

## Modeling the social, economic and environmental effects of Pondok Tahfiz

Hassanuddin<sup>a</sup>, Ikhwan Aziz<sup>a\*</sup>, Rohana<sup>a</sup>, Salwani<sup>a</sup>, Arbaiah<sup>b</sup>, Hakimin<sup>a</sup> and Asyraf Afthanorhan<sup>c</sup>

<sup>a</sup>Faculty of Entrepreneurship and Business, University Malaysia Kelantan (UMK), Pengkalan Chepa, 16100, Kota Bharu, Kelantan, Malaysia

<sup>b</sup>Universiti Teknologi Malaysia Space, Kuala Lumpur, Malaysia

<sup>c</sup>Faculty of Business and Management, University of Sultan Zainal Abidin (UniSZA), 21300 Kuala Nerus, Terengganu, Malaysia

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### ABSTRACT

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This paper aims to model the social, economic and environmental (SEE) impacts of Pondok Tahfiz in Kelantan. The basic principle of a sustainable development paradigm lies in three aspects; namely social, economic, and environmental. These aspects guide the management of human use of resources so that any development project may yield the greatest sustainable benefits or positive impacts to present generations while maintaining the ability to meet the needs of future generations. Pondok tahfiz is the orthodox Islamic school institution that focus on Islamic education learning. Presently, the institution is highly demanded among Muslim Malaysian as they believe the institution provides some benefits in future. The three aspects of SEE are commonly used as dimensions for measuring impacts of sustainable development of Pondok tahfiz. Through this, SEE is able to acquire indirect and direct impacts of education institute towards social, economy and environment. The findings indicate that all the dependent variables provide a significant impact towards sustainable development of pondok tahfiz. However, the economic development provides less impact for the sustainable development.

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## 1. Introduction

Pondok tahfiz is an orthodox Islamic education institution for secondary school and this paper examines the impact of social, economic, and environment (SEE) towards Pondok tahfiz in Kelantan. The basic principle of a sustainable development paradigm lies in three aspects that are social, economic and environmental (Harris, 2000). These aspects guide the management of human resources for the development project which may yield the greatest sustainable benefits or positive impacts to present generations while maintaining the ability to meet the needs of future generations (Basiago, 1998). Therefore, the three aspects are commonly used as dimensions for measuring impacts of many development projects. Pondok tahfiz is the orthodox Islamic education that emphasises on moral community education. Even though the education majorly is based on Islamic concept, but still general education has also been included. Generally, local government has the power to govern the Pondok tahfiz, even, some of the Pondok tahfiz run with private initiative. From that action some Pondok tahfiz units are in poor state which cause poor competitive to remain sustainable in future. Furthermore, the learning objective of the institution is to form a good attitude and character as the main roles of the subject. By having that education, character problem can be changed through the education in Pondok tahfiz. As the Pondok tahfiz education is able to cultivate the learning outcome with the

\* Corresponding author.

E-mail address: [ikhwan.a@umk.edu.my](mailto:ikhwan.a@umk.edu.my) (I. Aziz)

community social impact. The practice of pondok tahfiz student though their behaviour is able to spread among the community. The curriculum practice in Pondok tahfiz significantly impacts the student and the community as well. However, it is limited to a small scale of community impact, which direct on the extrinsic value instead of intrinsic. Moreover, the impact on environment and economy impacts are still in a mystery measure. Typical modern and orthodox Pondok tahfiz less emphasizes on that matter as their main concern is on forms of good character and attitude. On the other hand, the operations of the institution traditionally are based on social enterprise which is non-profit focus. Some Pondok tahfiz are run based on the local or individual monetary contribution that cause the operation are very limited on infra development and maintenance. On that cause, the development of Pondok tahfiz is remained stagnant as it has less concern from the authority. Social enterprises are organizations that seek to fulfil social missions through the use of business practices (Peredo & McLean, 2006) and are often the results of the efforts of individual social entrepreneurs or outgrowths of non-profits that are seeking to create more predictable sources of funding (Dees, 1998a, 1998b). Currently, the field lacks the ability to consistently define and measure social performance within social enterprises and as a result it has been limited in its ability to make comparison among social enterprises (Short et al., 2009). While many different metrics have been proposed and different systems are in use to measure social value (Kickul & Lyons, 2012), there is no consensus of how to do this well. This likely resides in the fact that value, particularly social value, is subjective, often realized on a longer time horizon than economic value and is reliant on an individual's personal value system.

