Modelling The Multigroup Moderator-Mediator On Motivation Among Youth In Higher Education Institution Towards Volunteerism Program

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Abstract. This study aimed to evaluate the factors used for develop a best model of multigroup moderator-mediator effect on motivation among youth in higher education institution towards volunteerism program. The data be collected through questionnaires distributed at four higher education institution. This questionnaire is constructed based on five dimension which is motivation, benefits, goverment support, barrier and challenges. The data were distributed by using stratified sampling technique and involving 453 respodents . In this case, the data were analyzed through Structural Equation Modelling (SEM) by using Analysis Moment of Structural (AMOS) 18.0 to examine the influence of exogenous and endogenous variables. As a result showed that the goverment support is significant and direct influences on motivation, benefits, challenges and barrier. Moreover, the benefits and barrier is significant and direct influence on motivation while the challenges is insignificant influence on motivation. In generals, the findings revealed that benefits influence is most crucial for motivation of volunteerism. Next, moderation procedure is apply to examine the strength of influence of relationship between these variables. The findings suggest all path are insignificant unless goverment support on benefits.

Keywords: stratified sampling technique, Volunteerism, Structural Equation Modelling, Mediating and moderating effect

1.0 INTRODUCTION

Existing studies emphasize the level of involvement in volunteerism program especially among youth nowadays. One of these factor can be examined by the reason of volonteerism which is can be consider as the motivation (Rhyne, 1995). Four affective variables are of interest in this study which is barrier, benefits, goverment support and challenges. Volunteerism is defined as a professional or non-professional person who provides a services to a welfare or development organization, usually without reimbursement (The White Paper for Social Welfare, 1998). Barrier is referred as not about supported volunteering specifically (Eva Schindler-Raiman, 1987). According to Dingle, 2001, the benefits is extremely important if had supported by the contribution of goverment. Thus, this barrier hinder the growth of volunteery activities. Besides, the challenges also influence towards the volunteerism program especially when comes from the forces of globalization (Rothenberg, 2003). According to Carol Hardy-Fanter,1993 found that males and females took on different roles when volunteering. In this study, the benefits, barrier, and challenge play role as mediator variable since these variables can become exogenous and endogenous variable simultaneously.

Therefore, the prior studies is to examine the relationship between goverment support, benefits, challenges and barrier on motivation as well as their different relationships. Besides, the gender is also include to determine the strength of relationship for the whole variables. In generals, this study employ the moderating and mediating effect in order to achieve the objective research.

2.0 METHODOLOGY

2.1 Target Population

The target population for this study is among youth from the selected university which is majority of respodent age's must be between 15 to 40 years old. Since the university campuses are widely scattered in term of geographical location, the study applied the staratified sampling technique whereby in Terengganu only. Then, four higher education institution are selected randomly among the university available in Kuala Terengganu which is Universiti Malaysia Terengganu (UMT) ,Universiti Teknologi Mara (UiTM) Chendering, Universiti Sultan Zainal Abidin (UNISZA), and Institut Pengajian Guru Batu Rakit (IPGBR) . Thus, all students in the selected university are taken as respondents in the study. In other words, the number of students from both university that encompassed by variety faculty are as a population of the study. The data were collected are 453 respondents by using questionnaire distributed.

2.2 THE MEASURING INSTRUMENTS IN THE STUDY

The study adopts the questionnaires developed by emerged of the literature review based on the previous research, to measure the level of involvement in volunteerism program among youth. Hence, the variable of motivation is refering of level of involvement is measured to determine the relationship of variable that related with other variable such as benefits, challenges, barriers, and goverment support. Thus, the instruments was encomprised of five section provided for the respondents. Since this research is developed for the students from higher education institution, this study would customized the items accordingly an order to suit students in the education industry.

