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VALIDATING THE INSTRUMENT TO MEASURE ENTREPRENEURIAL TRAITS

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ABSTRACT. The objective of this study is to develop a distilled measure for entrepreneurial traits particularly in the context of low-income households in Malaysia. In this attempt, the following study examined the need for achievement, locus of control, tolerance of ambiguity, visionary, persistence, and resilience as components to develop an instrument to measure entrepreneurial traits among low-income households in Kelantan, Malaysia. The study adopted a cross-sectional design and collected quantitative data through structured interviews from 800 low-income households across four districts in Kelantan, Malaysia. Based on the reliability and validity tests, this study finalized the instrument reducing a 58 items scale to 20 items yielding four factors, i.e., need for achievement (five items), tolerance of ambiguity (five items), visionary (four items), and persistence (six items). Findings of the reflective hierarchical model revealed that persistence is the highest contributor towards entrepreneurial traits among the low-income households in Kelantan, followed by tolerance of ambiguity, need for achievement, and visionary. It is recommended that future researchers further extend the developed measure by cross-examining the instrument forwarded by this study across different income-level groups living throughout diverse economies.

JEL Classification: L26

Keywords: Instrument; Entrepreneurial Traits.

Introduction

Entrepreneurship is perceived as a significant process by means of which innovative knowledge is transformed into new services and products and thereby equilibrating supply and demand (Shane & Venkataraman, 2000). Entrepreneurship generally refers to the various activities associated with owning and managing businesses (Nazri *et al.*, 2016) that has been proven to drive not only innovation and technical transformations, but also economic growth (Shane *et al.*, 2003). Entrepreneurship is considered a crucial component for economic progress and it signifies its fundamental importance in various ways such as by identifying, assessing, and exploiting newer opportunities for businesses, renewing existing or creating new firms, steering the economy forward by new innovations, competences, job creations, and eventually improving the overall welfare of a society (Cuervo *et al.*, 2007).

Research conveys that high-potential entrepreneurial activities, specifically among small to medium sized enterprises, are positively associated with economic growth (Wong *et al.*, 2005), particularly in the context of developing economies, where entrepreneurship, even

in its basic form, is found to significantly affect the structural transformation of primary-sector based low-income states into technology based high-income service societies (Naude *et al.*, 2008). Moreover, the positive role of small sized enterprises particularly that of new ventures has been widely acknowledged in the development literature, thanks to the crucial role played by micro-enterprises in the socioeconomic development of low-income households along with their support towards maintaining a healthy and sustainable economic growth (Al-Mamun *et al.*, 2016).

Entrepreneurship engages individuals with unique personality traits and abilities; and some of these traits are conversed in literature to be significantly influential in achieving different organizational success metrics (Beattie, 2016; Gartner, 1990). The immensely positive interest of individuals to know which capabilities and traits facilitate successful ventures is to be credited for the emerging significance of research penetrations in regards to the relationship between entrepreneurs and business success (Driessen & Zwart, 2007). Moreover, the value creation of a firm has been found to depend on the capabilities of entrepreneurs to perform their role successfully (Grant, 1991); this further signifies the connection of specific entrepreneurial traits to the entrepreneur's ability to achieve certain organizational success metrics (Beattie, 2016). Perhaps this is why the Babson survey ranked entrepreneurial traits and characteristics as the topic of the highest research interest (Gartner, 1990).

Entrepreneurship is perceived to create a positive and an immense interest among people who are keen to know which traits and capabilities among entrepreneurs influence the success of a business and therefore research in the context of the relationship between entrepreneurs and business success has become increasingly important (Driessen & Zwart, 2007). Moreover, according to an earlier study, rigorous empirical research has had trouble identifying particular individual traits that are strongly associated with entrepreneurship (Zimmer, 1986); further reflecting significance and the need for studies related to entrepreneurial traits. Under such a reality, it is apparent that the lack of conceptual development along with inadequate tools to measure entrepreneurial traits has been hindering the progress of related quantitative research. Therefore, in a novel and significant attempt, this study surveys the depths and progress of entrepreneurial literature with the research purpose of developing and validating a new and prevalent instrument to measure entrepreneurial traits in the context of low-income or underprivileged households located in developing nations by means of distilling existing relevant literature.

1. Literature Review

1.1. Entrepreneurial Traits and its Components

Entrepreneurial Traits could be portrayed as certain attitudes, beliefs, and behaviors, which are functional within the context of the entrepreneurial paradigm and such characteristics form a cluster that focuses on opportunities arising from the ability to deal with a sense of personal efficacy and uncertainty, leading to an attenuated perception of risk and a proactive disposition (Pendergast, 2003). The value creation of a firm is dependent on the capabilities of entrepreneurs to perform their role successfully (Grant, 1991) and this signifies the connection of specific entrepreneurial traits to the entrepreneur's ability to achieve certain organizational success metrics (Beattie, 2016). Perhaps this is why the Babson survey ranked entrepreneurial traits and characteristics as the topic of the highest research interest (Gartner, 1990). Although entrepreneurial traits rarely affect behaviors in isolation, however, the rationale behind signifying and developing a distilled instrument to measure entrepreneurial

traits lies in the fact that entrepreneurship engages individuals with unique attributes, characteristics, and abilities. Moreover, some of these traits are conversed in literature to be more influential than others in achieving different organizational success metrics (Beattie, 2016; Gartner, 1990).

Zimmer (1986) in conveying the commonality of entrepreneurial traits among individuals stated that considering the high proportion of adults expressing the intention to pursue entrepreneurship and the proportion that actually attempts self-employment, it seems as if half of the population possess these entrepreneurial traits (Zimmer, 1986). Gartner (1990) forwarded that attributes such as risk taking, locus of control, autonomy, perseverance, commitment, vision, and creativity describe an entrepreneur. Accordingly, Shane *et al.* (2003) highlighted the need for achievement, an individual's locus of control, vision, desire for independence, passion, individual's goal setting, self-drive, and self-efficacy as significant traits for entrepreneurs. Based on the above and other relevant existing literature, the present study identifies the constructs of immediate interest upon which questions could be asked of the respondents to measure entrepreneurial traits, as, need for achievement, locus of control, tolerance of ambiguity, visionary, persistence, and resilience.

