomes in Table 6 uncovered that all factors have Discriminant validity.

Table-6: Results of HTMT Ratio of Correlations					
	RLR	**GPR**	**GPD**	**GCC**	**COM**
RLR					
GPR	0.562				
GPD	0.235	0.765			
GCC	0.465	0.237	0.658		
COM	0.673	0.489	0.592	0.701	
Source: Authors Estimation					

Finally, in partial least square technique, basic model and hypotheses were tested by figuring path coefficients [48]-[49]. As per [44] suggestions, a bootstrapping strategy utilizing 1000 sub-sample was made to gauge the measurable significance of all path beta. This is likewise the principle of Smart-PLS programming. Table 7 uncovers path beta coefficients alongside their noteworthiness values.

Table-7: Results of Path Coefficients				
Hypothesized	**Beta**	**T stats**	**P-Values**	**Remarks**
GPD ← RLR	0.384	5.004	0.000	Supported
GPR ← RLR	0.401	8.356	0.000	Supported
GCC ← RLR	0.436	3.635	0.000	Supported
GCC ← GPR	0.274	6.929	0.000	Supported
GCC ← GPD	0.392	4.944	0.000	Supported
COM ← GCC	0.531	2.478	0.014	Supported
Note: Level of Significance (5% i.e. 0.050)				
Source: Authors Estimation				

Table 7 depicted the result of structural equation modelling, regression path coefficient, t-statistics, value of significance and the remarks related to hypothesized path. The results of investigation clarify that green product innovation (β= 0.384, $p<0.000$), green process innovation (β= 0.401, $p<0.000$) and green customer capital (β= 0.436, $p<0.000$) have significantly and positively influenced by relationship learning thus confirming **H1, H2** and **H3**. Moreover, the results of structural equation modelling also confirm that, green process innovation (β= 0.274, $p<0.000$) has significant and positive effect on green customer capital therefore confirming hypothesis **H4**. However, green product innovation (β= 0.392, $p<0.000$) has also a positive and significant impact on green customer capital therefore confirming **H5**. Finally, the results further prescribed that green customer capital (β= 0.531, $p<0.000$) has a positive and significant effect on competitive advantage subsequently affirming the **H6**. The ultimate model clarifies 57.28% change of competitive advantage by the four factors that are relationship learning, green product innovation, green process innovation and green customer capital.

5. Discussion and Conclusion

The rise of green business evolution enable organization to contribute in environmental performance and help reducing ecological pressures. The awareness regrading green practices emerged to play a critical role after the growing international regulations focusing on smart growth. Also, the relationship learning is a course of collaborating knowledge, experiences and information with organizations stake holders including consumers, partners, suppliers, shareholders etc. Hence, to advance invention in business operations, organizations are encouraged to involve in flourishing learning environment with the objective of improved innovation competences within the domain of technical modifications and upsurge international competitiveness. Given the significance of relationship learning in driving green innovations and green customer capital, the present study aims to explore the impact of relationship learning in enhancing the green product innovation, green process innovation and green customer capital in Malaysia. Furthermore, the authors extended the domains of present investigation to examine how green customer capital influence firm's competitive advantage. Utilizing the advanced methodology of PLS-SEM, the motivation of the current study is to explore the role of relationship learning in driving Malaysian manufacturing industry's prospect of green innovation, customer capital and competitiveness.

The results of PLS-SEM confirm that green product innovation, green process innovation and green customer capital have significantly and positively influenced by relationship learning. Moreover, the results of structural equation modelling also confirm that, green process innovation has significant and positive effect on green customer capital. However, green product innovation has also a positive and significant impact on green customer capital. Finally, the results further prescribed that green customer capital has a positive and significant effect on competitive advantage. The ultimate model clarifies 57.28% change of competitive advantage by the four factors that are relationship learning, green product innovation, green process innovation and green customer capital.

References

[1]. Chen, Y.-S., & Chang, C.-H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision, 50*(3), 502–520.

[2]. Zhu, Q., Sarkis, J., & Lai, K. H. (2007). Initiatives and outcomes of green supply chain management implementation by Chinese manufacturers. *Journal of environmental management*, *85*(1), 179-189.

[3]. Chen, C. C., Shih, H. S., Shyur, H. J., & Wu, K. S. (2012). A business strategy selection of green supply chain management via an analytic network process. *Computers & Mathematics with Applications*, *64*(8), 2544-2557.

[4]. Chen, Y.-S., Lai, S.-B., & Wen, C.-T. (2006). The influence of green innovation performance on corporate advantage in Taiwan. *Journal of Business Ethics, 67*(4), 331–339.

[5]. Hojnik, J., Ruzzier, M., & Manolova, T. S. (2018). Internationalization and economic performance: The mediating role of eco-innovation. *Journal of Cleaner Production*, *171*, 1312-1323.

