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Personality Traits as Predictors to Entrepreneurial Self-Efficacy with Gender and Family Background as Moderators

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Abstract

A model of personality traits toward entrepreneurial self-efficacy were assessed with personality traits as the independent variable, gender and family background of the entrepreneurs as moderators and entrepreneurial self-efficacy as the dependent variable. Survey questionnaires were distributed to entrepreneurs through Google Form (n=150) and collected by interview (n=150) of which 215 were returned, and 188 of these were valid. The responses were analysed using SmartPLS 2.0 to build the causal model. The results indicated that personality traits of openness, relational, and decisive significantly predicted entrepreneurial self-efficacy. Secondly, gender of entrepreneurs significantly moderated the relationship between personality traits of neutral and entrepreneurial self-efficacy. Lastly, the family background of entrepreneurs significantly moderated the relationship between personality trait of analytical and entrepreneurial self-efficacy. Future research framework might be expanded to include entrepreneurial intention, entrepreneurs' education specialization, financial background and support from parents.

Keywords:
Entrepreneurs
Entrepreneurial self-efficacy
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Family background.

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1. Introduction

The term "entrepreneur" has been used in the French language since the twelfth century, where the operation of feudal at the time hampered the development of entrepreneurship and innovation. However, by the eighteenth century, entrepreneurship and innovation prosper with the changed of legal and institutional conditions as well as the development of banking system (Iandoli, Landström, & Raffa, 2007). Entrepreneurship comprised of the process of planning, organizing, operating, and assuming the risk of business venture (Griffin, 2016) and according to Hisrich, Peters, and Shepherd (2017) entrepreneurship plays an important role in the creation and growth of business and prosperity of nations.

The importance of entrepreneurship reflected particularly in a developing nation like Malaysia, where entrepreneurs play a vital role in creating jobs and providing goods and services. The New Economic Policy (Jomo (2005), as cited in Bangura & Stavenhagen, 2005) is perhaps one of the most prominent government initiatives in encouraging entrepreneurship to achieve national unity, harmony and integrity, restructuring the economy and minimizing the level of poverty across the country (Tomos, Kumar, Clifton, & Hayms-Ssekasi, 2019). Furthermore, research also demonstrated that countries that are more focused on entrepreneurship tend to witness higher economic growth (Tomos et al., 2019).

In addition, research have demonstrated that personality, gender, and family background may influence human action in many conditions including entrepreneurship, particularly the self-efficacy of entrepreneurs (Arquisola & Muanar, 2019; Butz, Hanson, Schultz, & Warzynski, 2018; Mustapha & Selvaraju, 2015; Sahin, Karadag, & Tuncer, 2018; Subramanian, Gopalakrishnan, & Thayammal, 2012; Wang, Chang, Yao, & Liang, 2016). Therefore, given the strong influence of entrepreneurship at an individual level and beyond, as well as the need to know more about the link among personality, gender, family background and self-efficacy, three research questions were formulated, which include: (1) Are personality traits significant predictors of entrepreneurial self-efficacy? (2) Does gender of entrepreneurs moderate the relationship between personality and entrepreneurial self-efficacy? And (3) Does family background of entrepreneurs moderate the relationship between personality and entrepreneurial self-efficacy?

1.1. Personality Traits and Self-Efficacy

Personality traits refer to an individual's dispositions to exhibit particular type of response towards various situations (Rauch & Frese, 2007). According to Baum, Frese, and Baron (2014) personality traits reflects individual's characteristics pattern of thoughts, feelings, and behaviours, which imply the consistency and stability over time. In the study of entrepreneurship, researchers believe that that entrepreneurs tend to have unique set of personalities that emerged to shape their commitment toward a certain career (Gartner, 1988; Sahin et al., 2018).

The five-factor model of personality was originally proposed by Digman (1990) and later on been extended by Goldberg to its highest level of organisation in 1993. In summary, personality traits can be broadly classified into five categories – emotional stability, conscientiousness, openness, agreeableness, and extraversion (Sahin et al., 2018). Current research utilized the Leonard Personality Inventory (LPI) in measuring the personality traits. LPI was built upon the five-factor model of personality and therefore, are compatible.

Self-efficacy, on the other hand, is a domain-specific concept concerning individual's perceptions of their ability to perform course of actions that is needed to achieve desired outcomes (Gallagher, 2012). The concept has been studied over decades since it was first proposed by Albert Bandura in 1977. Although it has been suggested that self-efficacy beliefs may not reflect an individual's intention to pursue a particular goal, it is very crucial and heavily impact on eventual outcomes (Gallagher, 2012).