3.0 THE PROCEDURE DATA ANALYSIS

The following table presents the type of realibility and validity with literature supported:

Validity	Technique	Description
Construct Validity		
Convergent validity	CFA used in covariance-based SEM only	GFI>0.90, NFI> 0.90, AGFI> 0.9 and an insignificant c^2, to show undimensionality. In addition, item loadings should be above 0.707, to show that over half the variance is captured by the latent construct (Chin,1998, Hair et. Al., 1998, Segars, 1997, Thompson et. Al., 1995).
Discriminant Validity	CFA used in covariance-based SEM only	Comparing the c^2 of the original model with an alternative model where the constructs in question are united as a construct. If the c^2 is significanly smaller in the original model, discriminant validity has been shown (Segars, 1997)
Convergent and discriminant validity	PCA used in PLS can assess factor analysis but not as rigourously as a CFA in LISREL does and without examining undimensionality	Each construct AVE should be larger than its correlation with other constructs, and each item should load more highly on its assigned construct tahn on the other constructs.
Realibility		
Internal Consistency	Cronbach Alpha	Cronbach alpa should be above 0.60 for explanatory research and above 0.70 for confirmatory researc (Nunally, 1967, Nunally, 1978, Nunally and Bernstein, 1994, Peter, 1979)
	SEM	The internal consistency coefficient sholud be above 0.70 (Hair et.al., 1998, Thompson et.,al 1995)
Unidemensionality Realibility	Covariance-based SEM only	Model comparison favor unidemensionality with a sognificantly smaller c^2 in the proposed measrement model in comparison with alternative measurement models (Segars, 1997)

Table 1: realibilty and validity

Category	Index	Name	Acceptance	
Absolute Fit	GFI	Goodness-of-fit Index	GFI > 0.90	Joreskog and Sorbom (1986)
	AGFI	Adjusted Goodness-of-fit test	AGFI > 0.90	Joreskog and Sorbom (1986)
	SRMR	Standardized root mean square residual	SRMR < 0.08	Bentler (1995)
	RMSEA	Root mean Square Error Approximation	RMSEA < 0.06	Steiger & Lind (1980)
Comment	Higher values of GFI and AGFI as well as lower value of SRMR and RMSEA indicate better model data fit.			
Incremental Fit	NFI	Normed Fit Index	NFI > 0.90	Bentler & Bonett (1980)
	TLI	Tucker Lewis Index	TLI > 0.95	Tucker and Lewis (1973)
	RNI	Relative noncentrality Index	Rni > 0.90	McDonald & Marsh (1990)
	CFI	Comparative Fit Index	CFI > 0.95	Bentler (1989,1990)
	IFI	Incremental Fit Index	IFI > 0.90	Bollen (1989)
Comment	Higher values of incremental fit indices indicate larger improvement over the baseline model in fit.			
Parsimonous Fit	Chisquare/ Df	Chisquare/ degree of Freedom	Chisq/Df < 5.0	Marsh and Hancover (1985)
Comment	Very sensitive to the sample size.			

Table 2: Type of Fitness Model

The following table presents the type of fitness with the literature support for the widely employed fitness indexes:

Name of	Name of	Index Full	Level of	Literature

4.0 DATA ANALYSIS

Structural Equation Modelling (SEM) have two types of model which is measurement model and structural model. Basically, mesurement model is frequently used nowadys among reseracher to analyze for Confirmatory Factor Analysis (CFA). Hence, the researcher needs to run CFA procedures for each construct involved in the study. All measurement models must be validated and accepted prior to modelling the structural model. In this case, there are have 5 dimension which is motivation (16 items), challenges (6 items), goverment support (9 items), barrier (8 items), and benefits (14 items). According to Hair et.al, 2010, the factor loadings for each items should be greater than 0.6. However, factor loading which greater than 0.50 is also accepted depend on the decison by the researcher if have strong reason not to do so. The table below shows the territory items results leave after remove:

Construct	Number of items before remove	Number of items after remove
Motivation	16	15
Benefits	14	11
Challenges	6	6
Barrier	8	4
Goverment Support	9	6