It needs to be noted that this study does not posit that no measure of the identified constructs of entrepreneurial traits exist in relevant literature. Craig, Franklin, & Andrews (1984) measured locus of control in their study, McLain (1993) measured tolerance of ambiguity, certain indicators of visionary leader have been forwarded in Conger and Kanungo (1994), Duckworth *et al.* (2007) discussed measures of persistence, while the construct of resilience have been highlighted by Smith *et al.* (2008). However, no unified, prevalent, and statistically validated existing instrument to measure all constructs of entrepreneur traits, particularly in context of low-income households is found in existing literature. The present study hence extensively defines the need for achievement, locus of control, tolerance of ambiguity, visionary, persistence, and resilience as components of entrepreneurial traits in the following sections before disclosing the methodologies adopted to develop and validate the new instrument.

1.2. Need for Achievement

Entrepreneurs portray a need for achievement (in contrast to power or affiliation), which drives the pursuit of opportunities and the creation of measurable, tangible targets, and outcomes (McClelland, 1965) within the framework of the creation of a new venture. McClelland forwarded that individuals with a high achievement orientation would pursue careers that allowed them control over outcomes, access to more direct feedback on performance, and offered moderate levels of risk (McClelland, 1961). He further preceded that entrepreneurial environments are those game-fields that are most likely to fulfill such requirements (McClelland, 1965). Moreover, research has reinforced and consolidated that need for achievement is a definitive trait that entrepreneurs exhibit, separating them from non-entrepreneurs (Begley & Boyd, 1987). It is perceived that the need for achievement is what drives entrepreneurs to scale their ventures beyond their original markets (Beattie, 2016). Accordingly, Lee and Tsang (2001) revealed that an entrepreneur's need for achievement was the trait that had the highest impact on venture growth, reflecting that need for achievement not only predicts entrepreneurial behavior but the striving for excellence characteristic has a direct influence on the growth motivation of an entrepreneur and the growth of his/her business (Beattie, 2016).

1.3. Locus of Control

Locus of control remains the other significant entrepreneurial trait that has received much attention as the belief of individuals in the extent to which they perceive that their personal characteristics or actions affect outcomes (Shane *et al.*, 2003). Individuals with an external locus of control believe that the result of an event is out of their control, while individuals with an internal locus of control perceive that their personal actions directly impact the results of an event (Rotter, 1966). Research conveys that locus of control is a definitive trait among entrepreneurs (both founders and managers), separating them from non-entrepreneurs (general population) (Shane *et al.*, 2003). According to Mueller and Thomas (2001), internal locus of control is one of the frequently cited personality traits associated with entrepreneurial potential and one of the most studied psychological traits in entrepreneurship research. Perhaps the rationale behind such a finding lies in the keen interest of individuals with an internal locus of control to seek entrepreneurial roles as a result of their desire to hold positions where their actions directly affect outcomes (Rotter, 1966).

1.4. Tolerance of Ambiguity

In a reality where entrepreneurial situations are inherently uncertain and unstructured, Tolerance of Ambiguity is a trait often linked to successful entrepreneurs for its potential to allow entrepreneurs to organize their thought processing and providing opportunity to induce creative and novel response that defines new rules of the game and thereby aids in decision making even under uncertain conditions. Moreover, the construct could be defined as the ability of entrepreneurs to deal with ambiguity and act in an optimistic and challenging way while recognizing ambiguous circumstances wherein ambiguity refers to the lack of complete and definitive information (Ibrahim & Soufani, 2002). Although the absence of information instills entrepreneurs with risk, the same condition simultaneously defines opportunities, thereby associating ambiguity or uncertainty with decision outcomes as a primary source of perceived risks in entrepreneurial decision making situations (Sitkin & Pablo, 1992). Furthermore, Pendergast (2003) articulates that the absence of structure provokes the need to establish new organizations where suppliers and customers are new, jobs are undefined, and there remain constant surprises in the external environment providing a margin for unusual profits. Although entrepreneurs are found to be sufficiently comfortable with uncertainty while they embark on business ventures with minimum planning or research, the capability to deal with ambiguity reduces the perception of risks that might otherwise hinder action in such uncertain environments (Pendergast, 2003; Ibrahim & Soufani, 2002).

1.5. Visionary

The term Visionary refers to the trait of individuals whereby a person remains committed and single-minded in the pursuit of his/her vision while confronting the skeptic naysayers coupled with the absence of resources within one's control (Sarasvathy & Venkataraman, 2011). According to Fernald, Solomon, and Tarabishy (2005), a vision is formulated by explicitly identifying the domain of competitive behavior, a set of sources for competitive strength, and a resource capability profile determined by many factors such as managerial vision, competence, and capacity, logistic and technological profiles, along with financial access to the organization. The key element in being visionary is having foresight, which refers to the ability to see beyond the immediate moment, past whatever is working at present, and realizing what could actually and potentially work in the future (Locke & Baum, 2007). Visionary and Self-confidence growing out of their identity drive entrepreneurial

leaders towards achievement (Fernald *et al.*, 2005). Entrepreneurs must be able to make inferences from their observations and integrations (Locke, 2000), by developing leadership qualities, such as visionary in order to grow their business ventures and carry them to the level of professionalism (Fernald *et al.*, 2005). The visionary trait of entrepreneurs makes them fixated on the unwavering pursuit of a single most powerful opportunity, which at times may even represent a false opportunity or one that is ahead of its time, which fails to consider significant obstacles of implementation (Pendergast, 2003).