The relationship between personality and self-efficacy has been widely studied in various disciplines. For example, Kim, Dar-Nimrod, and MacCann (2018) indicated that teachers' personality predicted student performance self-efficacy. In addition, personality also predicted trauma-related coping self-efficacy (Bosmans, Van der Knaap, & Van der Velden, 2015) and political efficacy beliefs (Vecchione & Caprara, 2009). In view of the predictive relationship, all of these studies suggested that emotional stability, extraversion, and openness strongly predict self-efficacy. Teacher with low emotional stability may be interpreted as someone who is anxious with self-doubt, and in turn, affects students' performance self-efficacy Kim et al. (2018). Furthermore, patients with low emotional stability tend to enter a downward spiral, where they are more likely to experience higher traumatic stress (Bosmans et al., 2015). Conversely, individuals who are open and extrovert tend to display high level of engagement in activities, which encourages participation in politics (Vecchione & Caprara, 2009).

The predictive relationship between personality and self-efficacy has also been implicated in the study of entrepreneurship. Chan, Uy, Chernyshenko, Ho, and Sam (2015) suggested that personality has influence on entrepreneurial intention, whereby individual with proactive personality tend to have higher self-esteem to be entrepreneur. The statement was supported by Chen, Greene, and Crick (1998) where there were differences in entrepreneurial self-efficacy between entrepreneurs and non-entrepreneurs. More specifically, the personality trait of extraversion is positively related to entrepreneurial. Likewise, emotional stability, conscientiousness, and extraversion also affected entrepreneurial self-efficacy, which in turn, impact the entrepreneurial intention (Mei et al., 2017).

Apart from what has been discussed, various past studies have also demonstrated the relationship between personality and self-efficacy. Ample literature suggest that emotional stability, conscientiousness, agreeableness, extraversion, and openness were positively associated with self-efficacy (Lee & Klein, 2002; Nauta, 2004; Tams, 2008; Wang et al., 2016). These findings can be explained from theoretical perspective (John & Srivastava, 1999; Mei et al., 2017) where individuals who are emotionally stable tend to be calm and relaxed under stressful conditions. In addition, individuals with higher conscientiousness are more likely to control impulses and act in socially acceptable and goal-directed ways, and individuals who score high on openness are likely to learn new things and enjoy new experiences. Furthermore, people with dominant trait of agreeableness have better ability to get along and interact with others. Lastly, individuals who score high on extraversion tend to be more energetic, enthusiastic, and confident in comparison to individuals at the other end of the continuum. In general, the characteristics of these traits encourages individuals to believe in their skills and capabilities, which in turn, contribute to entrepreneurial self-efficacy to be involved in entrepreneurial activities (Mei et al., 2017).

1.2. Gender, Personality Traits, and Self-Efficacy

Research on gender differences indicated that there was a significant difference between male and female in almost all dimensions of personality traits and self-efficacy of entrepreneurs (Subramanian et al., 2012). The difference in the intention to become entrepreneurs can be observed between genders, where men tend to show stronger interest and are more likely to take risk to become entrepreneurs as compared to women (Joensuu-Salo, Varamäki, & Viljamaa, 2015). This finding was supported by Langowitz and Minniti (2007) suggesting that women then to display lower risk-taking behaviour as compared to men. The difference could be due the stereotypical gender roles, where females are expected to be accommodating and emotional, while males are expected to be self-confident and aggressive, which limits the opportunity of females to take part in entrepreneurial activities (Yukongdi & Lopa, 2017). However, a contradicting finding was suggested by Travis and Freeman (2017) where female tend to display higher level of agreeableness, openness, and neuroticism as compared to male. Although this finding is not consistent with previously reported cross-cultural studies on gender differences in personality traits, various literature indicated that gender will somehow influence the relationship between personality and entrepreneur self-efficacy (Costa Jr, Terracciano, & McCrae, 2001; Karwowski, Lebuda, Wisniewska, & Gralewski, 2013; Wang et al., 2016; Yukongdi & Lopa, 2017). Nevertheless, further research is needed to examine the complex moderating relationship between personality and entrepreneur self-efficacy, with gender as a moderating variable.

1.3. Family Background, Personality Traits, and Self-Efficacy

The influence of family background on entrepreneurial inclination are predominantly studied from two frameworks – the parental role model and family support model (Chaudhary, 2017). Literature suggest that individuals are more likely to become entrepreneurs if their parents are self-employed, as well as if their family are able to provide them social and financial support (Chaudhary, 2017). Parental role model studies indicated that individuals are more likely to demonstrate higher entrepreneurial intention if their parents are also entrepreneurials (Hisrich, 1990). Moreover, Farrukh, Khan, Khan, Ramzani, and Soladoye (2017) argued that parents play an important role in developing entrepreneurs' self-efficacy by acting as role models and delivering values. Even so, Marques, Ferreira, Gomes, and Rodrigues (2012) found a negative relationship between family background and entrepreneurial intention. The contradicting findings prompts a need for further research.