Table 3: Number of item remove

The CFA procedure produces several indices which indicates the goodness of the measurement model. This procedure can be namely as the model fits. Some indices provide meaningful explanation, together with proper literature review support, concerning the fitness of the model. There are three categories of fitness which is absolute fit, incremental fit, and parsimonous fit. The reseacrher should choose any one represent for each categories. This study elect to employ the baseline comparion represent for incremental fit, RMSEA represent for absolute fit, and the chisquare/ Df represent for parsimonous fit. The RMSEA is fit when the default model should be less than 0.08. Other than that, the baseline comparison which include CFI, IFI, TLI should be greater than 0.9 to achieve the fitness of measurement model. In this case, the baseline comparison and RMSEA is not a good fit to data at hands. Thus, the modification model is required in order to improve its fit. Also, the modification indeces should be employ to determine if there is any pair of measurement error happen to correlate with each other. If the items are correlated, the constrains should be employ to remedy the multicollinearity problem. The modification indices produced by AMOS 18.0. If there have any pair is above 15.0, the researcher needs to apply constraints. Then, the internal reliablity, convergent validity and discriminant validity achieve the fitness for each measurement model. The convergent validity and discriminant validity should be apply in order to enhance the validity of measurement model. The table below shows the result:

The convergent validity:

Construct	Items Loadings	Factor Loading	Cronbach Alpha	CR	AVE
Benefits	B1 B3 B4 B5 B6 B7 B9 B10 B11 B12 B14	0.636 0.669 0.711 0.775 0.811 0.772 0.643 0.726 0.824 0.776 0.644	0.923	0.898	0.503
Motivation	M1 M2 M3 M4 M5 M6	0.591 0.783 0.755 0.777 0.799 0.809	0.941	0.941	0.519
	M7 M8 M10 M11 M12 M13 M14 M15 M16	0.569 0.702 0.777 0.742 0.715 0.634 0.767 0.709 0.698			
Challenges	C1 C2 C3 C4 C5 C6	0.688 0.798 0.595 0.748 0.721 0.635	0.849	0.844	0.477
Barrier	Bar1 Bar2 Bar3 Bar4	0.627 0.765 0.775 0.522	0.761	0.758	0.452
Goverment_Support	G1 G2 G3 G4 G5 G6	0.688 0.798 0.595 0.748 0.721 0.635	0.835	0.838	0.467

Table 2: Convergent validity

4.1 Convergent validity

According to Fornell and Larcker, 1981 proposed three procedures to asses for convergent validity of the measurement items which is include tradisional method (cronbach alpha), composite realibility, and the average variance extracted. According to Nunally & bernestein, 1994 explore the Cronbach Alpha with a value of 0.7 or higher being recomended.

The discriminant validity:

Benefits	Motivation	Challenges	Barrier	Goverment_Support
0.709				
0.690	**0.721**			
0.219	0.229	**0.691**		
0.287	0.297	0.390	**0.672**	
0.451	0.449	0.277	0.261	**0.683**

Table 4: Discriminant validity

The diagonal values with bold are the square root of Average Variance Extracted (AVE) while other value are the correlation between the respective construct from pooled confirmatory factor analysis. The discriminant validity is achieved when all the diagonal value is higher than in its row and column. According to Fornell et.all, 1982 proposed discriminant validity is present when the variance shared between construct and any other construct in the model is less than the variances that construct shares with its indicators.

4.2 Structural Model 1(Mediating Effect)

After the measurement model have been validated, the next step is to assemble these construct in the structural model. The path coefficient

from the structural equation modelling are shown in Figure 1(see Model 1).This model can be namely as the multigroup mediating effect since there had three model classify as the mediator which is benefits, challenges, and barrier. As usual, the structural model should run for for the goodness of fit-test in order to achieve the fitness of model data-fits. In this case, this study also elect the baseline comparison and RMSEA for fitness. Hypotheses 1,2,3,4,5, and 7 were all supported. Therefore, barrier and benefits construct were partially mediate which had significant direct effect. However, the construct for challenges is fully mediate which had a non-significant direct effect.

