

THE RELATIONSHIP BETWEEN ORGANISATIONAL EFFICACY AND CORPORATE SUSTAINABILITY IN THE CONSTRUCTION INDUSTRY

MUSTAPHA, N. A.^{1*} – HASSAN, R.¹

¹ *Arshad Ayub Graduate Business School, Universiti Teknologi MARA, Selangor, Malaysia.*

**Corresponding author
e-mail: arfahmustapha[at]uitm.edu.my*

(Received 22nd April 2022; accepted 20th June 2022)

Abstract. There is a growing focus on sustainability across all domains of businesses. However, there is limited evidence on the relationships between organisational efficacy and corporate sustainability. A central question for researchers and practitioners is whether organisational efficacy can build corporate sustainability in construction industry. To address this question, the present study seeks to empirically explore the relationship between organisational efficacy and corporate sustainability. By drawing upon recent thinking in the strategy and sustainability management literature, this paper argues on the impact of organisational efficacy on corporate sustainability. Using survey data from 62 housing development organizations, respondents included executives in charge of sustainability management, such as owners or sustainability development managers. Questionnaires (and an accompanying letter with survey details and contact information on the researchers) were sent through email by linking an online survey to the targeted respondents, and by applying structural equation modelling (SEM). Outcomes suggest that organisational efficacy enhances corporate sustainability. Respondents responded to 64 items that were adapted and adopted from previous researchers listed in the questionnaire. The study proposes that a corporate sustainability framework, which were developed and tested, are valid and reliable. The findings show that organisational efficacy and corporate sustainability are positively significant and all variables are formative constructs. The corporate sustainability framework may be used by organisations to assess and monitor the practices. A principal contribution of this study is empirically developed and has tested the corporate sustainability framework based on the elements of triple bottom line approach. As it stands, the investigation provides a foundation for further research, offering opportunities for updates, amendments and refinements.

Keywords: *organisational efficacy, corporate sustainability, construction industry, management*

Introduction

Corporate sustainability is a new and evolving corporate management paradigm, which is used deliberately as an alternative to the traditional growth and profit-maximization model (Meuer et al., 2020; Wilson, 2003). More often than not, these companies maintain their corporate sustainability management efficiently by relying on their corporate culture and substantial business logic. Corporate sustainability identifies that corporate growth and profitability are important. Therefore it requires the firm to pursue the triple bottom line concept; economic, social and environmental development stage by Sanchez-Planelles et al. (2021) and Ahmad et al. (2011). Past literature reviews suggest that the concept of corporate sustainability uses elements from other established concept; sustainable development, corporate social responsibility, stakeholder theory and corporate accountability theory (Wilson, 2003). However, according to Steger et al. (2007), corporate sustainability is not only about mere compliance to the law, as this is a prerequisite condition for all companies in order to commence operations and attain their operating license. Several theoretical frameworks designed on the relationship

between corporate social or environmental performances and financial performance have emerged over the years.

These are the elements that drive the corporate sustainability agenda through political lobbying for regulatory changes and actions aimed at companies and the entire industries to trigger changes in corporate policies and behaviours. Their actions are most effective if they can successfully target highly visible companies and brands. The existing corporate model that contributes to sustainability can be analyzed by applying instrumental, societal, political and normative theories as stated by Garriga and Melé (2004), as cited by Schaltegger et al. (2014). Organisational efficacy derives from the idea of Penrose (1995). In her study on growth firm theory, (Penrose, 1995) looked into two factors which are human factors and physical factors. These two factors are the capabilities of an organisation to grow and perform. According to Bohn (2010; 2002), organisational efficacy is a shared belief that the generative capacity within an organisation to cope effectively and efficiently with the demands, challenges, stressors and opportunities that it encounters within the business environment. Currently, the revolution of the business world is at a rapid rate, therefore, companies are aware of the need to increase their capabilities as part of their strategy to move forward. In an organisation, they have or will need to develop these capabilities, including collective skills, abilities and expertise, to compete and face the future (Zehir and Acar, 2006). Company capabilities plays an essential role in the corporate sustainability (Cao et al., 2020; Shams and Hasan, 2020). Bukhamsin (2015) stated that in order to increase company capabilities, they will need to allocate more sources towards improving their business pace, due to intensive competition.