Family background not only influence the self-efficacy of individuals, which in turn, affects their entrepreneurial intention, but it also influence the development of their personality traits (Schröder & Schmitt-Rodermund, 2006). Personality characteristics are important antecedents in determining entrepreneurial activities. Literature shown that almost all constructs of personality traits are implicated in the intention to start a new business and the persistence to continue with current business (Schmitt-Rodermund, 2004). The relationship between family background and personality has long been studied by researchers. Carpenter and Eisenberg (1938) found that treatment by parents tend to impact the development of children's personality. For example, if parents value freedom and individuality, where children are allowed to arrange their activities and take their own responsibilities, then children with these privileges tend to be developed to be a more conscientious individual equipped with personal characteristics such as dependable, responsible, deliberate, and achievement oriented (McCrae & Costa Jr, 1987). Past research indicated the direct and mediating relationship between personality, family background, and self-efficacy, where it is still unclear whether family background will mediate the relationship between personality and self-efficacy.

2. Methods

2.1. Participants

Survey questionnaires were distributed to entrepreneurs through Google Form (n=150) and collected by interview (n=150) of which 215 were returned, and 188 of these were valid. Hence, total participants were 188 entrepreneurs in Malaysia. The non-probability convenience sampling was adopted for this study. Of the 188 entrepreneurs, 66.00% were male entrepreneurs and 34.00% were female entrepreneurs. Regarding the educational background of the entrepreneurs, 45.74% pursued their studies in business-related programme whereas the remaining 54.26% of the entrepreneurs pursued their studies in non-business programme. Concerning the family background, 39.40% of the entrepreneurs came from family with entrepreneurial background and the remaining 60.60% came from family with non-entrepreneurial background.

2.2. Instruments

LEONARD Personality Inventory (LPI): The short-version LEONARD Personality Inventory developed by Yong (2007) was adopted to measure the five personality traits, namely Openness, Neutral, Analytical, Relational and Decisive. The LPI is invented based on the Five Factors Model of personality. The 20-item short-version LPI was adopted in this study instead of the 100-item version due to more cost effective and comparable psychometric properties. Each statement was rated by a five-point Likert scale ranging from 1–Disagree Strongly to 5–Agree Strongly.

Entrepreneurial Self-Efficacy Scale: The Entrepreneurial Self-Efficacy Scale developed by McGee, Peterson, and Mueller (2009) was adopted to measure the entrepreneur's confidence in term of the ability to search for opportunities, to plan, to marshal resources, and to implement. The scale comprised of 19 items. Each item was rated by a five-point Likert scale ranging from 1 that indicated "Very Little" to 5 that indicated "A Lot" confidence in the ability to engage in each entrepreneurial task. There is no reverse scored item. The Entrepreneurial Self-Efficacy Scale is a reliable measure as the Cronbach coefficients range from $\alpha = .76$ to $\alpha = .85$ (McGee et al., 2009).

2.3. Procedure

Permission to conduct the research on entrepreneurs was obtained from the research ethics committee. Upon being granted the permission to collect data, questionnaires were distributed to the entrepreneurs. The informed consent was acquired and the respondents were assured that the data provided will be kept confidential and strictly for research purposes only. Data collected were entered in Statistical Package for the Social Sciences (SPSS) Statistics version 22 prior to model building using SmartPLS 2.0.

2.4. Data Analysis

SmartPLS 2.0 (Ringle, Wende, & Will, 2005) is based on the principles of path modeling and bootstrapping was employed to build the causal model. Partial Least Squares (PLS) that applies variance-based calculation method is robust for testing theoretical models (Ringle, Sarstedt, & Straub, 2012) and is getting more popular in Social Sciences research anaysis (Henseler, Ringle, & Sarstedt, 2015). PLS model consists of two sub-models known as measurement model and structural model. The measurement model that comprised the indicators and latent variables was analysed through factor analysis to verify the psychometric properties. This was followed by the analysis of the structural model, which showed the relationships between the constructs.

The construct validity of the measurement model is assessed through convergent validity and discriminant validity while construct reliability is assessed through composite reliability. The values, which included factor loadings, Average Variance Extracted (AVE), and Composite Reliability (CR) were utilised to assess the convergent validity of the measurement model (Hair, Black, Babin, & Anderson, 2010). As a minimum requirement, the factor loadings and AVE need to exceed .50 (Bagozzi & Yi, 1988). The composite reliability need to exceed the threshold of .70 (Chin, 1998). The discriminant validity was then evaluated using Fornell-Larcker criterion, which is to compare the square roots of AVE with the correlations with other variables (Fornell & Larcker, 1981). The discriminant validity is satisfied if the square root of AVE exceeded the correlations with other latent variables (Hair, Hult, Ringle, & Sarstedt, 2017).