## 2. Problem Statement

On this part, Pondok tahfiz abilities are the untap of grey area in modern education. Current practices of Pondok tahfiz have minimum impacts and mystery as presently, there is non-official measurement in the market to measure the impact of Pondok tahfiz. This measurement is critically important in future as it remains competitive and sustainable. In addition, it is challenging to develop a set of metrics that is pluralistic in nature to accommodate a wide variety of social missions and flexible enough to integrate new innovations. Without the ability to effectively measure social performance our ability to “understand elements that might reliably foster social entrepreneurship” (Short et al., 2009) is greatly limited. This is especially concerning as social enterprises begin to replace traditional non-profit organizations and government services. Extant social enterprise studies have failed to critically examine the impacts of social enterprises without examining unexpected impacts and the potential harm they can create (Zietsma & Tuck, 2012). Without understanding how social value is created within social enterprises and how social performance can effectively be measured, it is impossible to ensure that social enterprises are having the impacts they claim to have. This paper intends to unpack the concept of SEE value creation within Pondok tahfiz and will attempt to offer a clearer understanding on the concept.

From that issue, two main questions arose, that are, how the social, economic, and environment (SEE) act towards development of “Pondok Tahfiz” at regional level and what kind of model of SEE is able to attain the balance of SEE for “Pondok Tahfiz” at regional level. Hence this paper aims to examine and develop a balanced SEE model of “Pondok Tahfiz” for sustainable development at regional level.

## 3. Literature

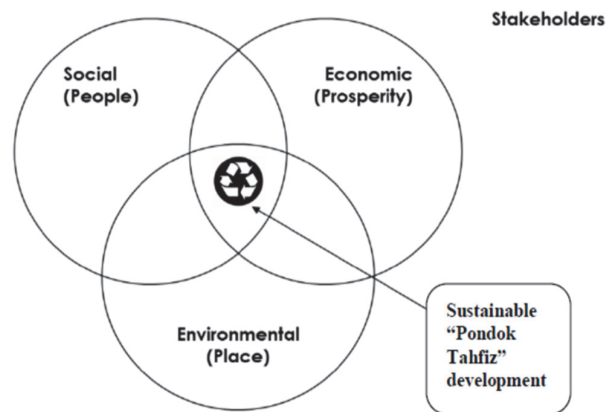
The one set of sustainable development theory was mainly focusing on environmental issues. As early as 1980, a world conservation strategy was introduced by the International Union for the Conservation Nature that included one of the earliest references for the term “sustainable development” and strategies for sustainable use of natural resources as a global priority (IUCN, 1980). Twenty years later, the United Nations adopted the Millennium Declaration that identified principles for sustainable development including economic development, social development and environmental protection (Assembly, 2000). According to Harris (2000), the underlying principle of the sustainable development concept focuses on three aspects:

- Social - A socially sustainable system must achieve distributional equity, adequate provision of social services including health and education, gender equity, and political accountability and participation.
- Economic - An economically sustainable system must be able to produce goods and services on a continuing basis, to maintain manageable levels of government debt, and to avoid extreme sectoral imbalances which damage industrial production.
- Environmental - An environmentally sustainable system must maintain a stable resource base, including maintenance of biodiversity, atmospheric stability, and other ecosystem functions not ordinarily classed as economic resources.

