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Mediating Impact of Psychological Autonomy on the relationship between Entrepreneurship Engagement and Wellbeing

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Abstract---*Present study aims to investigate the mediating role of psychological autonomy (PSA) on the relationship between entrepreneurship engagement (EENG) and well-being (WB). For this purpose, data are collected through an online questionnaire survey from 267 entrepreneurs and business owners of different industries. The study analyzed the data by using smart PLS's SEM. Smart PLS used variances-based approach of partial least square that explains measurement errors and therefore accounts for providing more precise results as compare to OLS regressions. The results show significant and positive relationship between EENG and WB. PSA mediates the linkage between EENG and WB. The study suggested that EENG should be promoted as it helps individuals in establishing their own goals, increases the level of competency and enhances WB.*

Keywords---*psychological autonomy; wellbeing, entrepreneurship engagement; structural equational modeling.*

I. Introduction

Existing researchers have shown their interest in individual's well-being (WB) and find that employment is one of the main factors that affects individual's WB (Keller, 2015). Studies show that employed people are more satisfied from their lives as they can fulfill their basic requirements. Looking at the differences between self-employed and employed, studies clearly showed that self-employed individuals are more satisfied from their lives as compare to employed because it provides them means of psychological autonomy (PSA).

During last few years, the emphasize on WB has encouraged to the foreground of academic research on entrepreneurship (ENT). Business researchers start emphasizing on the outcomes of ENT. Different studies indicated WB as an essential outcome of ENT and reveal that the mental health of entrepreneurs is affected by psychological mechanism (Dahalan, Jaafar & Rosdi, 2013) because ENT is a vigorous process (Dijkhuizen et al., 2015). Studies also find that ENT leads to the higher level of stress (Haynie & Shepherd, 2011) and fear (Lange, 2012). However, it is also related with satisfaction of needs, objectives and ambitions. Accordingly, ENT may have positive and significant contributions in the attainment of basic psychological requirements, that resultantly increases individual's WB (Rahmani, Gnoth & Mather, 2018).

Though, there is a deficiency of a combined speculative framework that explores the psychological contrivances, through which WB of individuals are influenced by ENT (Veldhoven, & Schalk, 2016). To fill this existing gap, present study focuses on the probable fit between ENT and WB. Particularly, this study takes support from the self-determination theory (SDT) which proposes that psychological autonomy (PSA) is a key that promotes individual WB (Simmons et al.,2019)

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Present study makes several contributions to the literature of ENT. Firstly, most of the previous studies examined the direct impact of ENT on WB (Fredrick, 2016; Ryff, 2019; Dijkhuizen et al., 2015) without considering the mediating role of psychological variables. On the basis of SDT, this study fills this gap by raising a dispute that ENT engagement is exclusively helpful in achieving the psychological needs and well-being of an individual as it permits individuals to self-establish their own methods and tactics of work, let people to alter the method of wage earning into a significant detection that can accomplish their intrinsic growth propensities (Foo, 2011). Particularly, this study develops a model in which the mediation between EENG and WB has been tested through structural equational modeling (SEM) approach. Secondly, existing business researchers emphasized on the importance of the positive effects on different ENT consequences (Binder & Coad, 2016; Hanglberger & Merz, 2015). Most of the studies used quality of life as a proxy of well-being (Dahalan, Jaafar & Rosdi, 2013; Fredrick, 2016). This paper uses life satisfaction for measuring the individual's well-being, that is less focused by existing researchers. Lastly, most of existing researchers, worked on the relationship between ENT and EB, perceived ENT as self-employment (SE). However, gradually, theories proposed that EENG and SE are two different concepts (Cordeiro et al., 2016). Therefore, the focus on SE restricts our considerations of ENT, as a persuasive and interactive singularity. Therefore, the focus of present study is not on ENT, but on EENG.

Remaining paper has following structure: section 2 represents the review of existing literature and construction of hypothesis, section 3 depicts methodology and data, section 4 represents empirical findings, while section 5 is about conclusion and implications of the study.

II. Literature Review

This section explains the review of existing literature and construction of hypothesis.