The awareness of corporate sustainability begins with the earlier stage of corporate social responsibility (CSR), whereby organisations focus on improving on social and environment of the organization back in the 1990s by incorporating CSR into their corporate agenda. Therefore, even with the increased awareness on corporate sustainability in Malaysia, the regulations and projects are mostly in its infancy stage (Abidin and Jaapar, 2008). CSR intertwines with corporate sustainability and has evolved as a critical factor for most companies' sustainability to enhance brand image and reputation, improve financial performance and increase foreign investment and customer loyalty (Said et al., 2009b). This is due to the lack of technical skills and the knowledge of its impact on the environment and society (Said et al., 2009a). Corporations are now held more accountable for their actions towards the environment, society and community (Darus, 2012). Thus, investigating organisational efficacy's perspective towards corporate sustainability is very valuable.

Materials and Methods

As underlined in the research process, the data collection method used in this study is through questionnaires. Data were collected online by sending a link to the online survey created on a Google Form platform, directly to the organisations' email. The idea of the self-administered online survey is to provide greater flexibility where respondents can answer at their own leisure and convenience. Furthermore, it helps to reduce the researchers' bias due to less personal contact with the respondents. All respondents were selected from Real Estate and Developer Association (REHDA) branches that are located in the Central and Southern Region of Malaysia. Participants

are determined by their willingness to participate in the survey. Using the G-Power software, the sample size calculated for this study is 37.

Research model and concept

This study utilized the concept of corporate sustainability by Wilson (2003), collective efficacy theory by Bandura et al. (1999) and the idea of organisational efficacy theory by Bohn (2002) as the theoretical framework. Unlike other corporate sustainability model, this model addressed organisational efficacy as a variable that might have predicted relationship enhancement between corporate sustainability and organisational efficacy (*Figure 2*). By building this model, this study may lead to additional relevant insights in the housing development construction industry. According to (Bohn, 2010; 2002), organisational efficacy is a shared belief that the generative capacity within an organisation to cope effectively and efficiently with the demands, challenges, stressors and opportunities that it encounters within the business environment. Every aspect of an organisation needs to work together efficiently to achieve desirable outcomes and reduce the internal weakness of the organisation to sustain in the industry. H1 A significant relationship exists between organisational efficacy and corporate sustainability. As *Figure 1* shows, the research framework is incorporated to investigate the corporate sustainability concept from organisational efficacy's perspective in a comprehensive way by two constructs.

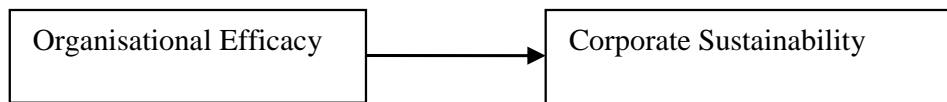


Figure 1. A corporate sustainability model.