Generally defined, sustainable development is a systematic approach to manage both the benefits and impacts associated with physical and human development. For the purpose of achieving the research objectives, a comprehensive protocol for social, economic and environmental (SEE) impacts assessment developed by the European Union (Sanz et al., 2018) is used as a tool for this SEE impact study. Details of the SEE impacts are listed as in Table 1

**Table 1**  
Dimensions and elements of the SEE impacts

No.	Elements	Dimensions
1	<b>Social</b>	-Safety -Productive and valued activities -Standard of living -Education /Life-long learning -Quality of social interaction
2	<b>Economic prosperity</b>	-Economic -Investment flows -Public budgets/services -Market mechanisms
3	<b>Natural environment</b>	-Environmental -Culture, heritage and leisure -Land use -Climate and energy -Renewable resources/waste -Settlement – urban/rural -Housing



**Fig. 1.** Sustainable SEE Model of Pondok Tahfiz Development

Based on Fig. 1, there are three main substantiate dimensions ; namely social (people), economic (prosperity) and environmental (place) formed a sustainable model for Pondok tahfiz. The intercorrelated dimension built the conceptual model for sustainability. The detail element of the model will be tested in analysis part to acquire the impact of the model among the community.

#### 4. Methodology

This paper used quantitative approach that lies on descriptive, explanatory, and confirmatory research design. Multistage sampling method with stratified and Simple random technique was used to acquire respondents with parametric and probability value (Creswell & Clark, 2017). 8 Registered modern “Pondok Tahfiz” becomes the subject matter of the study. 310 respondents were randomly selected from 1600 villagers nearby “Pondok Tahfiz”. All the data collection from respondents were acquired by using 10-point Likert scale questionnaire with structured interview approach as the instrument of the study (Aziz et al., 2019a). After the data collected, the data was analysed with two approach that are descriptive statistic use frequency and normality analysis. While inferential statistics, using reliability and sequential equation modelling (SEM) with path Analysis through confirmatory factor analysis (CFA). All the data were analysed by using IBM-SPSS and IBM-AMOS as a tool of analysis. Descriptive statistics were used to measure the frequency, percentages, means and standard deviations and the response score of the measured items. However, detecting outlier is an essential part before proceeding to the next analysis. Therefore, whisker plot or box plot analysis was performed to determine any extreme score that will affect the outcome of the analysis. Later, the P-P plot was utilized to determine the normality of the data by referring to the graphical points of pattern plots on the linear line from the origin. In the first stage of quantitative data analysis, Statistical Package for the Social Science (IBM-SPSS) was used to analyse the data. Furthermore, the IBM-SPSS was also employed to run the Exploratory Factor Analysis (EFA) to reduce and manage the number of variables that belong together and have overlapping measurement characteristic. Afterwards, the data were analysed using the Analysis of Moments Structures (IBM-AMOS 21). IBM-AMOS software will be used to handle the Path analysis and Confirmatory Factor Analysis (CFA) to describe the directed dependencies among the set of variables, validate the measurement model of a construct, and test the stated hypothesis

in the path model. The statistical method employed in testing the path model is SEM (Structural Equation Modelling). SEM is a second-generation method of statistical analysis developed to cater for limitations in the traditional Ordinary Least Square Regression (OLS) especially when dealing with latent constructs in a model (Aziz et al., 2019b; Aziz et al., 2016; Dalila et al., 2020). This study employed quantitative approach, by using cross sectional study method to derive the whole structured of the research. The population of the study were identified from 8 Pondok Tahfiz Institution that encompasses of 1600 Tahfiz students across Kelantan. Hence 310 samples of respondents were identified through Krejcie and Morgan, (1970) and Hair et al., (2013, 2014) method. These methods were mean to satisfy the generalization and statistical of the data generated. The result generated for the research were obtained from IBM-AMOS 20 as a tool of the analysis with 10-point Likert scale from structured interview. Thus, descriptive analysis, exploratory factor analysis (EFA), and path analysis used to meet and answer the objective of the research.