1.6. Persistence

Persistence in general refers to effort sustained over time (Locke, 2000), and research asserts that the construct is one of many significant entrepreneurial characteristics which generally exists among entrepreneurs (Fernald *et al.*, 2005). Cardon *et al.* (2009) defined persistence as the continuation of effortful actions despite impediments, failures, or threats, either imagined or real that influence entrepreneurial effectiveness. Entrepreneurial challenges require a dogged persistence and determination over time (Pendergast, 2003). Sceptic naysayers coupled with scarce resources within one's control, unexpected bumps in the road, and limited novel ideas, as commonly encountered by entrepreneurs, are bites of the entrepreneurial process and require persistence in the countenance of obstacles (Pendergast, 2003; Sarasvathy & Venkataraman, 2011). According to Locke (2000), persistence depends on values and goals, and individuals are believed to persist more only when the value or goal attached to the job is important or harder to achieve. It is also perceived that pleasurable and deeply meaningful activities boost persistency among individuals by allowing them to enjoy a prolonged state of positive effect, reinforcing their role identity, and mitigating the risk of identity threats arising from premature disengagement (Cardon *et al.*, 2009). Further research extends that persistence behavior reflects interest in higher achievement and effectively supports opportunity recognition, both of which represent the fundamental functions of entrepreneurship (Baum & Locke, 2004; Cardon *et al.*, 2009).

1.7. Resilience

Resilience in general refers to the ability to move on with life, or to go on living a purposeful life, even after confronting adversities or hardships (Tedeschi & Calhoun, 2004). The construct has recently earned a place in entrepreneurship research particularly as an individual unit of analysis from the viewpoint of entrepreneurs as individuals begin again after previously failed business attempts (Bullough *et al.*, 2014). Resilient individuals with their higher propensity are more likely to act, take action in the face of adversities than less resilient individuals who are effortlessly discouraged by challenges of a hostile environment. Since entrepreneurs are required to remain optimistic in the face of setbacks and adversities, it is therefore apparent that resilient individuals are more likely to engage in entrepreneurial activities to directly address problems, such as inadequate meaningful employment, incapability to financially provide for the family, and the desire to have a daily routine (Baron & Markman, 2000; Bullough *et al.*, 2014; Markman *et al.*, 2005). Research also conveys that among the failed entrepreneurs, those possessing higher resilience are the ones more likely to start over again should a new business opportunity emerge (Hayward *et al.*, 2010), further establishing resilience as a significant component of the entrepreneurial trait.

2. Research Methodology

This study adopted a cross-sectional design to develop and validate the instrument to measure entrepreneurial trait among the low-income households in Kelantan, Malaysia. The target population for this study is the low-income households from the poorest state in Peninsular Malaysia, i.e., Kelantan. This study selected four locations in Kelantan for the purpose of data collection based on information from *Majlis Agama Islam Dan Adat Istiadat Melayu Kelantan (ASNAF)*, the authority responsible for the low-income households in Malaysia. Thus the population frame of 3,090 low-income households registered under '*Majlis Agama Islam Dan Adat Istiadat Melayu Kelantan (ASNAF)*', located across the four selected districts of Kelantan, i.e., Bachok (1394), Tumpat (1257), Jeli (233), and Gua Musang (206) emerged for the purpose of collecting data in this study. Since this study intends to compare across the locations and other antecedents, it randomly selected 800 low-income respondents, a total of 200 respondents from each location. Data was collected through a face-to-face structured interview.

2.1. Research Instrument

All indicators used in this study for identifying entrepreneurial traits have been adapted from existing entrepreneurship index (i.e., Norasmah & Faridah, 2010; Noraishah, 2003) with some modification to suit the context of present study. The instrument (questionnaire) for this study was developed based on the review of the existing entrepreneurship indices and tested through a pilot survey and the instrument was enhanced based on the comments and feedback from the pilot survey. The questionnaire was translated into Malay and checked for inter-translator consistency. This study used a five-point Likert scale ranging from one denoted as strongly disagree to five denoted as strongly agree for all indicators in order to avoid confusion and bias from fatigue of longer scales.

Table 1. Research Instrument – Entrepreneurial Traits

| Code | Questions |
|------|---|
| 1 | 2 |
| B82 | I prefer to act to get something rather than sit and wait until someone else does |
| B83 | I always want immediate feedback |
| B84 | I like to accept responsibility for my own performance |
| B85 | I want to know how well I have been doing |
| B86 | I enjoy working on moderately difficult and challenging tasks |
| B87 | I am thinking of accomplishing goals rather than my previous achievement |
| B88 | I am driven to more greater efforts by an unquenched ambition |
| B89 | I judge my work by considering whether it meets the minimum requirements for the task |
| B90 | I feel real satisfaction when my work is among the best |
| B91 | I seldom get a sense of pride and accomplishment from my work |
| B92 | My goals and ambitions are modest and easily achieved |
| B93 | I want to achieve something in my life |
| B41 | I have more fun handling more complicated problems |
| B42 | Many of the most important decisions consist of insufficient information |
| B43 | I am willing to face new challenges |
| B44 | My life is determined by my own actions |
| B45 | I get what I want usually because I work hard for it |
| B46 | My success is due to luck and being in the right place at the right time |
| B47 | The vast majority of my life happened by accident |