For the analysis of this research, the path between personality traits and entrepreneurial self-efficacy was tested for significance through bootstrapping procedure. A bootstrapping of 5000 samples was applied. The path is considered significant if the *t*-value exceeded 1.96, $p < .05$ (Hair, Hult, Ringle, & Sarstedt, 2014). To examine the moderation effect of gender and family background of entrepreneurs , multi-group moderation technique as demonstrated by Gaskin (2013) was utilized. The *t*-value need to exceed 1.96, $p <$ .05 to demonstrate a significant moderation effect (Hair et al., 2014). Lastly, to confirm the generalisability of the present model across future samples, goodness-of-fit (GoF), which is a cut-off value for global validation of the PLS model was estimated. GoF of .10 indicated small effect sizes, GoF of .25 indicated medium effect sizes, while GoF of.36 indicated large effect sizes (Wetzels, Odekerken-Schroder, & van Oppen, 2009).

2.5. Assessment of Measurement Model

Table 1 presents the indicators for measurement model. Figure 1 illustrates the factor loadings of measurement model. The measurement model demonstrated adequate convergent validity as the factor loadings exceeded .50 (.60 to .87), the AVE exceeded .50 (.51 to .70), and the composite reliability exceeded .70 (.82 to .93). Six indicators of entrepreneurial self-efficacy (SE6, SE7, SE10, SE17, SE18, and SE19) were deleted due to low AVE, .41. The deletion of the 6 indicators resulted in satisfactory AVE. Table 2 shows the results summary for measurement model. The discriminant validity was satisfactory as the square roots of AVE (.71 to .84) exceeded the intercorrelations of the latent variables (.40 to .68) Table 3. As shown in Figure 2, the indicators were significantly related to the respective latent variable as the *t*-value exceeded 1.96 (7.02 to 35.90). The measurement model was considered reliable as the composite reliability exceeded .70 (.82 to .93).

Table-1. Indicators for measurement model.

Latent Variable	Definition	Label	Indicator
Personality Traits Openness	The new and original ways in dealing with life's situations.	O1	**I see myself as someone…** is known for coming up with new ideas
		O2	is innovative
		O3	is creative
		O4	is curious
Neutral	Prefer to remain behind the scenes and to follow rather than lead.	N1	tries to live in harmony with others
		N2	tries hard not to hurt people's feelings
		N3	likes to live in harmony with others
		N4	tries to think well of others
Analytical	Highly detail, information oriented, and sceptical in nature.	A1	thinks carefully before making a decision
		A2	is careful
		A3	tends to be cautious
		A4	prefers changes to be made only after careful planning
Relational	Enjoy interacting with people, cheerful, enthusiastic about life, and talkative.	R1	is a fun person to be with
		R2	is cheerful
		R3	makes friends easily
		R4	is sociable
Decisive	Goal oriented, risk-takers, and loves challenges.	D1	likes to win
		D2	is competitive
		D3	desires to be in control
		D4	likes to lead
Entrepreneurial Self-Efficacy	Entrepreneur's confidence in term of the ability to search for opportunities, to plan, to marshal resources, and to implement.		**Please indicate how much confidence you have in your ability to:**
		SE1	brainstorm (come up with) a new idea for a product or service
		SE2	identify the need for a new product or service
		SE3	design a product or service that will satisfy customer needs and wants
		SE4	estimate customer demand for a product or service
		SE5	determine a competitive price for a new product or service
		SE6	estimate the amount of a start-up funds and working capital necessary to start your own business
		SE7	design an effective marketing/advertising campaign for a new product or service
		SE8	get others to identify with and believe in your vision and plans for a new business
		SE9	network (make contact with and exchange information with others)
		SE10	clearly and concisely explain verbally in writing your business idea in everyday terms
		SE11	supervise employees
		SE12	recruit and hire employees
		SE13	delegate tasks and responsibilities to employees in your business
		SE14	deal effectively with day-to-day problem and crisis
		SE15	inspire, encourage, and motivate your employees
		SE16	train employees
		SE17	organize and maintain the financial records of your business
		SE18	manage the financial assets of your business
		SE19	read and interpret financial statements

Source: The indicators were adapted from Yong (2007) and McGee et al. (2009).