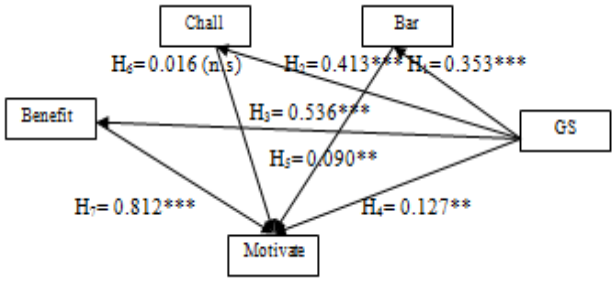
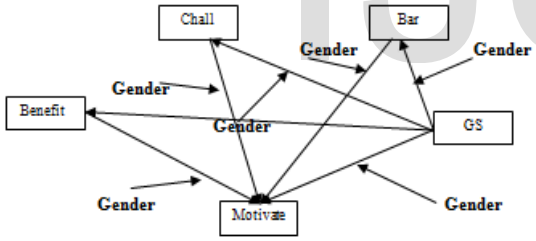


Figure 1: Mediating Effect
***** = p< 0.001 ** = p< 0.05 n.s= non-significant**

4.3 Structural Model 2 (Moderated Mediation)

Then, the structural Model 1 is run for the moderator procedure to determine the strength of relationship influences of these variables. Hence, the new name for structural model is moderator-mediator. In this case, the demographic gender is chosen as the moderating effect to be tested for the whole path. The figure below shows the conceptual design for multigroup moderator-mediator:



The conceptual design

Figure 2: Conceptual Design

The result is shown as below after run the moderator procedure:

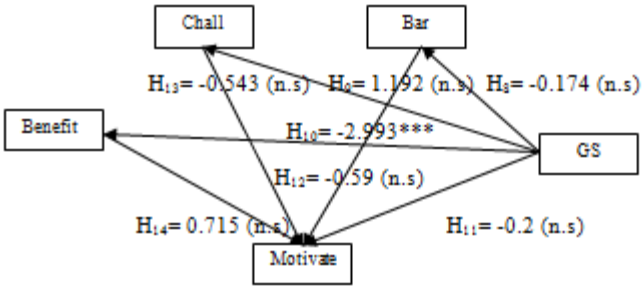


Figure 3: Moderator-mediator
*** = p< 0.001 ** = p< 0.05 n.s= non-significant

By regarding the significant for each path, hypotheses 8, 9, 11, 12, 13, and 14 are not supported. In this case, only hypothesis 10 is supported and this result is completely different compare to the Model 1. Therefore, three path which is (GS->Motivate), (Bar-> Motivate), and (Chall-> Motivate) are non-moderation and the rest are partially moderation.

5.0 DISCUSSION AND CONCLUSION

Using the volunteerism as a research model, the results for mediating effect show that benefits, barrier, and goverment support are significant direct effect on motivation while the challenges is insignificant different effect. In addition, the type of mediator variables is also included based on the significant value produced. As a result, the benefits and barrier are partially mediation while challenges is fully mediation. In order to improve the strength influences of relationship between these exogenous and endogenous variables, the gender is employed. The result shows that the respondent's gender moderates the causal effect of goverment support on benefits only and the rest are insignificant.

There are some limitation of this study. The scope of the study is only limited to the youth at higher education institution at Kuala Terengganu. Hence, the results might only be generalised to the above population. In the other words, the findings might be different if the scope is increase to include more categories might pose different characteristics. Future research may include additional variables and the chracterisctics of respodents to enhance their impact on the motivation. Moreover, attempts could be made to unpack and clarify the role and properties of challenges as a variable in the volunteerism program. Then, Model 2 which include gender as the moderator variable is may not suitable for these variable. Hence, another variable would be employ to carry out this future research.

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