| <i>1</i> | <i>2</i> |
|----------|---|
| B48 | I am lucky in getting what I want |
| B49 | I think planning anything too much is not wise because things can turn out to be associated with a bad thing |
| B50 | Success in life – I mostly rely on my own abilities |
| B51 | I think what is happening in my life is mostly due to existing contacts in the organization |
| B52 | My life is under control |
| B53 | I think that most of the success in business is due to luck |
| B54 | To get the job, it also depends on the convenient time and place |
| B55 | I think most things in life have a bad part of their misfortune |
| B56 | An individual is disadvantaged due to past mistakes he/she once did |
| B57 | Individuals do not realize how their lives are affected by things that are inadvertent |
| B58 | I always find that what is happening will continue to happen |
| B59 | One needs to be diligent to be successful |
| B60 | In my opinion, businesses will continuously grow if we can control our competencies |
| B61 | I am in total control of my destiny |
| B62 | I am ultimately responsible for my own business success |
| B63 | I can control my own internal situations |
| B64 | I frequently find myself in situations where I am powerless to control the outcome |
| B31 | I need to know that it's already been done before I'm willing to try it |
| B32 | I need to know the consequence before making any decisions |
| B33 | I need to know the rules before starting a job |
| B34 | I feel that example sentences are only helpful when we have already gone over the rules |
| B35 | When we do a new activity or game, I prefer to know all of the rules before I start |
| B36 | When faced with the ambiguity of change, I try to create certainty |
| B37 | In the midst of something unfamiliar, I try to make sense of what I am experiencing |
| B38 | When faced with ambiguity, I choose to become neutral instead of trying to force certainty |
| B39 | A person is said to attract those who differ from others |
| B40 | A person is said to attract those who do not mind being themselves |
| B94 | I need to contribute to the family income |
| B95 | I want to be economically independent |
| B96 | I do not want to be just a housewife |
| B97 | I have a clear vision of myself operating at my best |
| B98 | I understand my vision |
| B99 | I read my written vision statement regularly |
| B100 | My written vision statement causes positive physical sensations |
| B101 | I support the independent action of an individual or a team in bringing forth an idea or a vision and carrying it through to completion |
| B118 | I can usually accept things in stride |
| B119 | I always easily to find something to make myself happy |
| B120 | I can overcome challenges by believing in myself |
| B121 | I usually get a solution, even in difficult conditions |
| B122 | I can manage many things at once |
| B123 | I have enough income to support a family |
| B124 | I have enough income for myself |
| B125 | I will do a job until completion |
| B110 | I want to work for myself |
| B111 | I want to work for my family |
| B112 | I continue to work on hard projects even when others oppose me |
| B113 | I can think of many times when I persisted with work when others quit |
| B114 | No matter how challenging my work is, I will not give up |
| B115 | I have a strong sense of vision to succeed that keeps me going |

| 1 | 2 |
|------|---|
| B116 | I tolerate the pressure to grow my business further within the limited resources |
| B117 | I am always clear about what to do regardless of the business problems I have |
| B154 | Owning my own business is more important than spending more time with my family |
| B155 | I feel like I have made progress toward being successful in my life |
| B156 | I have found very few hobbies or activities in my life that capture my interest or motivate me to put effort into them |
| B157 | When it comes to achieving things that are important to me, I find that I don't perform as well as I would ideally like to do |

3. Summary of Findings

3.1. Demographic Characteristics

Among the selected 800 respondents from Kelantan, Malaysia, 71.3% of the respondents gave a positive response while being asked about their willingness to venture into business, 25.3% gave a negative response, and the rest (3.5%) of the respondents stated that they were not sure whether they would venture into business. On the other hand, for recording whether they had any previous business experience before starting their business, the respondents were categorized according to their years of experiences. 30.1% of the respondents fell under the first category which was less than five years of experience, 10.4% respondents fell under the second category which was between 6 to 10 years of experience, 4.4% of the respondents fitted between 11 to 15 years of experience, 2.8% of respondents reported 16 to 20 years of experience, while 5.3% of the respondents had more than 21 years of previous business experience. However, a large portion of about 47.1% of the respondents reported not having any previous business experience as such.

In terms of gender, 32.0% (256 respondents) reported to be male and 68.0% (544 respondents) were female. As for their marital status, 515 reported to be married, 47 were single, 41 were widow/widower, and the rest were single parents. The respondents were further divided into four categories to record their ages. For the first category of less than 31 years old, there were 81 respondents accounting for 10.1%. Then, for the second category (31-45 years old), there were 250 respondents reflecting 31.3%, followed by the third category (46-55 years old) accounting for 22.1%. For the fourth category of over 55 years old, there were 292 respondents with 36.5% that was found to be the largest age group among the respondents. Lastly, for reporting the level of education, the respondents were grouped into five categories, of which most reported SPM / Form five as their education level with 35.5%. 19.8% or 158 respondents reported PMR/ SRP, 18.9% or 151 reported completing primary six while a large portion of 22.4 % or 179 respondents reported never having attended school at all.

3.2. Measuring Validity

The Fornell-Larcker criterion postulates that the latent variable is expected to share more variance with its assigned indicators than with any other latent variable, therefore the AVE of each latent variable should be greater than the latent variable's highest squared correlation with any other latent variable (Henseler *et al.*, 2009). As shown in *Table 2*, the constructs do not meet the set criteria. Furthermore, the Heterotrait-Monotrait Ratio (HTMT) is an estimate of the correlation between constructs, paralleling the disattenuated construct score creation. Using a value of 0.9 as the threshold, this study failed to conclude that there is any evidence of a lack of discriminant validity.

Table 2. Validity – Model A

| | NA | LC | TA | VI | PE | RE | ET |
|---|-------|-------|-------|-------|-------|-------|-------|
| <i>Fornell-Larcker Criterion</i> | | | | | | | |
| Need for Achievement | 0.781 | | | | | | |
| Locus of Control | 0.878 | 0.690 | | | | | |
| Tolerance of Ambiguity | 0.835 | 0.852 | 0.755 | | | | |
| Visionary | 0.857 | 0.754 | 0.734 | 0.804 | | | |
| Persistence | 0.837 | 0.832 | 0.743 | 0.742 | 0.813 | | |
| Resilience | 0.886 | 0.799 | 0.720 | 0.829 | 0.853 | 0.859 | |
| Entrepreneurial Trait | 0.967 | 0.939 | 0.887 | 0.884 | 0.900 | 0.922 | 0.711 |
| <i>Heterotrait-Monotrait Ratio (HTMT)</i> | | | | | | | |
| Need for Achievement | | | | | | | |
| Locus of Control | 0.934 | | | | | | |
| Tolerance of Ambiguity | 0.899 | 0.929 | | | | | |
| Visionary | 0.910 | 0.806 | 0.799 | | | | |
| Persistence | 0.910 | 0.910 | 0.827 | 0.812 | | | |
| Resilience | 0.932 | 0.842 | 0.773 | 0.877 | 0.925 | | |
| Entrepreneurial Trait | 1.001 | 0.987 | 0.946 | 0.923 | 0.959 | 0.945 | |

Note: Need for Achievement (NA), Locus of Control (LC), Tolerance of Ambiguity (TA), Visionary (VI), Persistence (PE), Resilience (RE), Entrepreneurial Trait (ET).