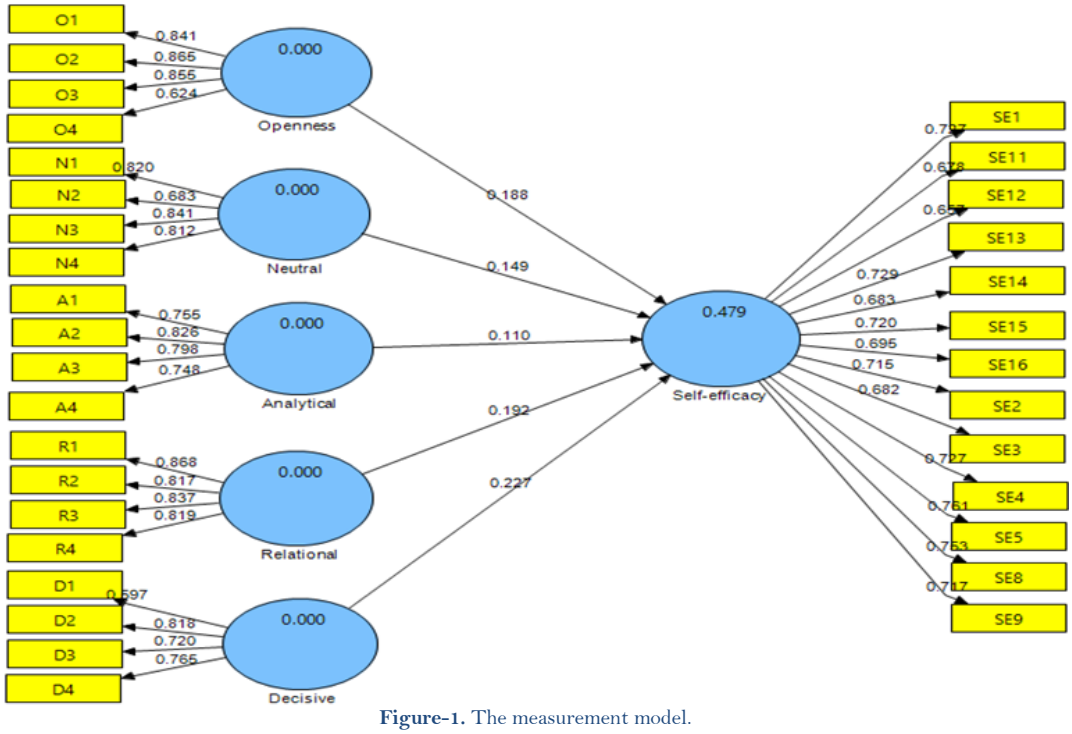

Figure-1. The measurement model.

Table-2. Results summary for measurement model.

Latent Variable	Indicator	Factor Loading	AVE	Composite Reliability	Discriminant Validity
Openness	O1	.842	.644	.877	Yes
	O2	.865			
	O3	.855			
	O4	.624			
Neutral	N1	.820	.626	.869	Yes
	N2	.683			
	N3	.841			
	N4	.812			
Analytical	A1	.755	.612	.863	Yes
	A2	.827			
	A3	.798			
	A4	.748			
Relational	R1	.868	.698	.902	Yes
	R2	.817			
	R3	.837			
	R4	.819			
Decisive	D1	.598	.533	.818	Yes
	D2	.818			
	D3	.720			
	D4	.766			
Entrepreneurial Self-Efficacy	SE1	.727	.507	.930	Yes
	SE2	.715			
	SE3	.682			
	SE4	.728			
	SE5	.761			
	SE8	.753			
	SE9	.717			
	SE11	.678			
	SE12	.657			
	SE13	.730			
	SE14	.683			
	SE15	.720			
	SE16	.695			

Table-3. Square roots of AVE and intercorrelations of the latent variables.

Latent Variable	Analytical	Decisive	Neutral	Openness	Relational	Entrepre-neurial Self-Efficacy
Analytical	.782					
Decisive	.509	.730				
Neutral	.659	.399	.791			
Openness	.495	.680	.425	.802		
Relational	.463	.560	.555	.612	.835	
Entrepre-neurial Self-Efficacy	.506	.578	.499	.578	.568	.712

Note: Diagonals (in bold) represent the square root of AVE while other values represent the correlations.