## 5. Finding

### 5.1 The Confirmatory Factor Analysis (CFA)

The Confirmatory Factor Analysis is required to validate the measurement model of all latent constructs involved in the study. The validation procedure in CFA will assess the uni-dimensionality, validity, and reliability of all constructs (Awang, 2015). Three types of validity used to evaluate in this study were Construct Validity, Convergent Validity, and Discriminant Validity. Meanwhile, the reliability of the constructs is assessed through composite reliability. The study decided to employ the Pooled-CFA since it is more efficient, thorough, and free from model identification problem especially if some of the constructs have less than four measuring items (Aimran et al., 2017; Awang et al., 2015; Aziz et al., 2016). Based on this type of method, all the constructs are pooled together and linked using the double-headed arrows to assess the correlation among the constructs, as shown in Fig. 1. The CFA procedure is executed once for all constructs. There are three latent variables used to estimate the relationship between exogenous and endogenous constructs. Among these latent variables, three of the latent variables considered as exogenous constructs which are Economy, Social and Environment. Meanwhile, Sustainable Development is considered an endogenous construct.

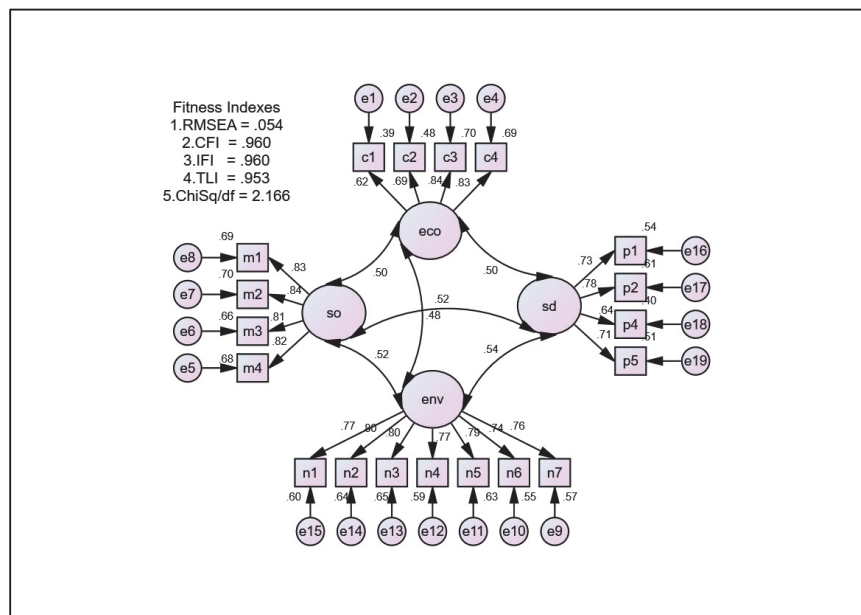


Fig. 2. Measurement model for sustainable development

Referring to Fig. 2, Fitness Indexes (FI) was developed to reflect how the model fits the present data. In this study, the researcher used FI as suggested by Hair et al. (1995, 2010) and Holmes-Smith et al., (2006), where they recommend the use of at least one FI from each category of the model fit. There are three model fit categories namely the Absolute Fit, Incremental Fit, and Parsimonious Fit. Thus, the choice of FI for Absolute Fit is the Root Mean Square Error of Approximation (RMSEA) (Browne & Cudeck, 1993). The Incremental Fit includes the Incremental Fit Index (IFI), Comparative Fit Index (CFI) (Peter M. Bentler, 1990), and Tucker Lewis Index (TLI) (Bentler & Bonett, 1980) while the Parsimonious Fit is Chi Square/Degrees of Freedom (Chisq/df) (Marsh & Hocevar, 1985). The table below shows a summary of the required model fit categories. Table 1 below indicates that all the fitness indexes in this study have achieved all the required level and indicated that the measurement model had achieved the required construct validity (Awang, 2015).

**Table 1**

The Summary of fitness index

Name of category	Name of index	Index value	Comments
<b>Absolute fit</b>	RMSEA (<0.08) (Brown & Cudeck, 1993)	<b>0.054</b>	The required level is achieved
<b>Incremental fit</b>	IFI (>0.9)	<b>0.960</b>	The required level is achieved
	CFI (>0.9) (Bentler, 1990)	<b>0.960</b>	The required level is achieved
	TLI (>0.9) (Bentler & Bonett, 1980)	<b>0.953</b>	The required level is achieved
<b>Parsimonious fit</b>	Chisq/df (<3.0) (Marsh & Hocevar, 1985)	<b>2.166</b>	The required level is achieved

### 5.2 The CFA result for measurement model

The study needs to report the Composite Reliability (CR) which indicates the reliability of the construct and the Average Variance Extracted (AVE) which indicates the convergent validity of the construct. The threshold value for CR is .6 or higher, while the threshold value of AVE is .5 or higher.