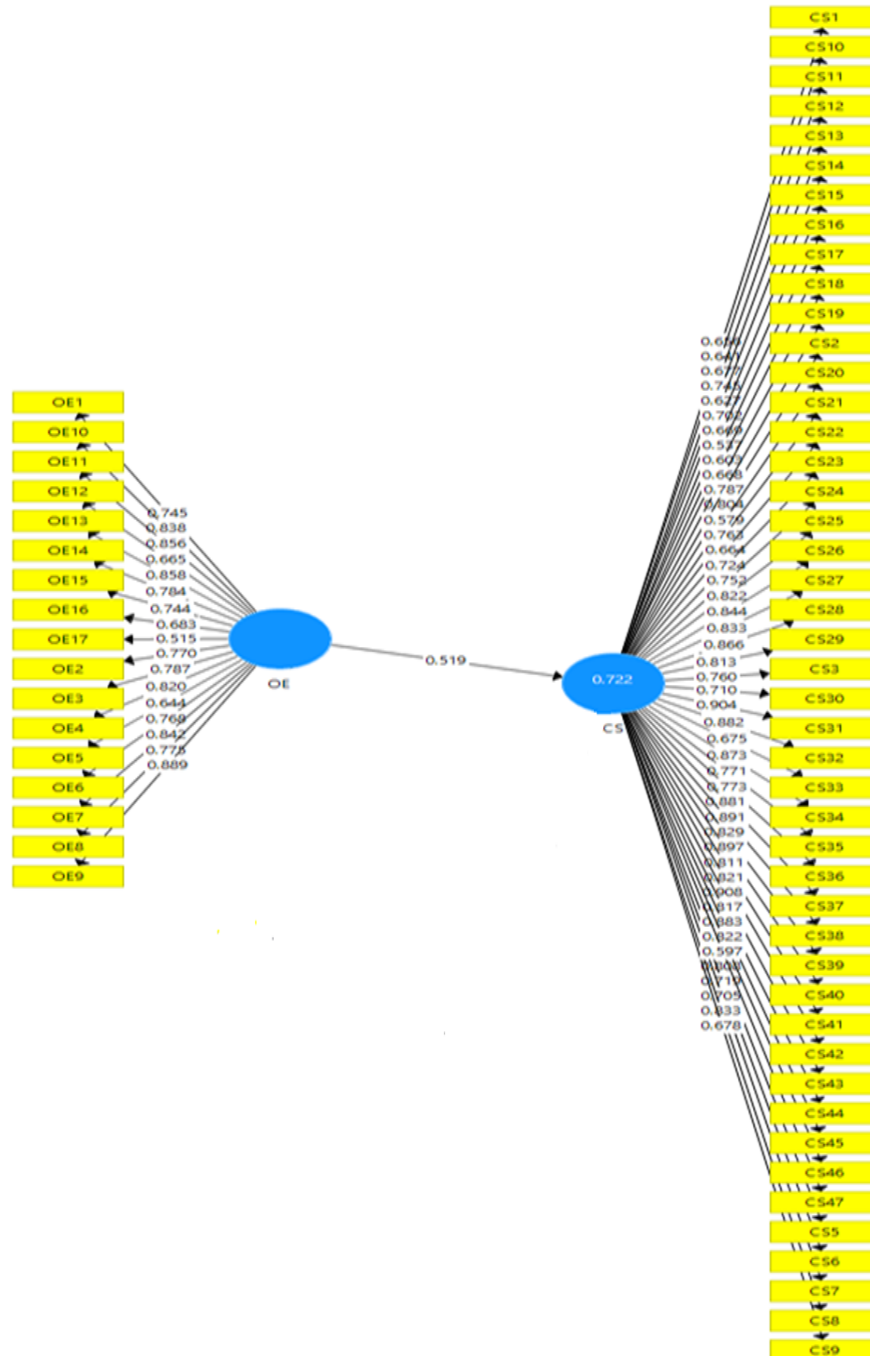


Figure 2. Factor loadings.

Questionnaire design, pretest and sampling procedure

In this study, a survey is employed as a focal mean for the source of data collection. Before the survey can be conducted in full scale, a pretest was carried out. The survey instruments were pilot tested on a small-scale sample of respondents in a housing development sector. The instruments are then tested for internal reliability based on the data collected from the pilot survey (Hee, 2014). The measurement met the requirement; hence data was collected through emails by sending a link to the questionnaire from Google Document. SmartPLS was employed for data analysis. This research took place in Malaysia and is aimed to analyze Malaysian housing development construction

industry and the information that caters towards corporate sustainability that is not clearly defined initially. This research strives to provide a clearer understanding, as well as creating new knowledge in the academia with regards to corporate sustainability in the Malaysian housing development construction industry.