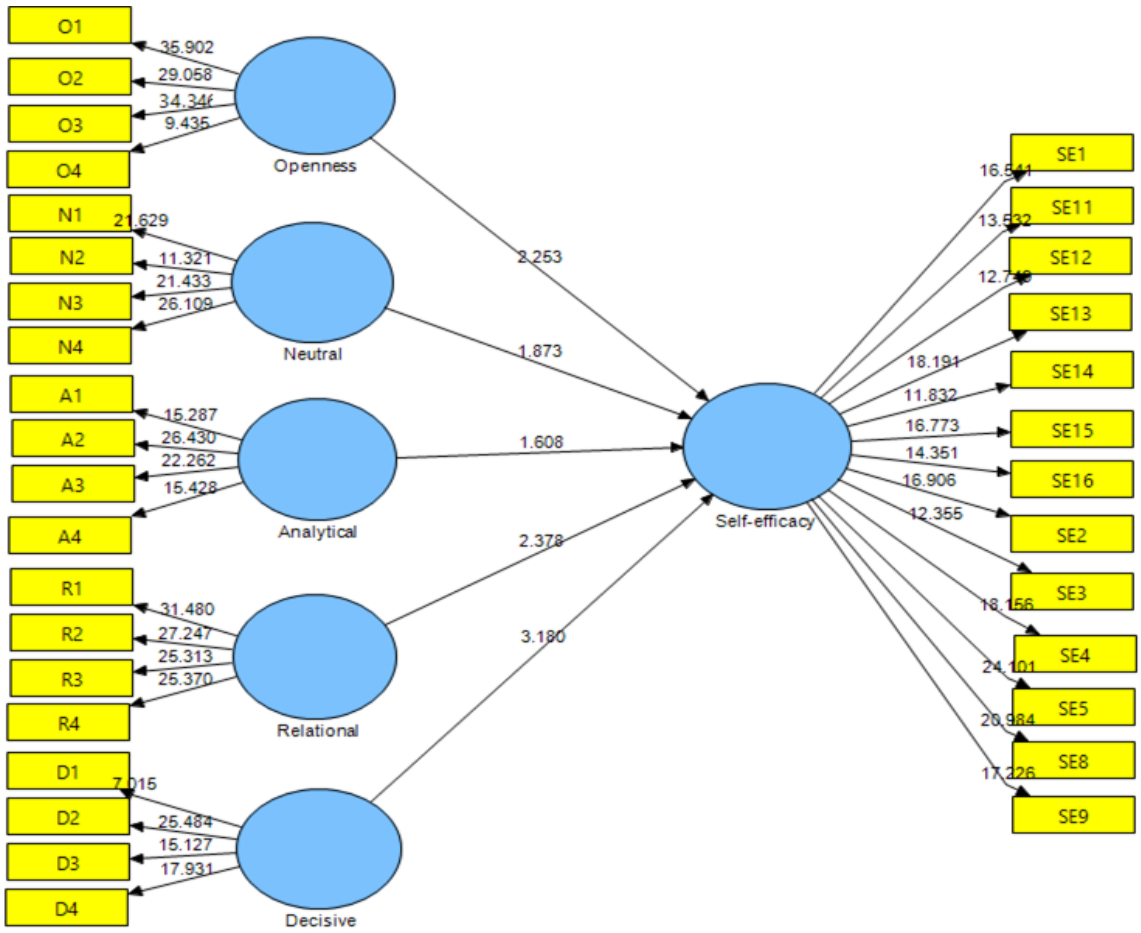

Figure-2. Bootstrapping of measurement model.

3. Results

For the first research question — "Are personality traits significant predictors of entrepreneurial self-efficacy?", the results indicated that personality traits of openness, relational, and decisive significantly predicted entrepreneurial self-efficacy ($t = 2.25$, $p < .05$; $t = 2.38$, $p < .05$; t-value = 3.18, $p < .05$ respectively). However, the personality traits of neutral and analytical did not significantly predict entrepreneurial self-efficacy ($t = 1.87$, $p > .05$; $t = 1.61$, $p > .05$ respectively). The explanatory power was $R^2 = .48$, which means that the personality traits of openness, neutral, analytical, relational, and decisive were accounted for the 47.90% of variance in entrepreneurial self-efficacy. The explanatory power is considered substantial (Cohen, 1988). Figure 3 displays the t-statistics of personality traits and entrepreneurial self-efficacy.

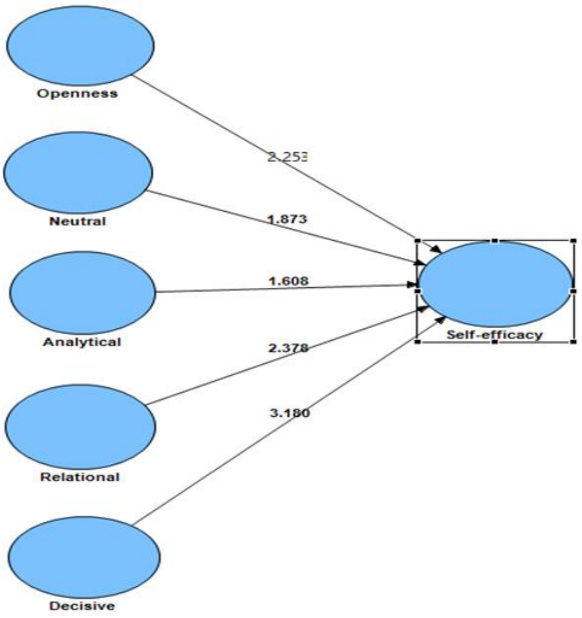

Figure-3. T-statistics of personality traits and entrepreneurial self-efficacy.