Furthermore, the loading of each indicator is expected to be greater than all of its cross-loadings (Henseler *et al.*, 2009). Given the evidence of higher level of correlations among the items used, this study removed items with cross-loading values of more than 0.75. After removing 33 items (noted in Table 3), this study conducted the tests again.

Table 3. Cross Loading – Model A

| | NA | LC | TA | VI | PE | RE | ET |
|----------|---------------|--------------|--------|--------|--------|--------|---------------|
| <i>i</i> | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| B82 | 0.810 | 0.698 | 0.649 | 0.705 | 0.703 | 0.758 | 0.788 |
| B83 | 0.730 | 0.664 | 0.668 | 0.563 | 0.616 | 0.565 | 0.698 |
| B84 | 0.754 | 0.693 | 0.706 | 0.571 | 0.647 | 0.597 | 0.727 |
| B85 | 0.753 | 0.660 | 0.696 | 0.592 | 0.604 | 0.613 | 0.718 |
| B86 | 0.748 | 0.648 | 0.577 | 0.635 | 0.630 | 0.712 | 0.722 |
| B87 | 0.781 | 0.723 | 0.661 | 0.685 | 0.611 | 0.648 | 0.754 |
| B88 | 0.856 | 0.745 | 0.686 | 0.780 | 0.707 | 0.789 | 0.833 |
| B89 | 0.850 | 0.737 | 0.672 | 0.769 | 0.717 | 0.808 | 0.830 |
| B90 | 0.775 | 0.725 | 0.667 | 0.657 | 0.638 | 0.637 | 0.752 |
| B91 | -0.596 | -0.498 | -0.458 | -0.469 | -0.486 | -0.496 | -0.551 |
| B92 | 0.858 | 0.723 | 0.693 | 0.763 | 0.724 | 0.808 | 0.832 |
| B93 | 0.825 | 0.688 | 0.671 | 0.773 | 0.720 | 0.805 | 0.812 |
| B41 | 0.606 | 0.674 | 0.564 | 0.591 | 0.574 | 0.609 | 0.661 |
| B42 | 0.560 | 0.652 | 0.537 | 0.482 | 0.471 | 0.461 | 0.585 |
| B43 | 0.666 | 0.713 | 0.623 | 0.575 | 0.646 | 0.632 | 0.705 |
| B44 | 0.727 | 0.761 | 0.675 | 0.636 | 0.661 | 0.675 | 0.757 |
| B45 | 0.732 | 0.770 | 0.702 | 0.605 | 0.645 | 0.667 | 0.757 |
| B47 | 0.535 | 0.631 | 0.501 | 0.404 | 0.467 | 0.469 | 0.559 |
| B48 | 0.532 | 0.662 | 0.575 | 0.436 | 0.542 | 0.476 | 0.592 |
| B50 | 0.699 | 0.755 | 0.694 | 0.602 | 0.626 | 0.618 | 0.733 |