Entrepreneurship Engagement (EENG) and Wellbeing (WB)

Several studies investigated the influence of EENG on WB. For instance, Fredrick (2016) examined the effects of entrepreneurship (ENT) on the quality of life by using an extensive approach. The findings of the study documented positive effects of ENT on the quality of life. Dahalan, Jaafar & Rosdi (2013) developed a potential framework by using the existing theories on the association between EENG and life quality. The study further investigated the relationship between EENG and life quality and indicated positive and significant contributions of EENG in the quality of life. Ryff (2019) examined the association between EENG and WB. For this purpose, they utilized the data of 345 entrepreneurs and reported positive relation between these two variables. Ryan & Deci (2017) done a valuable work that was conducted for investigating the influence of ENT on individual well comforts. The study used 2 different dimensions of well-being that is life satisfaction and quality of life. The study found positive effect of ENT on both of the dimensions of WB. The significance for life satisfaction was stronger as compared with life quality. Dijkhuizen, Gelderen, Kautonen & Fink (2015) used a sample of 135 Dutch entrepreneurs and investigated the influence of EENG on the WB. For measuring the WB, the study used two different proxies; life satisfaction (LS) and individual strength (IS). The study revealed positive association among IS, LS and EENG. The study concluded that the higher a person is engaged in entrepreneur activities, the higher the person will be satisfied from his life because he is independent of doing anything in his business, he is not answerable to his boss/manager, therefore he is more strengthen. Veldhoven, & Schalk (2016) investigated the effects of ENT and non-ENT on the individual's well-being. For this purpose, they utilized the data of 234 entrepreneurs and 195 traditional workers (non-EENG) and revealed significant effect of ENT on the WB of individual. While their study did not find any significant association between WB and non-ENT because work arrangement in traditional institutions were usually based on same schedules and operating techniques that cannot inhibit self-directed activities. In the summary of above literature, it is noted that most of the studies are conducted in the relationship between ENT and WB while the relationship between EENG and WB is less focused by

the previous researchers. Thus, the current study aims investing the effect of EENG on WB by using life satisfaction as a proxy of WB. On the basis of above debate, it is supposed that:

H_1: There is positive relationship between EENG and WB.

Psychological Autonomy (PSA) and Wellbeing (WB)

Several studies found positive effects of PSA on WB. Particularly, Fotiadis, Abdulrahman & Spyridou (2019) worked on the relationship between PSA and WB and revealed a positive association between PSA and WB. The study concluded that PSA regulates a person's capability of making a conversant decision. Moreover, it also induces a degree to which a person has control over his choices. Keller (2015) also concluded that individual can acquire WB through PSA, this conclusion was based on the empirical findings of his study. Rahmani, Gnoth & Mather (2018) investigated the influence of PSA on individual competitiveness (INC) and revealed positive influence of PSA on INC. Study further concluded that the higher the existence of PSA in an individual, the higher will be the level of INC. Similarly, Simmons et al., (2019) also empirically investigated the relationship between PSA and INC and revealed a positive association between PSA and INC. In line with this discussion, following hypothesis is formulated:

H_2: There is positive link between PSA and WB.

Entrepreneurship Engagement (EENG) and Psychological Autonomy (PSA)

Numerous studies linked entrepreneurship with individual autonomy (Benz & Frey, 2003; Haynie & Shepherd, 2011; Lange, 2012). According to these studies, EENG is appreciated for the autonomous comfort (Foo, 2011) or practical value (Frey, Benz & Stutzer, 2004) because it makes provision of greater autonomy from negligible restriction (Shane, Locke & Collims, 2003). Particularly, Haynie & Shepherd (2011) conducted their research on the group of restricted experts who were concerning about autonomous employment as it makes them the provision of their physical and psychological requirements. However, the focus of the previous study was on the individuality from the employment orders instead on exploring the positive effects of EENG. Few evidences have been found which reveal that EENG leads WB through individual autonomy (Gelderen, Kautonen, & Fink, 2015)

In contrast to forgoing assumptions, the basic foundation of present study is to investigate the direct and indirect effect of EENG on WB. Study tries to examine the indirect effect through PSA. Literature showed that, it is not only freedom value, through which ENT affects WB (Cordeiro, 2016), but ENT has some effects on WB also through PSA (Hessels, Rietveld & Zwan, 2017). PSA is significantly related with self-reliance. In other words, being free form employment restraints and acting in independent decision harmony, are two different things. ENT doesn't include liberty from employment restraints, but it also assists independent support to individuals. Several studies (i.e. Binder & Coad, 2016; Hanglberger & Merz, 2015) linked the need of autonomy with the well-being measures. Consequently, supporting by the above debate, the study formulates the following hypotheses:

H_3. There is significant relation between PSA and EENG.

H_4: PSA mediates the relationship between EENG and WB.

III. Methodology

This section represents the brief description of data, variables and econometric models and tool.