[6]. Albort-Morant, G., Martelo-Landroguez, S., & Leal-Rodríguez, A. L. (2018). Fostering a relationship learning context as a driver of green innovation performance and green customer capital. In *Sustainability in Innovation and Entrepreneurship* (pp. 11-29). Springer, Cham.

[7]. Chan, A. L.-C., & Wang, W.-Y. (2012). The causal relationships between aspects of customer capital. *Industrial Management & Data Systems*, *112*(6), 848–865.

[8]. Edvinsson, L., & Malone, M. S. (1997). *Intellectual capital: Realizing your Company's true value by finding its hidden roots*. New York: Harper Collin Publishers.

[9]. Chen, Y.-S., & Chang, C.-H. (2013). The determinants of green product development performance: Green dynamic capabilities, green transformational leadership, and green creativity. *Journal of Business Ethics*, *116*(1), 107–119.

[10]. Sarkar, A. N. (2013). Promoting eco-innovations to leverage sustainable development of eco-industry and green growth. *European Journal of Sustainable Development*, *2*(1), 171-224.

[11]. Daghfous, A. (2004). Absorptive capacity and the implementation of knowledge intensive best practices. S.A.M. Advanced Management Journal, 69(2), 21−27.

[12]. Roberts, P. W., & Amit, R. (2003). The dynamics of innovative activity and competitive advantage: The case of Australian retail banking, 1981 to 1995. Organization Science, 14(2), 107−122.

[13]. Roberts, K. (2003). What strategic investments should you make during a recession to gain competitive advantage in the recovery? Strategy & Leadership, 31–39(4), 31.

[14]. Leal-Rodríguez, A. L., Roldán, J. L., Ariza-Montes, J. A., & Leal-Millán, A. (2014). From potential absorptive capacity to innovation outcomes in project teams: The conditional mediating role of the realized absorptive capacity in a relational learning context. *International Journal of Project Management*, *32*(6), 894–907.

[15]. Saudi, M.H.M, Sinaga, O., & Jabarullah, N.H. (2019) The Role of Renewable, Non-renewable Energy Consumption and Technology Innovation in Testing Environmental Kuznets Curve in Malaysia, *International Journal of Energy Economics and Policy*, 9(1), 299-307.

[16]. Chen, Y. S., Lin, M. J. J., & Chang, C. H. (2009). The positive effects of relationship learning and absorptive capacity on innovation performance and competitive advantage in industrial markets. *Industrial Marketing Management*, *38*(2), 152-158.

[17]. Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative science quarterly*, 128-152.

[18]. Fang, S. R., Fang, S. C., Chou, C. H., Yang, S. M., & Tsai, F. S. (2011). Relationship learning and innovation: The role of relationship-specific memory. *Industrial Marketing Management, 40*(5), 743–753.

[19]. Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of marketing*, *68*(1), 1-17.

[20]. Hallen, L., Johanson, J., & Seyed-Mohamed, N. (1991). Interfirm adaptation in business relationships. *The Journal of Marketing*, 29-37.

[21]. Malimi, K. (2017). The Influence of Capital Adequacy, Profitability, and Loan Growth on Non-Performing Loans a Case of Tanzanian Banking Sector. International Journal of Economics, Business and Management Studies, 4(1), 38-49.

[22] Khan, S. N., & Ali, E. I. E. (2017). The Moderating Role of Intellectual Capital between Enterprise Risk Management and Firm Performance: A Conceptual Review. American Journal of Social Sciences and Humanities, 2(1), 9-15.

[23] Haque, S., & Chandio, J. A. Human Capital Flight in Pakistan: Strategies for Coping Brain Drain Situation. International Journal of Economics Business and Management Studies, 2(2), 75-82.

[24] Le, H. L., Vu, K. T., Du, N. K., & Tran, M. D. (2018). Impact of working capital management on financial performance: The case of Vietnam. International Journal of Applied Economics, Finance and Accounting, 3(1), 15-20.

[25] Amfani-Joe, C. E., Okonkwo, L., & Osagede, E. A. (2018). Socio-demographic Structures of Families as Predictors of Time Management by Working Housewives in the Federal Capital Territory (FCT), Abuja, Nigeria. International Journal of Social Sciences Perspectives, 3(1), 1-6.

[26] Jones Osasuyi, O., & Mwakipsile, G. (2017). Working Capital Management and Managerial Performance in some Selected Manufacturing Firms in Edo State Nigeria. Journal of Accounting, Business and Finance Research, 1(1), 46-55.

[27] Zhang, W. B. (2018). Endogenous Economic Growth with Education Subsidies. International Journal of Emerging Trends in Social Sciences, 2(1), 10-16.