RECENT ISSUES IN ECONOMIC DEVELOPMENT

| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> | <i>8</i> |
|----------|----------|--------------|--------------|--------------|--------------|--------------|--------------|
| B51 | 0.540 | 0.605 | 0.501 | 0.451 | 0.511 | 0.520 | 0.575 |
| B52 | 0.568 | 0.703 | 0.601 | 0.451 | 0.534 | 0.464 | 0.614 |
| B57 | 0.510 | 0.635 | 0.534 | 0.357 | 0.448 | 0.371 | 0.532 |
| B58 | 0.606 | 0.749 | 0.579 | 0.502 | 0.599 | 0.533 | 0.658 |
| B59 | 0.492 | 0.640 | 0.510 | 0.430 | 0.551 | 0.439 | 0.560 |
| B60 | 0.584 | 0.647 | 0.568 | 0.522 | 0.612 | 0.586 | 0.641 |
| B62 | 0.739 | 0.789 | 0.645 | 0.699 | 0.684 | 0.712 | 0.781 |
| B63 | 0.499 | 0.617 | 0.536 | 0.464 | 0.547 | 0.464 | 0.569 |
| B31 | 0.727 | 0.681 | 0.829 | 0.614 | 0.616 | 0.622 | 0.744 |
| B32 | 0.654 | 0.665 | 0.780 | 0.550 | 0.576 | 0.530 | 0.684 |
| B34 | 0.673 | 0.675 | 0.801 | 0.585 | 0.551 | 0.551 | 0.700 |
| B35 | 0.701 | 0.703 | 0.821 | 0.604 | 0.597 | 0.589 | 0.732 |
| B36 | 0.724 | 0.695 | 0.829 | 0.634 | 0.621 | 0.646 | 0.754 |
| B37 | 0.687 | 0.685 | 0.805 | 0.614 | 0.592 | 0.607 | 0.726 |
| B38 | 0.459 | 0.550 | 0.615 | 0.384 | 0.510 | 0.456 | 0.539 |
| B39 | 0.501 | 0.568 | 0.650 | 0.484 | 0.487 | 0.438 | 0.566 |
| B40 | 0.471 | 0.539 | 0.615 | 0.466 | 0.479 | 0.401 | 0.536 |
| B94 | 0.787 | 0.686 | 0.674 | 0.789 | 0.692 | 0.754 | 0.793 |
| B96 | 0.709 | 0.606 | 0.627 | 0.765 | 0.614 | 0.671 | 0.719 |
| B97 | 0.698 | 0.569 | 0.585 | 0.884 | 0.576 | 0.701 | 0.718 |
| B98 | 0.689 | 0.568 | 0.569 | 0.897 | 0.580 | 0.685 | 0.712 |
| B99 | 0.534 | 0.541 | 0.487 | 0.743 | 0.486 | 0.494 | 0.587 |
| B100 | 0.573 | 0.538 | 0.504 | 0.766 | 0.467 | 0.518 | 0.604 |
| B101 | 0.769 | 0.697 | 0.635 | 0.771 | 0.699 | 0.767 | 0.785 |
| B118 | 0.699 | 0.688 | 0.639 | 0.586 | 0.841 | 0.703 | 0.747 |
| B119 | 0.679 | 0.673 | 0.613 | 0.605 | 0.860 | 0.717 | 0.742 |
| B120 | 0.684 | 0.671 | 0.602 | 0.625 | 0.855 | 0.727 | 0.745 |
| B121 | 0.668 | 0.649 | 0.568 | 0.616 | 0.811 | 0.731 | 0.725 |
| B122 | 0.667 | 0.656 | 0.579 | 0.607 | 0.772 | 0.670 | 0.711 |
| B125 | 0.680 | 0.719 | 0.617 | 0.576 | 0.730 | 0.607 | 0.714 |
| B110 | 0.645 | 0.585 | 0.522 | 0.574 | 0.622 | 0.756 | 0.673 |
| B111 | 0.786 | 0.683 | 0.611 | 0.749 | 0.708 | 0.870 | 0.800 |
| B112 | 0.782 | 0.701 | 0.627 | 0.754 | 0.736 | 0.890 | 0.813 |
| B113 | 0.810 | 0.737 | 0.658 | 0.767 | 0.768 | 0.896 | 0.841 |
| B114 | 0.801 | 0.734 | 0.662 | 0.753 | 0.767 | 0.893 | 0.836 |
| B115 | 0.775 | 0.699 | 0.638 | 0.733 | 0.733 | 0.852 | 0.803 |
| B116 | 0.715 | 0.652 | 0.583 | 0.643 | 0.762 | 0.834 | 0.756 |
| B117 | 0.759 | 0.687 | 0.634 | 0.697 | 0.754 | 0.866 | 0.796 |

As noted earlier, the AVE of each latent variable should be greater than the latent variable's highest squared correlation with any other latent variable, however (as shown in *Table 4*), the constructs do not meet the set criteria. Furthermore, the Heterotrait-Monotrait Ratio (HTMT) is an estimate of the correlation between constructs, paralleling the disattenuated construct score creation. Using a value of 0.9 as the threshold, this study failed to conclude that there is any evidence of a lack of discriminant validity.

Table 4. Validity – Model B

| | NA | LC | TA | VI | PE | ET |
|---|-------|-------|-------|-------|-------|-------|
| <i>Fornell-Larcker Criterion</i> | | | | | | |
| Need for Achievement | 0.807 | | | | | |
| Locus of Control | 0.827 | 0.813 | | | | |
| Tolerance of Ambiguity | 0.804 | 0.808 | 0.850 | | | |
| Visionary | 0.707 | 0.700 | 0.662 | 0.854 | | |
| Persistence | 0.776 | 0.802 | 0.702 | 0.660 | 0.813 | |
| Entrepreneurial Trait | 0.923 | 0.930 | 0.895 | 0.816 | 0.893 | 0.738 |
| <i>Heterotrait-Monotrait Ratio (HTMT)</i> | | | | | | |
| Need for Achievement | | | | | | |
| Locus of Control | 0.951 | | | | | |
| Tolerance of Ambiguity | 0.909 | 0.910 | | | | |
| Visionary | 0.814 | 0.800 | 0.743 | | | |
| Persistence | 0.882 | 0.909 | 0.780 | 0.744 | | |
| Entrepreneurial Trait | 1.009 | 1.013 | 0.955 | 0.893 | 0.962 | |

Note: Need for Achievement (NA), Locus of Control (LC), Tolerance of Ambiguity (TA), Visionary (VI), Persistence (PE), Resilience (RE), Entrepreneurial Trait (ET).

Table 5. Cross Loading – Model B

| | NA | LC | TA | VI | PE | ET |
|------|--------------|--------------|--------------|--------------|--------------|--------------|
| B84 | 0.824 | 0.680 | 0.701 | 0.514 | 0.648 | 0.759 |
| B85 | 0.810 | 0.666 | 0.699 | 0.545 | 0.604 | 0.747 |
| B86 | 0.758 | 0.657 | 0.557 | 0.587 | 0.630 | 0.714 |
| B87 | 0.819 | 0.662 | 0.642 | 0.615 | 0.611 | 0.748 |
| B90 | 0.823 | 0.672 | 0.642 | 0.592 | 0.639 | 0.755 |
| B43 | 0.714 | 0.678 | 0.838 | 0.568 | 0.617 | 0.768 |
| B44 | 0.664 | 0.664 | 0.819 | 0.537 | 0.551 | 0.727 |
| B45 | 0.689 | 0.708 | 0.868 | 0.556 | 0.597 | 0.770 |
| B50 | 0.689 | 0.714 | 0.877 | 0.587 | 0.621 | 0.785 |
| B62 | 0.660 | 0.668 | 0.845 | 0.563 | 0.593 | 0.749 |
| B31 | 0.589 | 0.754 | 0.603 | 0.505 | 0.646 | 0.699 |
| B34 | 0.688 | 0.846 | 0.677 | 0.581 | 0.661 | 0.776 |
| B35 | 0.703 | 0.830 | 0.695 | 0.552 | 0.645 | 0.771 |
| B36 | 0.688 | 0.820 | 0.684 | 0.555 | 0.626 | 0.758 |
| B37 | 0.689 | 0.813 | 0.625 | 0.647 | 0.685 | 0.774 |
| B96 | 0.656 | 0.613 | 0.631 | 0.774 | 0.614 | 0.727 |
| B97 | 0.602 | 0.629 | 0.583 | 0.932 | 0.575 | 0.725 |
| B98 | 0.598 | 0.619 | 0.559 | 0.936 | 0.580 | 0.718 |
| B100 | 0.549 | 0.515 | 0.473 | 0.758 | 0.468 | 0.603 |
| B118 | 0.663 | 0.656 | 0.590 | 0.521 | 0.841 | 0.743 |
| B119 | 0.642 | 0.634 | 0.553 | 0.545 | 0.860 | 0.734 |
| B120 | 0.612 | 0.645 | 0.575 | 0.561 | 0.854 | 0.737 |
| B121 | 0.567 | 0.650 | 0.539 | 0.553 | 0.809 | 0.706 |
| B122 | 0.587 | 0.656 | 0.572 | 0.540 | 0.772 | 0.708 |
| B125 | 0.708 | 0.667 | 0.589 | 0.494 | 0.732 | 0.723 |