The unit of analysis for this study is made up of organisations on housing development construction industry. The government approved a total of 81,434 house units for private developers to construct within all price ranges. 64% of the units will be in the Central and Southern Region of Malaysia consisting of Selangor, Wilayah Persekutuan Kuala Lumpur, Negeri Sembilan, Melaka and Johor. The research sampling frame is about 726 companies as listed in Real Estate Housing Development Association and 77 companies listed on Bursa Saham Malaysia as of 2016. This study will focus on the Central and Southern Region due to the rapid urbanization especially in Klang Valley (CIDB, 2015). 51.22% of total construction companies are also situated in both regions. Looking at the rapid development leaning towards the Central and Southern Region of Malaysia, it was decided that this study will focus on the states in these two regions. In this study, the survey afforded a systematic approach to explore organisational efficacy and corporate sustainability with a larger population. Items included in the questionnaire ensured that data will be collected within parameters of the research problem. Three categories of information are in the questionnaire; demographic profile, the organisational efficacy, and corporate sustainability. The questionnaire, therefore, allowed aspects of sustainability of the large target population to be systematically identified. The use of Likert Scale in the survey, combined the opportunity for flexible responses with the ability to determine correlations and other forms of quantitative analysis. They can afford to determine frequencies, correlations and other forms of quantity and quality (Cohen et al., 2002).

The questionnaire consists of three sections; Section 1 contained four items on demographic profiles (*Table 1*); Section 2 contained 17 items on organisational efficacy; and Section 3 contained 47 items on corporate sustainability as in Figure 1. Responses for Section 2 and 3 are rated on a five-point Likert Scale (1=Strongly Disagree; 5=Strongly Agree). In this study, the Likert scale can be analyzed excellently as interval scales (Corner and Brown, 2011). According to Corner and Brown (2011), it is suggested that the scale item should be at least five; hence the five-point Likert scale is used as it can make a compromise between the conflicting goals of offering enough choice and making things manageable for respondents (Johns, 2010). The items in the questionnaire utilized key points from the literature on Organisational Efficacy and Corporate Sustainability as this came from previous literature; adaption and adoption questionnaire. For Organisational Efficacy, questionnaires which specifically looked at organisational efficacy scale by (Bohn, 2010), are used as a reference. For corporate sustainability, items were adapted from Hahn and Scheermesser (2006).

Table 1. Description of the samples.

		Numbers of respondents in frequency (N)	Percentage (%)	Cumulative in percentage (%)
Operation period	<4 years	10	16.1	16.1
	5-9 years	12	19.4	35.5
	10-14 years	16	25.8	61.3
	15-19 years	10	16.1	77.4
	20-24 years	2	3.2	80.6
	>25 years	12	19.4	100

Number of employees	<100	46	74.4	74.4
	101-200	12	19.4	93.5
	201-300	2	3.2	96.8
	601-700	2	3.2	100
Salary	<RM24.9M	32	51.6	51.6
	RM25-RM99.9M	12	19.4	71.0
	RM100M-RM199.9M	16	25.8	96.8
	RM400M-RM499.9M	2	3.2	100
Corporate sustainability awareness	<3 years	30	48.4	48.4
	3-5 years	20	32.3	80.6
	9-11 years	4	6.5	8.1
	>15 years	8	12.9	100

Results and Discussion

The study distributed questionnaires using Google Forms and sending the link in listed emails to respondents in this study. The study collected 62 responses and conducted initial screening for usability and reliability. *Table 1* lists demographic information about these 62 respondents. In PLS-SEM, the sample size requirement must be at least ten times of the largest number of structural paths directed at a particular latent construct in the structural model (Hair et al., 2011). *Figure 1* shows that there is one path from organisational efficacy to corporate sustainability, thus the sample must be greater than 10. By using G-Power calculator, the appropriate sample size is 37. Therefore, the sample of 62 responses in this study satisfies the minimum size requirement for PLS-SEM.