Sample and Data

The survey appliance uses the questions of multiple-choice to analyze the respondent's profile. Some parts of the survey are accomplished by Likert-type 5-point questions, while others are accomplished through categorical scale. For finding the participants, this study used the business links of the authors, that comprise on the business owners of different industries of Indonesia. Moreover, the URL of the questionnaire was shared to various groups, related with entrepreneurship for gathering the data. Almost 267 participants filled the online questionnaire. Data are used to authenticate the measures of the study and to accomplish follow-up analysis.

IV. Description of Variables

Well-being (WB)

WB is used as a dependent variable of the study which is measured through life satisfaction (LS) (Diener, Inglehart & Tay, 2013). The elements of LS have universal nature, and are formulated in association to satisfaction with entrepreneurship. Elements are adapted for inclusion in our study that are based on Likert-type 5-point Scale with 1: strongly disagree to 5: strongly agree. An example element is "I am satisfied with my entrepreneurial life".

3.2.2. Psychological autonomy (PSA)

PSA is used as a mediating variable of the study. The elements of PSA are also universal in nature and based on 5 type Likert scale, adapted from (Shir, Nikolaev & Wincent, 2019).

Engagement in entrepreneurship (EENG)

EENG is used as an independent variable of the study. It is a categorical variable having following classifications: 0 = no EENG, 1 = likely EENG, 2 = deliberate EENG, 3 = promising EENG, 4 = young business owner, 5 = potential business owner. All the elements are adapted from previous study (Zwan et al., 2016) having universal nature.

Analytical Tool

The study analyzed the data by using smart PLS's structural equational modeling (SEM). Smart PLS used variances-based approach of partial least square that explains measurement errors and therefore accounts for providing more precise results as compare to OLS regressions (Hair et al., 2014). Furthermore, PLS is beneficial to other path modeling softwares that used covariance SEM (i.e., AMOS, EQS and Liseral), in case of small data file. SEM is linked with multiple advantages, the most important of which include estimation of multiple relationships, measurability of latent variables, calculation of measurement error, and examination of standardized variables. In present study, SEM is used to test the main hypothesis. Study examined the standardized variables in the bootstrapping process by using a sample of 267 respondents. Finally, path analysis is another advanced statistical method by which both direct and indirect effects of each independent variable on the dependent variable can be detected. Study used path analysis for investigating both direct and indirect effects of independent variable on the dependent variable.

Model Specification

In order to analyze the mediating impact of PSA on the linkage between EENG and WB, the study develops following econometrics models:

$$WB = \beta_0 + \beta_1(EENG) + \mu \quad \ldots\ldots\ldots \quad (1)$$

$$WB = \beta_0 + \beta_1(PSA) + \mu \quad \ldots\ldots\ldots \quad (2)$$

$$PSA = \beta_0 + \beta_1(EENG) + \mu \quad \ldots\ldots\ldots \quad (3)$$

$$WB = \beta_0 + \beta_1(PSA) + \beta_2(EENG) + \mu \quad \ldots\ldots\ldots (4)$$

V. Empirical Results

This section represents the empirical findings for the mediating role of PSA in the linkage between EENG and WB.

Measurement Model

Present study used SEM for testing the proposed hypothesis of the study by using the software of smart PLS (SPLS) that is based on two dynamic multivariate methods, multiple regression and factor analysis. First step of SEM_SPLS is the evaluation of measurement model that is used for testing the validity and reliability of elements (Vinzi et al., 2010). Figure 1 shows the results of measurement model which depicts the composite reliability of constructs, outer loadings of each individual item, average variance extracted from each construct, and discriminate validity.

Confirmatory Factor Analysis (CFA)

Table 1 depicts the results of CFA used to check the reliability or validity among each item of the construct. Loading values of Table 1 shows the convergent validity of each item. According to Hair et al., (2011), data are valid if loading value of each item is greater than 0.4, if the value is less than 0.4 then there is a need to exclude that item from the construct. In the current case, all the loading values are greater than 0.4 showing that convergent validity is present in the data. Moreover, the value of AVE represents the convergent validity of each construct. There will be the presence of convergent validity in each construct if the value of AVE is greater than 0.5 (Hair et al., 2011). In this case, the value of AVE for all constructs (EENG = 0.528), (PSA = 0.521), (WB = 0.643) are greater than 0.5, stating that convergent validity is present in each of the construct.