**Table 2**

The Composite reliability (CR) and Average Variance Extracted (AVE)

Construct	Item	Factor loading	CR (>0.6)	AVE (>0.5)
<b>Economy</b>	C1	0.62	<b>0.836</b>	<b>0.564</b>
	C2	0.69		
	C3	0.84		
	C4	0.83		
<b>Social</b>	M1	0.83	<b>0.895</b>	<b>0.681</b>
	M2	0.84		
	M3	0.81		
	M4	0.82		
<b>Environment</b>	N1	0.77	<b>0.914</b>	<b>0.602</b>
	N2	0.80		
	N3	0.80		
	N4	0.77		
	N5	0.79		
	N6	0.74		
	N7	0.76		
<b>Sustainable Development</b>	P1	0.73	<b>0.808</b>	<b>0.514</b>
	P2	0.78		
	P3	0.64		
	P4	0.71		

The results in Table 2 above shows that all Composite Reliability (CR) and Average Variance Extracted (AVE) exceed the threshold value of .6 and .5, respectively. The values indicate the convergent validity and composite reliability of all main constructs in the model (Asnawi et al., 2018; Awang et al., 2015; Aziz et al., 2016).

### 5.3 Discriminant validity

In the last steps of CFA report, the study needs to assess the Discriminant Validity of the constructs in order to clarify that they are not redundant with each other. The Discriminant Validity for the construct is achieved if the correlation among the exogenous constructs in the model does not exceed .85 critical point (Majid, Zainol, & Afthanorhan, 2019). The study also needs to develop the Discriminant Validity Index Summary for all constructs involved in the model in order to ensure that they are discriminant among each other. The Discriminant Validity Index Summary is shown in Table 3.

**Table 3**

The Discriminant Validity Index Summary

Construct	Economy	Social	Environment	Sustainable Development
<b>Economy</b>	<b>0.75</b>			
<b>Social</b>	0.50	<b>0.82</b>		
<b>environment</b>	0.48	0.52	<b>0.60</b>	
<b>Sustainable Development</b>	0.50	0.52	0.54	<b>0.72</b>

The Discriminant Validity Index Summary is presented in Table 3 above. The bolded diagonal values are the square root values of the AVE in respective constructs, while other values are the correlation between the respective pair of constructs. The Discriminant Validity of the respective construct is achieved if the square root of its AVE exceeds its correlation value with other constructs in the model. In other words, the Discriminant Validity is achieved if the bolded diagonal values are higher than any other values in its row and column. The tabulated values in Table 3 meet the threshold of Discriminant Validity. Thus, the study concludes that the Discriminant Validity for all constructs is achieved.

#### 5.4 Assessment of normality

Finally, the study needs to assess the normality distribution of all items in measuring the construct before modeling the structural model and executing SEM. Since SEM employs the parametric statistical modeling approach, the study needs to assess the normality distribution of all accepted items measuring the constructs. According to Awang (2015), the study only needs to show that the skewness values for all items do not depart from normality. The normality assessment is made by assessing the measure of skewness for every item. The absolute skewness value of 1.0 or lower indicates the normal distribution of the data. However, for SEM using the Maximum Likelihood Estimator (MLE) like AMOS, it is fairly robust to keep skewness greater than 1.0 in absolute value if the sample size is large and the Critical Region (CR) for the skewness does not exceed 8.0. Normally, the sample size of 200 or more is considered as large enough in MLE even though the data distribution is slightly non-normal. Another method for normality assessment is by determining the multivariate kurtosis statistic. According to Awang (2015), the acceptable range for the multivariate kurtosis value is below than 50. In which, in this analysis, the result was 49.767, which is considered as normal. Meanwhile, the acceptance value of the kurtosis is between the value of -7 to +7 (Hair et al., 1998, 2014), which is the result considered as normal. Other than that, the acceptable range for the Skewness value is between -1.96 to +1.96 (Hair et al., 1998), which is for this study, the value is still within the range.