Given the evidence of higher level of correlations among the items used, this study removed items with cross-loading values of more than 0.8 (between Locus of Control and

Tolerance of Ambiguity). After removing 5 items (noted in *Table 5*), this study conducted the tests again.

Table 6. Validity – Model C

| | NA | TA | VI | PE | ET |
|---|-------|-------|-------|-------|-------|
| <i>Fornell-Larcker Criterion</i> | | | | | |
| Need for Achievement | 0.807 | | | | |
| Tolerance of Ambiguity | 0.805 | 0.850 | | | |
| Visionary | 0.707 | 0.662 | 0.854 | | |
| Persistence | 0.776 | 0.702 | 0.660 | 0.813 | |
| Entrepreneurial Trait | 0.927 | 0.896 | 0.830 | 0.896 | 0.737 |
| <i>Heterotrait-Monotrait Ratio (HTMT)</i> | | | | | |
| Need for Achievement | | | | | |
| Tolerance of Ambiguity | 0.909 | | | | |
| Visionary | 0.814 | 0.743 | | | |
| Persistence | 0.882 | 0.780 | 0.744 | | |
| Entrepreneurial Trait | 1.018 | 0.961 | 0.912 | 0.970 | |

Note: Need for Achievement (NA), Tolerance of Ambiguity (TA), Visionary (VI), Persistence (PE), Entrepreneurial Trait (ET).

Table 7. Cross Loading – Model C

| | NA | TA | VI | PE | ET |
|------|--------------|--------------|--------------|--------------|-------|
| B84 | 0.824 | 0.701 | 0.515 | 0.647 | 0.762 |
| B85 | 0.810 | 0.699 | 0.545 | 0.604 | 0.750 |
| B86 | 0.757 | 0.557 | 0.587 | 0.630 | 0.712 |
| B87 | 0.819 | 0.642 | 0.616 | 0.611 | 0.754 |
| B90 | 0.823 | 0.642 | 0.592 | 0.639 | 0.759 |
| B31 | 0.714 | 0.838 | 0.568 | 0.616 | 0.774 |
| B34 | 0.664 | 0.819 | 0.537 | 0.551 | 0.727 |
| B35 | 0.689 | 0.867 | 0.556 | 0.597 | 0.767 |
| B36 | 0.689 | 0.877 | 0.588 | 0.621 | 0.785 |
| B37 | 0.661 | 0.846 | 0.563 | 0.593 | 0.753 |
| B96 | 0.656 | 0.632 | 0.775 | 0.614 | 0.742 |
| B97 | 0.602 | 0.583 | 0.931 | 0.575 | 0.734 |
| B98 | 0.597 | 0.559 | 0.936 | 0.580 | 0.728 |
| B100 | 0.549 | 0.473 | 0.758 | 0.468 | 0.614 |
| B118 | 0.662 | 0.590 | 0.521 | 0.842 | 0.749 |
| B119 | 0.642 | 0.553 | 0.545 | 0.861 | 0.744 |
| B120 | 0.612 | 0.575 | 0.561 | 0.855 | 0.744 |
| B121 | 0.567 | 0.539 | 0.553 | 0.809 | 0.704 |
| B122 | 0.587 | 0.572 | 0.540 | 0.771 | 0.704 |
| B125 | 0.708 | 0.589 | 0.494 | 0.731 | 0.720 |

Note: Need for Achievement (NA), Tolerance of Ambiguity (TA), Visionary (VI), Persistence (PE), Entrepreneurial Trait (ET).

Finally, the AVE of each latent variable is greater than the latent variable's highest squared correlation with any other latent variable. Although the correlation between constructs (need for achievement and tolerance of ambiguity) is slightly higher than the

threshold ($0.909 > 0.90$), this study concluded that there is no evidence of a lack of discriminant validity.

3.3. Demographic, Reliability, and Validity

The following *Table 8* depicts the mean and relatively small standard deviation values, which indicate that the values in the statistical data set of the current study are close to the mean of the entire data set used for the study. Nonetheless, to achieve a sturdy research, reliable and valid items are needed. For evaluation, the first and foremost criterion is typically the internal consistency reliability. Cronbach's alpha presumes that all the used indicators are equally reliable (Hair *et al.*, 2013). The reliability of the data for this research based on the Cronbach's alpha, composite reliability, and the Average Variance Extracted (AVE) is shown in *Table 8* below. The Cronbach's alpha values for Need for Achievement, Tolerance of Ambiguity, Visionary, Persistence, and Entrepreneurial Traits have been found to be more than 0.7, thus, all the items used for the present study could be considered reliable.