Value of Cronbach's alpha (α) is used to test the reliability of each construct. For the current sample, values of α range from 0.524 to 0.847 indicating that each multi-item construct retains reliability[2]. The values of EENG (α = 0.88), PSA (α = 0.846), WB (α = 0.921) show that WB is exceptional reliable while EENG and PSA are highly reliable. Value of CR in Table 1 is used for testing the construct validity of the data. If the value exceeds 0.7, then there will be presence of construct validity in the data (Hair et al., 2011). The value of EENG (CR = 0.908), PSA (CR = 0.883), WB (CR= 0.935) show that all the values are greater than 0.7, thus, it is concluded that there is presence of convergent validity in the data.

Discriminate Validity

Result of discriminate validity are shown in Table 2. Discriminate validity is measured through HTMT ratio. According to Voohees et al., (2016), there will be presence of discriminate validity in data if the value of HTMT is less than 0.85. The highest value of HTMT is 0.798, while the lowest HTMT value is 0.674 which indicates that there is presence of discriminate validity in our data.

Structural Model

Second step of SEM_PLS is the evaluation of structural model, comprises on collinearity issues, good-fit of model, and path coefficients (see Figure 2).

Collinearity Issues of Structural Model

[2] According to Hinton et al. (2004), if the value of α is 0.90 or above then exceptional reliability, if the value is in between 0.70-0.90 then data is highly reliable, moderate reliability occurs when the value is in between (0.50-0.70) and if the value is 0.5 or below it shows that there is low reliability in the data.

If there is problem of collinearity among items of construct, then the results will be spurious. The issue of collinearity in items is detected through VIF. All the values of VIF in Table 1 are less than 5 which concluded that the collinearity issue is not present among items of the constructs.

Path Modeling

Table 3 elaborates the results of direct and indirect effects. Bootstrapping method has been used by the study for testing the significance of path coefficients. Results of direct effect are tested for three proposed hypotheses of the study. Path coefficient of H1 shows that there is significant relation between EENG and WB at 1%. The coefficient of EENG (0.768) depicts that 1-unit change in EENG results 0.768 units change in WB. So, H1 is supported. While, the Path coefficient of H2 indicated the significant relationship between WB and PSA at 1% level of significance. Particularly, the coefficient of PSA (0.826) depicts that 1-unit increase in PSA tends to increase WB by on average 0.826 units, supporting H2. Similarly, path coefficient of H3 also revealed the significant relationship between EENG and PSA at 1% significance level. For instance, 1-unit increase in EENG tends to increase PSA by 0.837 units. Hence confirming H3.

However, results of indirect effects test the main proposed hypothesis (mediation). Result shows the significant indirect effect of EENG on WB through PSA. Particularly, path coefficient of H4 (0.691) shows that 1-unit change in EENG will change WB by on average 0.691 units through PSA. It prostrates the significant mediating role of PSA on the association between EENG and WB.

VI. Discussions and Conclusions

Existing researchers have shown their interest in individual's well-being (WB) and find that employment is one of the main factors that affects individual's WB. Studies show that employed people are more satisfied from their lives as they can fulfill their basic requirements. Looking at the differences between self-employed and employed, studies clearly showed that self-employed individuals are more satisfied from their lives as compare to employed because it provides them means of psychological autonomy (PSA). In this regard, most of the existing studies examined the impact of ENT on WB by perceiving ENT as self-employment (SE). However, theories proposed that EENG and SE are two different concepts. Therefore, present study aims to investigate the impact of EENG on WB. Moreover, study also examines the mediating role of PSA on the association between EENG and WB on the basis of SDT, which is not incorporated by previous studies. For this purpose, study collected the data through questionnaire from 267 entrepreneurs and business owners of different industries. The study analyzed the data by using smart PLS's structural equational modeling (SEM). Smart PLS used variances-based approach of partial least square that explains measurement errors and therefore accounts for providing more precise results as compare to OLS regressions. SEM is used to test the main hypothesis. Standardized variables are examined in the process of bootstrapping by using a sample of 267 respondents. Finally, path analysis is conducted for analyzing the direct and indirect effects.

Result shows the significant positive relationship between EENG and WB as EENG provides the means of attainment of desires, that makes an individual satisfied from his life, and life satisfaction is a measure of WB. Results are consistent with (Veldhoven, & Schalk, 2016; Ryan & Deci, 2017). Result also shows that PSA mediates the relationship between EENG and WB; hence confirming SDT. EENG provides PSA to an individual which means that a person is independent of doing anything in his business. In other words, there are no restrictions imposed on a person, which in turn makes an individual more satisfied from his life. Results are also consistent with the empirical studies (Haynie & Shepherd, 2011; Gelderen, Kautonen, & Fink, 2015).