**Table 4**  
Assessment of Normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
p4	2.000	5.000	-.216	-1.773	.367	1.510
p3	2.000	5.000	-.130	-1.067	.012	.050
p2	2.000	5.000	-.372	-3.062	.270	1.110
p1	2.000	5.000	-.264	-2.171	.277	1.138
n1	2.000	5.000	-.149	-1.226	.344	1.416
n2	2.000	5.000	-.154	-1.263	.035	.142
n3	2.000	5.000	-.125	-1.026	-.245	-1.006
n4	2.000	5.000	-.275	-2.265	-.021	-.088
n5	2.000	5.000	-.095	-.786	-.105	-.432
n6	2.000	5.000	-.162	-1.333	-.370	-1.522
n7	2.000	5.000	-.325	-2.672	.289	1.187
m1	2.000	5.000	-.214	-1.764	-.247	-1.017
m2	2.000	5.000	-.290	-2.382	.123	.504
m3	2.000	5.000	-.195	-1.602	-.149	-.612
m4	2.000	5.000	-.186	-1.530	-.033	-.136
c4	2.000	5.000	-.101	-.827	.101	.416
c3	2.000	5.000	-.435	-3.579	.772	3.175
c2	2.000	5.000	-.288	-2.371	.245	1.007
c1	2.000	5.000	-.271	-2.229	.000	.002
Multivariate					<b>49.767</b>	<b>17.749</b>

#### 5.5 Structural Model

In the structural model, the researcher assembles the constructs involved in the study. It has a set of more dependence relationships linking the constructs in the hypothesised model with the construct of the structural model, which is useful to represent the interrelationship of variables between dependence relationships (Hair et al., 1998). Once the researcher has addressed the issues of multi-dimensionality, validity, and reliability of the latent constructs in the study, the next step is to model the construct into structural analysis. The researcher has executed the research model as showed in Fig. 3. In overall, SEM elucidated in AMOS requires a fair sample size of 200 samples (Christopher Westland, 2010; Shevlin & Miles, 1998) and depends on strict assumptions such as homoscedasticity, normality, and free of outliers to obtain adequate output and avoid non-convergence estimates (Anderson & Gerbing, 1988). As for that reason, the researcher has met this condition to ensure validity of the path estimates achieved through the maximum likelihood technique. Fig. 3 shows that the three main exogenous constructs (Social, Economy and Environment) are imposed on the endogenous construct (Sustainable Development). All constructs were modelled as a reflective measure. According to Arbuckle (2010), to test the relationship of a construct, a single arrow is chosen to represent the causal effect; in which the arrow begins from the exogenous to endogenous

construct. After that, the path will estimate each of the hypothesised relationships in the causal model as well as the Square Multiple Correlation ( $R^2$ ) of the dependent construct. Thus, it is reported as a structural model in Fig. 4.