For the second research question — "Does gender of entrepreneurs moderate the relationship between personality and entrepreneurial self-efficacy?", the results indicated that gender of entrepreneurs significantly moderated the relationship between personality traits of neutral and entrepreneurial self-efficacy (t = 2.34, p < .05), such that the effect for male entrepreneurs (Sample Mean = .26, SD = .08) is significantly stronger than female entrepreneurs (Sample Mean = .02, SD = .07). However, gender of entrepreneurs did not significantly moderate the relationship between personality traits of analytical, decisive, openness, relational and entrepreneurial self-efficacy (t = .54, p > .05; t = 1.51, p > .05; t = 1.79, p > .05; t = .43, p > .05 respectively).

Table 4 displays the data of gender as moderator to the relationship between personality traits and entrepreneurial self-efficacy. Figure 4 illustrates the male model while Figure 5 illustrates the female model of gender as a moderator in the relationship between personality traits and entrepreneurial self-efficacy.

Table-4. Gender moderating the relationship between personality traits and entrepreneurial self-efficacy.

Path	t-statistic	p-value
Analytical -> Entrepreneurial Self-efficacy	.543	.588
Decisive -> Entrepreneurial Self-efficacy	1.505	.134
Neutral -> Entrepreneurial Self-efficacy	2.343	.020
Openness -> Entrepreneurial Self-efficacy	1.794	.074
Relational -> Entrepreneurial Self-efficacy	.430	.667

Figure-4. Male model of gender as a moderator.

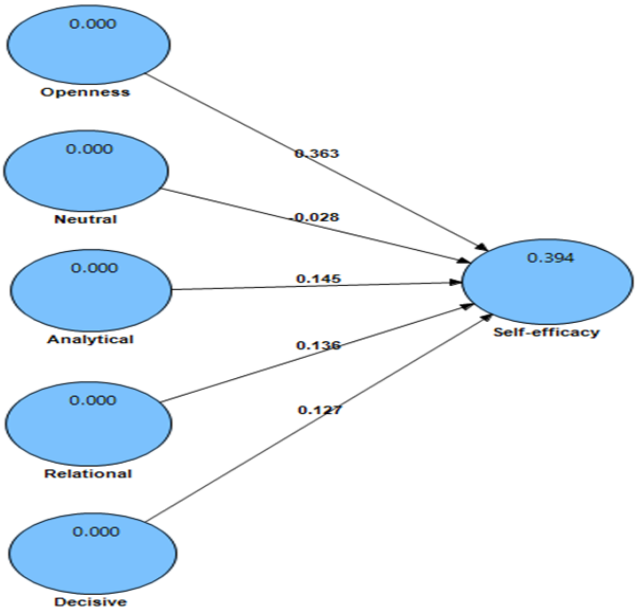

Figure-5. Female model of gender as a moderator.

For the third research question — "Does family background of entrepreneurs moderate the relationship between personality and entrepreneurial self-efficacy?", the results confirmed that the family background of entrepreneurs significantly moderated the relationship between personality trait of analytical and entrepreneurial self-efficacy (t = 2.89, p < .05), such that the effect for entrepreneurs with non-entrepreneurial family background (Sample Mean = .21, SD = .06) is significantly stronger than entrepreneurs with entrepreneurial family background (Sample Mean = .08, SD = .08). However, family background did not significantly moderate the relationship between personality traits of decisive, neutral, openness, relational and entrepreneurial self-efficacy (t = .36, p > .05; t = .42, p > .05; t = .46, p > .05; t = 1.29, p > .05 respectively).

Table 5 displays the data of family background moderating the relationship between personality traits and entrepreneurial self-efficacy. Figure 6 illustrates the entrepreneurial family background model while Figure 7 illustrates the non-entrepreneurial family background model as a moderator in the relationship between personality traits and entrepreneurial self-efficacy.

Table-5. Family background moderating the relationship between personality traits and entrepreneurial self-efficacy.