Implications of the Study

This study implies that EENT leads towards WB. But the psychological mechanism that underlies in the process of WB, occurs in several ways. Particularly, job base ENT (INT) have only direct effects on WB, which means that it only enhances the individual's WB by providing them the means of achievement of desires. While independent ENT have both (direct and indirect) effects on WB. It not only provides the means of needs satisfaction but it also provides PSA to the individual that enhances the feelings of competency. On the basis of results, it is recommended that INT are restricted by the schedules of their institutions that served as constraints of their ability of self-organizing behavior at work. For example, it might be possible that INT may have self-sufficiency to follow an autonomous project, but these projects are further appraised by advanced supervision and implemented within the restraints of organization. INT cannot provide PSA. It elaborated that why there is need of ENT and how it leads PSA. An ENT individual is self-reliant an ENT can make any project and its implementation, he cannot be facing organizational restriction in the implementation of that project. Therefore, leads higher satisfaction and also having indirect effect on WB. Therefore, it is suggested that there is a need to promote EENG as it helps individuals in establishing their own goals, increases the level of competency and enhances WB. Also, there is a need that organizations should lessen their restrictions on its employees by proving PSA to their employees, so that they feel free of doing a particular thing in their organization that is related to their jobs.

Limitations and Future Work

This study has few limitations: sample size is small, and data are collected through questionnaire URL. Future study can increase the sample size and collect the data from ENT personally. Secondly, the study uses only one measure of wellbeing that is life satisfaction, future studies may use different measures of wellbeing such as life quality or so on. Lastly, this study used only one psychological mechanism (PSA) as a mediator, future studies may use different psychological mechanisms to test the mediation in the relationship between EENG and WB.

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Appendix

Table 1: Confirmatory Factor Analysis (CFA)

constructs	*Items*	*loadings*	*Cronbach's alpha (α)*	*CR*	*AVE*	*VIF*
EEENG	EENG1	0.732	0.88	0.908	0.528	2.134
	EENG2	0.922				1.435
	EENG3	0.876				1.986
	EENG4	0.606				2.246
	EENG5	0.569				3.375
	EENG6	0.739				1.445
	EENG7	0.636				2.355
	EENGG	0.764				1.678
	EENG9	0.646				3.263
PSA	PSA1	0.617	0.846	0.883	0.521	1.2355
	PSA2	0.689				1.3767
	PSA3	0.714				2.4757
	PSA4	0.773				2.9855
	PSA5	0.747				1.3566
	PSA6	0.75				2.3654
	PSA7	0.749				1.3654
WB	WB1	0.842	0.920	0.935	0.643	3.2265
	WB2	0.735				1.3364
	WB3	0.832				2.3456
	WB4	0.84				3.2653
	WB5	0.728				2.1543
	WB6	0.867				1.5243
	WB7	0.807				1.5434
	WB8	0.842				1.6775

Table 2: Heterotrait–monotrat Ratio (HTMT)

	EENG	**PSA**	**WB**
EENG	0.674		
PSA	0.727	0.773	
WB	0.668	0.722	0.798

Table 3: Direct and Indirect effects

Direct Effects

Hypothesis	Path	Beta	Standard Errors	T-Statistics	P-Values	Decision
H1	EENG>WB	0.768	0.030	2.864	0.0045	✓
H2	PSA>WB	0.826	0.831	12.126	0.000	✓
H3	EENG>PSA	0.837	0.839	56.739	0.000	✓
			Indirect Effects			
H4	EENG>PSA>WB	0.691	0.061	11.377	0.000	✓