Furthermore, according to Hair *et al.* (2013), the reliability value of an item particularly, for composite reliability, values of 0.7 and more are acceptable, which is the case in the present study (see *Table 8*), indicating that all items in this study could be considered acceptable. *Table 8* also shows that the Average Variance Extracted (AVE) values for all the variables are found to be higher than 0.50. Since Hair *et al.* (2011) state that the values should be higher than 0.50 because if the AVE is less than 0.50 on average, more error remains in the items than the variance that is explained by the construct (Hair *et al.*, 2013); therefore, the values could be considered to be acceptable convergent validity.

Corresponding to Hair *et al.* (2013), the discriminant validity can be assessed by examining the cross loadings of the indicators. For the discriminant validity, when the value is higher than 0.7 and the construct loading is higher than its cross loading, a component is considered reliable. All the indicators in Model C (*Table 7*) are assumed to be reliable since it demonstrates that the loadings are higher than 0.7 (Hair *et al.*, 2013). *Table 7* further reveals the cross-loadings of all the indicators' loadings, which are higher than the entire cross-loadings, affirming the discriminant validity. Pertaining to the Fornell-Larcker criterion for discriminant validity, the AVE for each indicator needs to be higher than the constructs highest squared correlation with another construct and since all the constructs meet the criteria as observed in *Table 6*, there is no evidence of a lack of discriminant validity. Furthermore, the Heterotrait-Monotrait Ratio (HTMT) is an estimate of the correlation between constructs, which parallels the disattenuated construct score creation. Although the correlation between constructs (need for achievement and tolerance of ambiguity) is slightly higher than the threshold ($0.909 > 0.90$), yet this study concluded that there is no evidence of a lack of discriminant validity. Moreover, the AVE values for all the constructs are more than 0.5, indicating sufficient convergence validity.

Table 8. Demographic, Reliability, and Validity

| | Items | Mean | SD | Cronbach's Alpha | Composite Reliability | AVE |
|------------------------|-------|--------|---------|------------------|-----------------------|-------|
| Need for Achievement | 5 | 3.2313 | .97028 | 0.866 | 0.903 | 0.651 |
| Tolerance of Ambiguity | 5 | 3.0525 | 1.08222 | 0.903 | 0.928 | 0.722 |
| Visionary | 4 | 2.8500 | 1.23162 | 0.873 | 0.915 | 0.730 |
| Persistence | 6 | 2.9950 | 1.04227 | 0.896 | 0.921 | 0.661 |
| Entrepreneurial Trait | 20 | 2.3525 | 1.05931 | 0.956 | 0.960 | 0.543 |

3.4. Reflective Hierarchical Model

Path coefficients are estimated path relationships in the structural model (i.e., between the constructs in the model) (Hair *et al.*, 2013). Illustrated below, *Table 9* reveals a positive and statistically significant (at the chosen 5% level of significance) effect of the path coefficients of Need for Achievement, Tolerance of Ambiguity, Visionary, and Persistence on Entrepreneurial Traits indicating that the constructs employed are significantly able to predict Entrepreneurial Traits. Additionally, *Table 9* also translates the Beta and t-values, which reveals that Persistence is a single construct, which makes the strongest unique contribution in explaining Entrepreneurial Orientation as reflected by its highest Beta value followed by Tolerance of Ambiguity, Need for Achievement, and Visionary. In terms of Variance explained, Need for achievement leads the team followed by Tolerance of Ambiguity, Visionary, and Persistence.

Table 9. Path Coefficients of Reflective Hierarchical Model

| | Beta | t-value | p-value |
|--|-------|---------|---------|
| Need for Achievement → Entrepreneurial Trait | 0.278 | 55.313 | 0.000 |
| Tolerance of Ambiguity → Entrepreneurial Trait | 0.298 | 45.758 | 0.000 |
| Visionary → Entrepreneurial Trait | 0.221 | 41.842 | 0.000 |
| Persistence → Entrepreneurial Trait | 0.326 | 36.903 | 0.000 |

Conclusion and Recommendation

Previous relevant studies conveyed that people are positively and immensely interested to know about the traits and capabilities of entrepreneurs that influence the success of a business; therefore, research in the context of entrepreneurial traits has become increasingly important (Driessen & Zwart, 2007). Moreover, according to an earlier study, rigorous empirical research has had trouble identifying particular individual traits that are strongly associated with entrepreneurship (Zimmer, 1986), further reflecting the significance and need for studies related to entrepreneurial traits. Under such a reality, the present study perceived that there was a lack of conceptual development along with inadequate tools to measure entrepreneurial traits, which has been hindering the progress of related quantitative research. Therefore, in a novel and significant attempt, the present study surveyed the depths and progress of entrepreneurial literature with the purpose of distilling its outlines by examining the need for achievement, locus of control, tolerance of ambiguity, visionary, persistence, and resilience to develop a valid measure of Entrepreneurial Traits, particularly in the context of low-income or underprivileged households in Malaysia.

It needs to be acknowledged that the findings of the present study are mere incremental contributions to the overall understanding and knowledge of entrepreneurial traits, however, in its contribution, the present study has forwarded and confirmed the reliability and validity of a new instrument to measure Entrepreneurial Traits. This study found significant relationships between Entrepreneurial Traits and four of the posited components (i.e., Need for Achievement, Tolerance of Ambiguity, Visionary, and Persistence) by means of relevant statistical analyses. The instrument development and validation process for all constructs employed by the present study has confirmed that the new instrument to measure entrepreneurial traits is not only internally consistent, but also multi-dimensional and stable across samples. It is therefore recommended that future researchers could apply the instrument forwarded by the present study to carry out quantitative studies focusing on entrepreneurial traits across different income groups that could clarify the extent

to which the developed instrument of the present study is replicable across a wider set of countries, which in turn may contribute to future entrepreneurial traits related research and more generally towards theorizing entrepreneurship in the context of diverse economies across the globe.

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