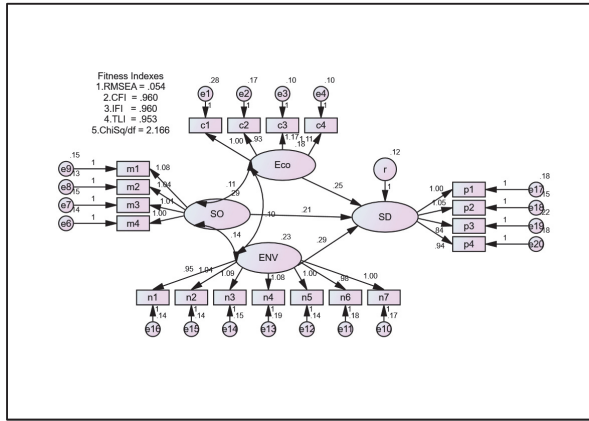


Fig. 3. unstandardized estimates

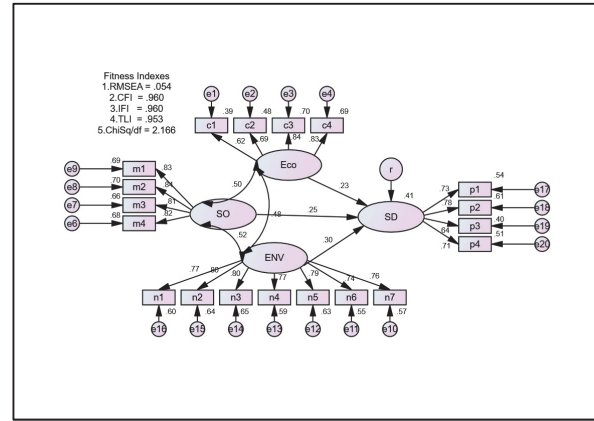


Fig. 4. standardized estimates

Table 5  
The Regression Weights

			Estimate	S.E.	C.R.	P	Label
SD	←	Eco	.251	.070	3.572	***	Sig
SD	←	SO	.211	.055	3.839	***	Sig
SD	←	ENV	.288	.061	4.746	***	Sig

The regression weight in the above table unveiled the effects between social, economy and environment on sustainable development. The results revealed that economy ( $\beta = .251$ ,  $CR = 3.572$ ), social ( $\beta = .211$ ,  $CR = 3.839$ ) and environment ( $\beta = .288$ ,  $CR = 4.746$ ) were statistically significant towards sustainable development. Composing to the statistically significance, the researcher uses the critical ratio (CR) as a guideline to indicate the research hypotheses. Basically, the CR should exceed the 1.96 rule of thumb to achieve the significant probability to either accept or reject the null hypotheses. Additionally, it founded that all path estimates (social, economy and environment) had a positive effect on sustainable development. Moreover, Rice and Harris, (2005) stated that  $R^2$  value which is exceeding 26%, is considered to have a large effect on the causal model. From figure 3, it founded that the proposed model explained an acceptable significant percentage of the variance in sustainable development (41%). Hence, the structural model involving measuring the level of sustainable development is considered as achievable and valid since it contributes highly to the research on sustainable development in Malaysia's Pondok Kelantan. Moreover, all the hypotheses testing for this research was supported.

6. Conclusion

The research finding will be useful for the government either state or federal to improve poverty level after building education institute or government agency. The three spheres (social, economic, and environmental) of sustainability encompass many concepts which explain how decisions and actions can have an impact on the overall sustainability of our education sector. Therefore, it is extremely important to broaden the concept of social, economic, and environmental for sustainable development at regional level.

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References

Aimran, A. N., Ahmad, S., Afthanorhan, A., & Awang, Z. (2017a). The development of comparative bias index. In *AIP Conference Proceedings* (Vol. 1870, No. 1, p. 060008). AIP Publishing.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.

Arbuckle, J. L. (2010). IBM SPSS Amos 19 user's guide. *Crawfordville, FL: Amos Development Corporation*, 635.

Asnawi, A., Awang, Z., Afthanorhan, A., Mohamad, M., & Karim, F. (2019). The influence of hospital image and service quality on patients' satisfaction and loyalty. *Management Science Letters*, 9(6), 911-920.

Assembly, U. G. (2000). United Nations millennium declaration. *United Nations General Assembly*.

Awang, Z. (2015). *SEM made simple: A gentle approach to learning Structural Equation Modeling*. MPWS Rich Publication.