PLS-SEM analysis necessitates checking for unidimensionality of each block in the model. A block is unidimensional when its Cronbach's alpha (α) value and composite reliability (CR) value are greater than 0.7. *Table 2* shows that in this study's model, the Cronbach's α values range from 0.935 to 0.977 and the CR values range from 0.943 to 0.978, exceeding the threshold value (0.7). *Table 3* shows the discriminant validity value of 0.849 indicate that the measures were discriminant and established. *Table 4* also lists the measurement model estimation results, including the outer weights, outer loadings, and average variance extracted (AVE) measures. The outer loadings, which represent the loadings of the reflective manifest variables with their respective latent variable, are useful to assess individual item reliability. A loading higher than 0.4 signals the item's reliability (Hair et al., 2011). In this study, all outer loadings (ranging from 0.5 to 0.94) are higher than 0.4. The average variance extracted (AVE) measurements are useful to assess the convergent validity of the constructs. In this study, AVE measurements vary from 0.501 to 0.502, passing the threshold value (0.5) that had suggested by researchers. To assess the discriminant validity, the square root of the AVE measurements on each construct must exceed the estimated correlations between the construct and other constructs in the model. In this study, the square roots of AVE on each construct (i.e., the diagonal elements in *Table 5*) are greater than the correlations of the construct with other constructs (i.e., those related off-diagonal elements in *Table 5*). After validating the measurement model, the research then estimates the structural model which specifies the relationships between latent variables. *Figure 2* are the path coefficients for the endogenous latent. The empirical results show that organisational efficacy associates significantly with corporate sustainability ($\beta=0.519$, 95% Confidence Interval of direct effect (0.213, 0.784), t -value=3.65 and $p=0.0000$). The empirical results support hypothesis (H1) and achieved the study

objective. The evaluation model fit SRMR is 0.114, the SRMR takes values between 0 and 1. The lower the SRMR, the better the model fit (Brown, 2006; Schermelleh-Engel et al., 2003).

This research confirms that organisational efficacy is significantly associated with corporate sustainability. Prior research shows that most organisation prefer using management accounting practice and financial as a guidance to measure their performance (Lu, 2016; Hu and Sathye, 2015; Rahdari and Anvary Rostamy, 2015; Halim et al., 2014), which leads to the understanding of sustainability from economic foundation (Sabatino, 2016; Helm, 2007). Under these circumstances, the dimension of resilience or adaptive capacity barely exist which makes the organisation least likely to survive in difficult situation. That is why Bohn (2010) suggests that organisations should or need to focus on building organisational efficacy as a way to sustain in their industry. From the results of this study, one can infer that organisational efficacy will gradually turn out to be an important segment as part of corporate sustainability.

Table 2. Reliability and convergent validity test.

Category	Cronbach's Alpha	Composite reliability	AVE
Organisational efficacy	0.935	0.943	0.501
Corporate sustainability	0.977	0.978	0.502

Table 3. Discriminant validity test.

Category	HTMT	
	Organisationa efficacy	Corporate sustainability
Organisational efficacy	-	0.849
Corporate sustainability	-	-

Table 4. Results of R² test.

Category	R ²	Adjusted R ²
Corporate sustainability	0.722	0.713

Table 5. Reliability and convergent validity test.