[28]. Martelo Landroguez, S., Barroso Castro, C., & Cepeda-Carrión, G. (2011). Creating dynamic capabilities to increase customer value. *Management Decision*, *49*(7), 1141-1159.

[29]. Martelo, S., Barroso, C., & Cepeda, G. (2013). The use of organizational capabilities to increase customer value. *Journal of Business Research*, *66*(10), 2042-2050.

[30]. Leal-Millán, A., Roldán, J. L., Leal-Rodríguez, A. L., & Ortega-Gutiérrez, J. (2016). IT and relationship learning in networks as drivers of green innovation and customer capital: Evidence

from the automobile sector. *Journal of Knowledge Management*, *20*(3), 444–464.

[31]. Saeidi, S. P., Sofian, S., Saeidi, P., Saeidi, S. P., & Saaeidi, S. A. (2015). How does corporate social responsibility contribute to firm financial performance? The mediating role of competitive advantage, reputation, and customer satisfaction. *Journal of business research*, *68*(2), 341-350.

[32]. Riahi-Belkaoui, A. (2003). Intellectual capital and firm performance of US multinational firms: a study of the resource-based and stakeholder views. *Journal of Intellectual capital*, *4*(2), 215-226.

[33]. Chen, Y. S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of business ethics*, *77*(3), 271-286.

[34]. Ringle, C.M., Wende, S. and Becker, J.M. (2015) *SmartPLS 3*, SmartPLS GmbH, Boenningstedt [online] http://www.smartpls.com.

[35]. Hair Jr., J.F., Hult, G.T.M., Ringle, C. and Sarstedt, M. (2013) *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications, USA.

[36] Abdul Hadi, A., Hussain, H. I., Suryanto, T., & Yap, T. (2018). Bank's performance and its determinants: evidence from Middle East, Indian sub-continent and African banks. *Polish Journal of Management Studies*, *17*.

[37] Abdul Hadi, A., Zafar, S., Iqbal, T., Zafar, Z., & Iqbal Hussain, H. (2018). Analyzing sectorial level determinants of inward foreign direct investment (FDI) in ASEAN. *Polish Journal of Management Studies*, *17*.

[38] Ali, A., & Haseeb, M. (2019). Radio frequency identification (RFID) technology as a strategic tool towards higher performance of supply chain operations in textile and apparel industry of Malaysia. *Uncertain Supply Chain Management*, *7*(2), 215-226.

[39] Haseeb, M., Abidin, I. S. Z., Hye, Q. M. A., & Hartani, N. H. (2018). The Impact of Renewable Energy on Economic Well-Being of Malaysia: Fresh Evidence from Auto Regressive Distributed Lag Bound Testing Approach. *International Journal of Energy Economics and Policy*, *9*(1), 269-275.

[40] Hussain, H., Hadi, A., Mohamed-Isa, A., Salem, M., Kamarudin, F., & Jabarullah, N. (2018). Adjustment to target debt maturity and equity mispricing: Evidence from Asia Pacific. *Polish Journal of Management Studies*, *17*(2), 87-100.

[41] Khan, S., Busari, A., Abdullah, S., & Mughal, Y. (2018). Followership moderation between the relationship of transactional leadership style and employees reactions towards organizational change. *Polish Journal of Management Studies*, *17*.

[42] Suryanto, T., Haseeb, M., & Hartani, N. H. (2018). The Correlates of Developing Green Supply Chain Management Practices: Firms Level Analysis in Malaysia. *Int. J Sup. Chain. Mgt Vol*, *7*(5), 316.

[43] Suryanto, T., & Komalasari, A. (2019). Effect of mandatory adoption of international financial reporting standard (IFRS) on supply chain management: A case of Indonesian dairy industry. *Uncertain Supply Chain Management*, *7*(2), 169-178.

[44]. Frooghi, R., Waseem, S. N., Afshan, S., & Shah, Z. (2015). Effect of offline parent brand dimension on online trust, satisfaction and loyalty: In Context of Newspaper Industry. *Journal of Management Sciences*, *2*(2), 223-254.

[45]. Mehmood, S. M., & Najmi, A. (2017). Understanding the impact of service convenience on customer satisfaction in home delivery: evidence from Pakistan. *International Journal of Electronic Customer Relationship Management*, *11*(1), 23-43.

[46]. Fornell, C., & Larcker, D. F. (1981). Structural equation models with unobservable variables and measurement error: Algebra and statistics. *Journal of marketing research*, 18(3), 382-388.

[47]. Waseem, S. N., Frooghi, R., & Afshan, S. (2013). Impact of human resource management practices on teachers' performance: a mediating role of monitoring practices. *J. Educ. Soc. Sci*, *1*(2), 31-55.

[48]. Carmines, E. G., & Zeller, R. A. (1979). *Reliability and validity assessment* (Vol. 17). Sage publications.

[49]. Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, *43*(1), 115-135.