Path	*t*-statistic	*p*-value
Analytical -> Entrepreneurial Self-efficacy	2.891	.004
Decisive -> Entrepreneurial Self-efficacy	.363	.717
Neutral -> Entrepreneurial Self-efficacy	.418	.677
Openness -> Entrepreneurial Self-efficacy	.455	.649
Relational -> Entrepreneurial Self-efficacy	1.289	.199

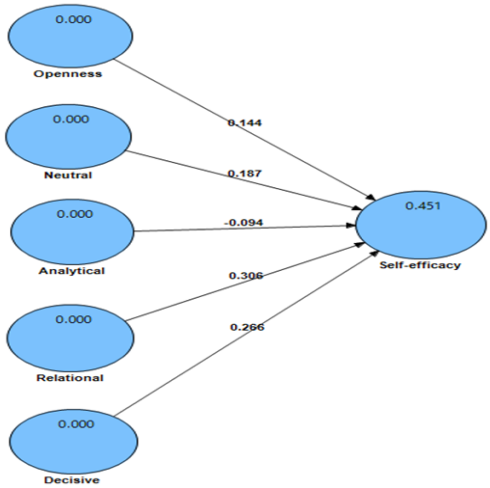

Figure-6. Entrepreneurial Family background model.

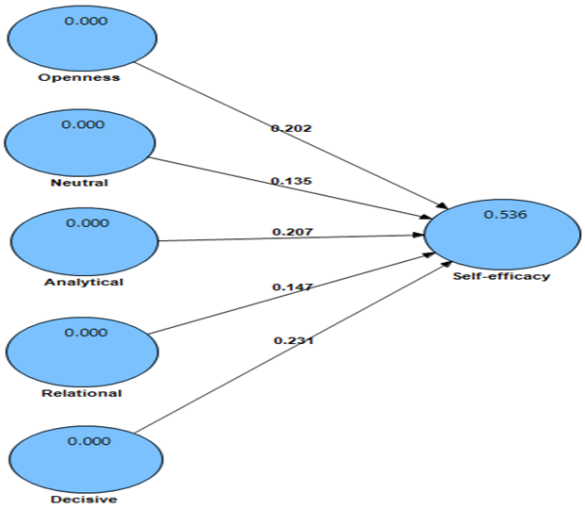

Figure-7. Non-entrepreneurial Family background model.

3.1. Explaining Power of PLS Model

A global fit assessment was conducted to ensure the model has adequate explaining power. The Goodness-of-Fit (GoF) value was .54, which exceeded the cut-off value of .36 for large effect sizes. This implied that the present model has better explaining power as compared to the baseline values.

4. Discussion

This paper attempted to test the possible impact of personality traits in determining entrepreneurial self-efficacy with gender and family background of entrepreneurs as moderators. Results obtained exceeded expectation and were above satisfactory level in which entrepreneurial personality traits do have an impact on their entrepreneurial self-efficacy. Personality traits of openness, relational, and decisive significantly predicted entrepreneurial self-efficacy. Hence, this research has proven that personality traits do reflect an individual's characteristics pattern of thoughts, feelings, and behaviours; and that entrepreneurs have unique set of personalities that emerged to shape their commitment toward a certain career. Specifically, the results of this research has added to the literature that emotional stability (decisive), extraversion (relational), and openness strongly predicted entrepreneurial self-efficacy; and agreed with the previous findings of Chen et al. (1998); Lee and Klein (2002); Nauta (2004); Tams (2008); Chan et al. (2015); Wang et al. (2016) and Mei et al. (2017).

A moderator is a variable that affects the strength of the association between the predictor and criterion variable. In this research the path analysis confirmed that gender of the entrepreneurs indeed significantly moderated the relationship between personality traits of neutral and entrepreneurial self-efficacy; such that the effect for male entrepreneurs is significantly stronger than female entrepreneurs. Hence, this confirmed that gender will somehow influence the relationship between personality and entrepreneurial self-efficacy and is consistent with findings of Costa Jr et al. (2001); Karwowski et al. (2013); Wang et al. (2016) and Yukongdi and Lopa (2017).

The family background of entrepreneurs also significantly moderated the relationship between personality trait of analytical and entrepreneurial self-efficacy; such that the effect for entrepreneurs with non-entrepreneurial family background is significantly stronger than entrepreneurs with entrepreneurial family background. These results confirmed the findings of Chaudhary (2017) and Farrukh et al. (2017) that individuals are more likely to become entrepreneurs if their parents are self-employed and that parents play an important role in developing entrepreneurial self-efficacy by acting as role models.

5. Conclusion

The conclusion model drawn from this study relates to a better understanding of the mechanisms through which entrepreneurial self-efficacy is dispositioned through personality traits and effected by their gender and family background. The Goodness-of-Fit (GoF) value of this model was .54, which exceeded the cut-off value of .36 for large effect sizes. This implied that the present model has above satisfactory explaining power as compared to the baseline values. Future research might want to study the direct and mediating relationship between personality traits, family background, and entrepreneurial self-efficacy where currently it is still unclear whether family background will mediate the relationship between personality traits and entrepreneurial self-efficacy. Future research framework might also be expanded to include other specific contents in the education system whereby certain entrepreneurial contents are included; entrepreneurial intention, entrepreneurs' education specialization, financial background and support from parents.

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