- Aziz, M., Adnan, A., Afthanorhan, A., Foziah, H., Ishak, S., & Rashid, N. (2019a). The influence of employer value proposition in talent demand towards talent shortage in the Malaysian Islamic banking institutions: A SEM approach. *Management Science Letters*, 9(6), 843–850.
- Aziz, M. I., Afthanorhan, A., & Awang, Z. (2016). Talent development model for a career in Islamic banking institutions: A SEM approach. *Cogent Business & Management*, 3(1), 1186259.
- Aziz, M. I., Hassan, S., & Adnan, A. A. (2019b). An Empirical Investigation into Malay Workers' Intentions to Leave their Jobs. *International Journal of Innovation*, 7(10), 19.
- Basiago, A. D. (1998). Economic, social, and environmental sustainability in development theory and urban planning practice. *Environmentalist*, 19(2), 145–161.
- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological Bulletin*, 88(3), 588–606. <https://doi.org/10.1037/0033-2909.88.3.588>
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin*, 107(2), 238.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. *Sage Focus Editions*, 154, 136–136.
- Christopher Westland, J. (2010). Lower bounds on sample size in structural equation modeling. *Electronic Commerce Research and Applications*, 9(6), 476–487. <https://doi.org/10.1016/j.elerap.2010.07.003>
- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- Dalila, D., Latif, H., Jaafar, N., Aziz, I., & Afthanorhan, A. (2020). The mediating effect of personal values on the relationships between attitudes, subjective norms, perceived behavioral control and intention to use. *Management Science Letters*, 10(1), 153–162.
- Dees, J. G. (1998a). Enterprising nonprofits: What do you do when traditional sources of funding fall short. *Harvard Business Review*, 76(1), 55–67.
- Dees, J. G. (1998b). *The meaning of social entrepreneurship*. Kauffman Center for Entrepreneurial Leadership.
- Hair, J. F., Anderson, R. E., Tatham, R. L., & William, C. (1998). *Black (1998), Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.
- Hair, J. F., Gabriel, M., & Patel, V. (2014). *AMOS covariance-based structural equation modeling (CB-SEM): Guidelines on its application as a marketing research tool*.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1–2), 1–12.
- Harris, J. M. (2000). Basic principles of sustainable development. *Dimensions of Sustainable Development*, 21–41.
- Holmes-Smith, P., Coote, L., & Cunningham, E. (2006). Structural equation modeling: From the fundamentals to advanced topics. *Melbourne: Sreams*.
- IUCN, U. (1980). WWF. *World Conservation Strategy. Living Resource Conservation for Sustainable Development*. Gland, Switzerland, IUCN, UNEP, WWF.
- Kickul, J., & Lyons, T. S. (2012). Measuring social impact. *Understanding Social Entrepreneurship: The Relentless Pursuit of Mission in an Ever Changing World*, 176–200.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610.
- Majid, N. A., Zainol, F. A., Daud, W. N. W., & Afthanorhan, A. (2019). Cooperative Entrepreneurship in Malaysian Secondary Schools: A Review of Current Practices. *The Journal of Social Sciences Research*, 5(3), 812–818.
- Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups. *Psychological Bulletin*, 97(3), 562–582.
- Peredo, A. M., & McLean, M. (2006). Social entrepreneurship: A critical review of the concept. *Journal of World Business*, 41(1), 56–65.
- Rice, M. E., & Harris, G. T. (2005). Comparing Effect Sizes in Follow-Up Studies: ROC Area, Cohen's d, and r. *Law and Human Behavior*, 29(5), 615–620. <https://doi.org/10.1007/s10979-005-6832-7>
- Sanz, M. F., Ferrer, J. G., van Staaldin, W., Bond, R., & Hinkema, M. (2018). Evaluating Socio-economic Impact of Age-Friendly Environments. In *Building Evidence for Active Ageing Policies* (pp. 117–138). Springer.
- Shevlin, M., & Miles, J. N. V. (1998). Effects of sample size, model specification and factor loadings on the GFI in confirmatory factor analysis. *Personality and Individual Differences*, 25(1), 85–90.
- Short, J. C., Moss, T. W., & Lumpkin, G. T. (2009). Research in social entrepreneurship: Past contributions and future opportunities. *Strategic Entrepreneurship Journal*, 3(2), 161–194.
- Zietsma, C., & Tuck, R. (2012). *First, do no harm: Evaluating resources for teaching social entrepreneurship*. Academy of Management Briarcliff Manor, NY.