Category	Direct path	95% of confidence interval of the direct effect	t-Value	Significant (p<0.05)	Hypothesis supported	Research objective
Organisational efficacy > corporate sustainability	0.935	0.943	0.501	0***	Yes	Yes

Conclusion

This study highlights important concepts relating to corporate sustainability in housing development construction industry by developing a research framework, with one of its hypotheses is to explore the relationship between organisational efficacy and corporate sustainability. This analysis shows that organisational efficacy would significantly affect corporate sustainability, and their influences (in terms of path coefficients and statistics significance) are much stronger. This specific finding may explain why organisations need to change their strategy to focus more on behaving efficaciously in order to sustain in their industry. The empirical results of this study

imply that when positive influences are greater than negative, organisations will need to realign their strategy towards corporate sustainability. This study does not address the issues of the influence of management control system, open innovation, and effectiveness; but different industries with various design philosophies and implementation approaches that might have different outcome and exploring the relationship. Therefore, to study various designs and implementation issues in follow-up research efforts would be interesting.

This study inevitably suffers from difficulties owing to time and budget limits. All the data in this empirical study comes from participants in the Malaysian housing development construction industry listed under Real Estate and Housing Development Association (REHDA), so the results might not be directly applicable to other contexts due to different cultures, customs, lifestyles, and habits in other industries/regions/countries. Difference in these areas may play an important role in spelling out the difference in the decision of efficacious behaviour and sustainability contents. Another topic for future investigation is to explore the mediating effect of management control system in housing development construction industry with necessary modifications. A wider scope of exploration can make design principles and specific application guidelines that this study identifies and suggests more generalized.

Acknowledgement

The authors received no financial support for the research study and/or authorship of this article.

Conflict of interest

The authors declared no potential conflicts of interest with respect to the research authorship, and/or publication of this article..

REFERENCES

- [1] Abidin, N.Z., Jaapar, A. (2008): Sustainable concept awareness in Malaysia construction practices. – In *The 3rd Built Environment and Natural Environment Conference* 9p.
- [2] Ahmad, N.H., Wilson, C., Kummerow, L. (2011): Assessing the dimensionality of business success: The perspectives of Malaysian SME Owner-Managers. – *Journal of Asia-Pacific Business* 12(3): 207-224.
- [3] Bandura, A., Freeman, W.H., Lightsey, R. (1999): Self-efficacy: The exercise of control. – *Journal of Cognitive Psychotherapy* 13(2): 157-166.
- [4] Bohn, J.G. (2010): Development and exploratory validation of an organizational efficacy scale. – *Human Resource Development Quarterly* 21(3): 227-251.
- [5] Bohn, J.G. (2002): The relationship of perceived leadership behaviors to organizational efficacy. – *Journal of Leadership & Organizational Studies* 9(2): 65-79.
- [6] Brown, T.A. (2006): *Confirmatory factor analysis for applied research*. – New York, NY, US: The Guilford Press 482p.
- [7] Bukhamsin, M. (2015): Investigating the relationship between organizational innovation capability and firm performance with Irish SMEs. – *Technological University Dublin* 100p.