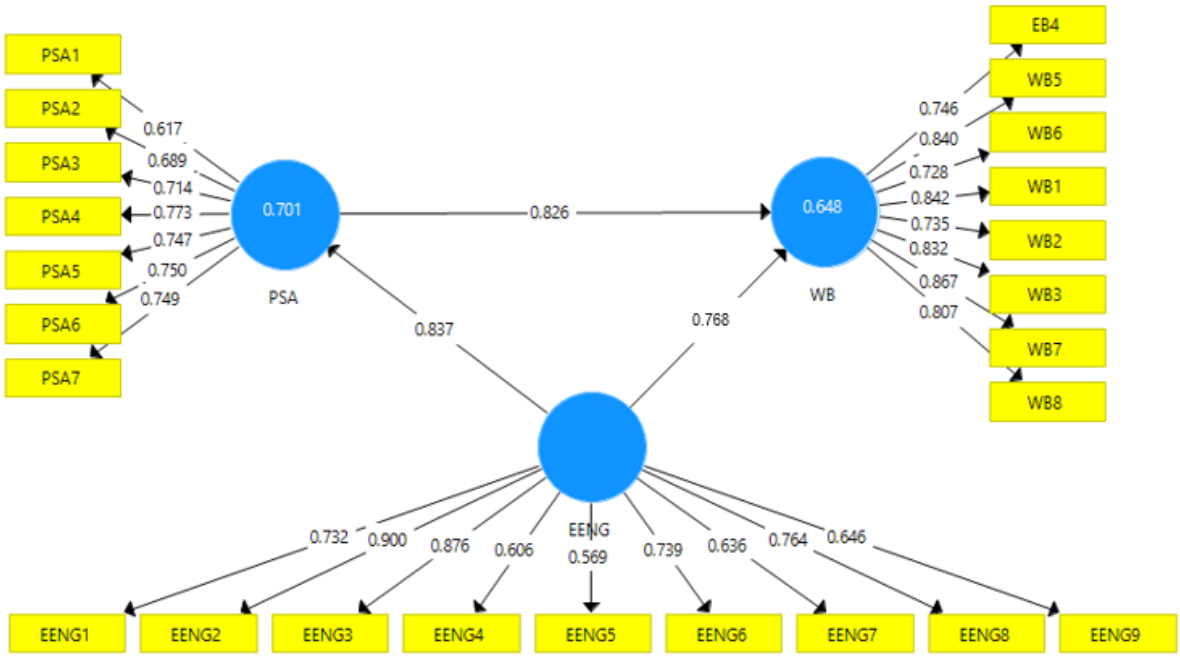

Figure 1: Measurement Model

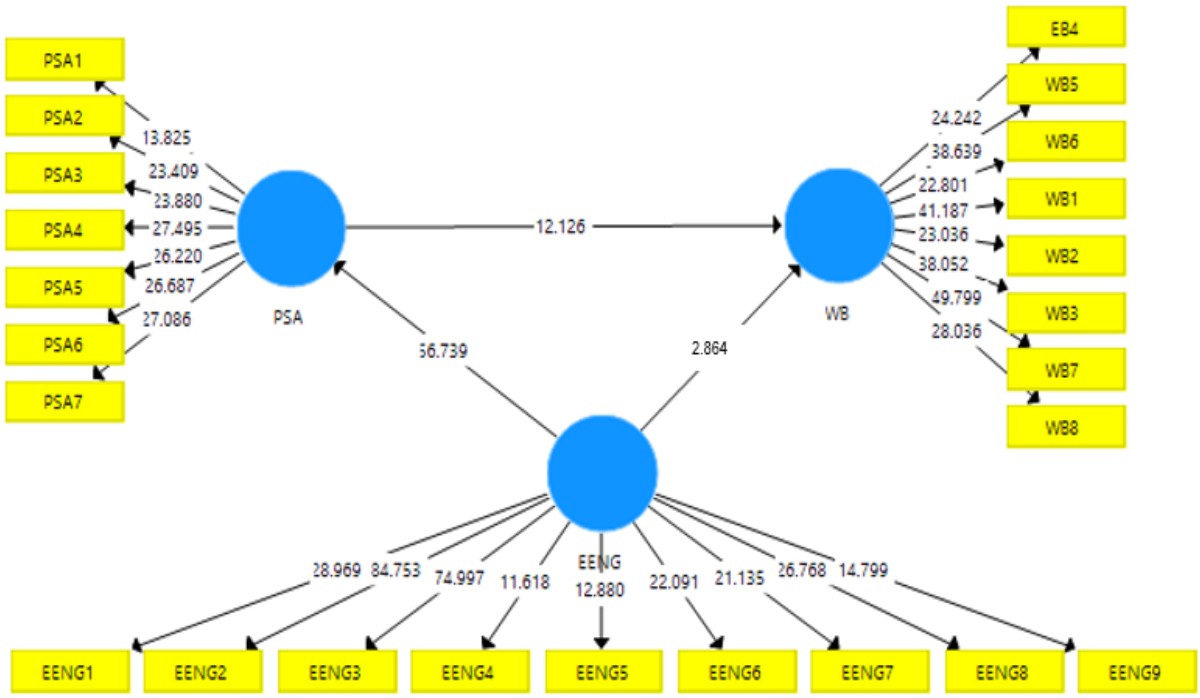

Figure 2: Structural Model