- [8] Cao, D., Tao, H., Wang, Y., Tarhini, A., Xia, S. (2020): Acceptance of automation manufacturing technology in China: an examination of perceived norm and organizational efficacy. – *Production Planning & Control* 31(8): 660-672.
- [9] Cohen, L., Manion, L., Morrison, K. (2002): *Research methods in education*. – Routledge: Taylor & Francis 657p.
- [10] Construction Industry Development Board (CIDB) Malaysia (2015): *Construction Industry Transformation Programme (CITP) 2016-2020*. – Construction Industry Transformation Programme. Retrieved from: <https://pdfcoffee.com/citp-pdf-free.html>
- [11] Corner, S., Brown, J.D. (2011): Likert items and scales of measurement. – *Shiken: JALT Testing & Evaluation SIG Newsletter* 15(1): 10-14.
- [12] Darus, F. (2012): Embracing Corporate social responsibility in Malaysia-towards sustaining value creation. – *Malaysian Accounting Review* 11(2): 1-13.
- [13] Garriga, E., Melé, D. (2004): Corporate social responsibility theories: Mapping the territory. – *Journal of Business Ethics* 53(1/2): 51-71.
- [14] Hahn, T., Scheermesser, M. (2006): Approaches to corporate sustainability among German companies. *Corporate Social Responsibility and Environmental Management* 13(3): 150-165.
- [15] Hair, J.F., Ringle, C.M., Sarstedt, M. (2011): PLS-SEM: Indeed a silver bullet. – *The Journal of Marketing Theory and Practice* 19(2): 139-152.
- [16] Halim, M.S.A., Haniff, M.S.M., Junoh, M.Z.M., Osman, A. (2014): Financial performance and the management issues of Bumiputera construction firms in the Malaysian construction industry. – *Journal of Scientific Research & Reports* 3(9): 1190-1202.
- [17] Hee, O.C. (2014): Validity and reliability of the big five personality traits scale in Malaysia. – *International Journal of Innovation and Applied Studies* 5(4): 2028-9324.
- [18] Helm, S. (2007): The role of corporate reputation in determining investor satisfaction and loyalty. – *Corporate Reputation Review* 10(1): 22-38.
- [19] Hu, H., Sathye, M. (2015): Predicting financial distress in the Hong Kong growth enterprises market from the perspective of financial sustainability. – *Sustainability (Switzerland)* 7(2): 1186-1200.
- [20] Johns, R. (2010): Likert items and scales. – *Survey Question Bank: Methods Fact Sheet* 1(1): 11-28.
- [21] Lu, W. (2016): An exploration of the associations among corporate sustainability performance, corporate governance, and corporate financial performance. – *The University of Texas* 132p.
- [22] Meuer, J., Koelbel, J., Hoffmann, V.H. (2020): On the nature of corporate sustainability. – *Organization & Environment* 33(3): 319-341.
- [23] Penrose, E. (1995): *Theory of the Growth of the Firm*. – Oxford University Press 296p.
- [24] Rahdari, A.H., Anvary Rostamy, A.A. (2015): Designing a general set of sustainability indicators at the corporate level. – *Journal of Cleaner Production* 108: 757-771.
- [25] Sabatino, M. (2016): Economic crisis and resilience: Resilient capacity and competitiveness of the enterprises. – *Journal of Business Research* 69(5): 1924-1927.
- [26] Said, I., Osman, O., Shafiei, M.W.M., Razak, A.A., Kooi, T.K. (2009a): Sustainability in the housing development among construction industry players in Malaysia. – *The Journal of Global Business Management* 5(15): 1-9.
- [27] Said, R., Zainuddin, Y.H., Haron, H. (2009b): The relationship between corporate social responsibility disclosure and corporate governance characteristics in Malaysian public listed companies. – *Social Responsibility Journal* 5(2): 212-226.
- [28] Sanchez-Planelles, J., Segarra-Oña, M., Peiro-Signes, A. (2021): Building a theoretical framework for corporate sustainability. – *Sustainability* 13(1): 21p.

- [29] Schaltegger, S., Hansen, E.G., Lüdeke-Freund, F. (2014): Business Models for Sustainability: Entrepreneurship, Innovation and Transformation. – Call for Papers for a Special Issue of Organization & Environment 7p.
- [30] Schermelleh-Engel, K., Moosbrugger, H., Müller, H. (2003): Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit Measures. – Methods of Psychological Research Online 8(2): 23-74.
- [31] Shams, S.M.R., Hasan, R. (2020): Capacity building for transnationalisation of higher education: Knowledge management for organisational efficacy. – European Business Review 32(3): 459-484.
- [32] Steger, U., Ionescu-Somers, A., Salzmann, O. (2007): The Economic Foundations of Corporate Sustainability. – The International Journal of Business in Society 7(2): 162-177.
- [33] Wilson, M. (2003): Corporate sustainability: What is it and where does it come from. – Ivey Business Journal 67(6): 1-5.
- [34] Zehir, C., Acar, A.Z. (2006): Organizational capabilities and its impacts on business performance. – In The Proceedings of 2nd International Strategic Management Conference 163(1): 163-172.