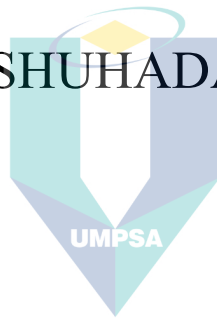# DETERMINANTS OF ENTREPRENEURIAL BEHAVIOUR AMONG *ORANG ASLI* IN PENINSULAR MALAYSIA: AN EXTENDED THEORY OF PLANNED BEHAVIOUR FRAMEWORK

NOR EMMY SHUHADA BINTI DERANI

DOCTOR OF PHILOSOPHY

UNIVERSITI MALAYSIA PAHANG
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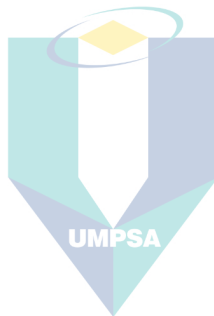
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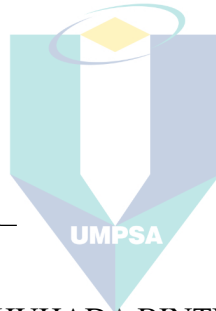
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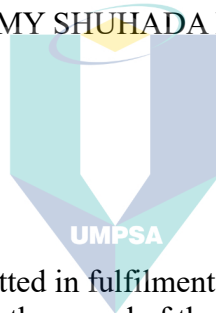
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ACKNOWLEDGEMENTS

بِسْمِ اللهِ الرَّحْمٰنِ الرَّحِيْمِ

"In the name of God, the Most Gracious, the Most Merciful".

"But Allah is your protector, and He is the best of helpers" [Quran: Al-Imran 3:150]

ABSTRACT

Poverty is a worldwide problem which crucially impacted on marginalized communities such as the Orang Asli people. Entrepreneurship is considered as a means of escaping the woes of poverty and improving the livelihood of the community. Hence, indigenous entrepreneurship has also been given the nudge through various government programmes to decrease incidence poverty among the Orang Asli. Hence, it is necessary to understand their entrepreneurial behaviour so that the right intervention could effectively contribute towards decreased rate of poverty. This study used an enriched Theory of Planned Behaviour with the addition of self-reliance and self-sufficiency from the Self-Identity Theory to examine the determinants of entrepreneurial behaviour among Orang Asli. Based on a post-positivist paradigm, this cross-sectional and quantitative study gathered information using survey questionnaire from the population of Orang Asli entrepreneurs. Using 216 valid datasets, this study employed a PLS-SEM approach to analyze data and generate the empirical findings. A total of 12 research hypotheses were tested whereby six were supported. Findings showed that attitude, subjective norms and self-reliance positively and significantly influence entrepreneurial intention but not self-sufficiency. Self-reliance significantly predicts self-sufficiency and actual behavioural control significantly predicts perceived behavioural control. Besides that, the moderating effect of perceived behavioural control on the relationships of attitude and subjective norms with entrepreneurial intention were not significant. Likewise, the moderating effects of perceived and actual behavioural control on the relationship between entrepreneurial intention and entrepreneurial behaviour were not significant. Self-sufficiency also did not mediate the relationship of self-reliance with entrepreneurial intention. The effect of entrepreneurial intention on entrepreneurship behaviour was positive and significant. The model showed substantial predictive accuracy with R^2 of 0.553 to explain entrepreneurial intention and an R^2 of 0.640 to explain entrepreneurial behaviour and PLSpredict indicated that the model has moderate predictive power. Findings implied the need for the government to plan and implement entrepreneurial programs that are based on the essence of self-reliance and subjective norms while at the same time, promoting positive attitude towards entrepreneurship among the Orang Asli community.

Keywords: Entrepreneurship, Entrepreneurial behaviour, Entrepreneurial intention, *Orang Asli*, Poverty, Theory of Planned Behaviour, Self-Identity Theory

ABSTRAK

Kemiskinan merupakan masalah dunia yang memberi kesan besar terhadap masyarakat terpinggir seperti Orang Asli. Keusahawanan dianggap sebagai satu cara untuk bebas dari kancah kemiskinan dan memperbaiki kehidupan dalam masyarakat. Oleh itu, keusahawanan bumiputera telah diberikan suntikan melalui pelbagai program Kerajaan untuk mengurangkan gejala kemiskinan dalam kalangan Orang Asli. Lantaran itu, adalah perlu untuk memahami tingkah laku keusahawanan mereka supaya intervensi yang betul dapat menyumbang secara efektif bagi mengurangkan kadar kemiskinan. Kajian ini menggunakan Teori Tingkah Laku Terancang yang diperkaya dengan penambahan kemandirian diri dan kemampuan diri daripada Teori Identiti kendiri untuk mengkaji penentu tingkah laku keusahawanan dalam kalangan Orang Asli. Berasaskan kepada paradigma pasca positivis, kajian rentas dan kuantiatif ini mendapatkan maklumat menggunakan soal selidik tinjauan daripada populasi usahawan Orang Asli. Dengan menggunakan 216 set data yang sah, kajian ini menggunakan pendekatan PLS-SEM untuk menganalisis data dan memperoleh dapatan empirikal. Sebanyak 12 hipotesis kajian telah diuji di mana enam telah disokong. Kajian menunjukkan sikap, norma subjektif dan kemandirian diri mempengaruhi niat keusahawanan secara positif dan signifikan tetapi tidak untuk kemampuan diri. Kemandirian diri juga meramal kemampuan diri secara signifikan manakala kawalan tingkah laku sebenar meramal kawalan tingkah laku dipersepsikan secara signifikan. Selain itu, kesan penyederhanaan oleh kawalan tingkah laku dipersepsikan terhadap hubungan sikap dan norma subjektif dengan niat tingkah laku tidak signifikan. Malahan, kesan penyederhanan kawalan tingkah laku dipersepsikan dan sebenar terhadap hubungan niat keusahawanan dan tingkah laku keusahawanan juga tidak signifikan. Kemampuan diri juga tidak mengantara hubungan antara kemandirian diri dan niat keusahawanan. Kesan niat keusahawanan terhadap tingkah laku keusahawanan adalah positif dan signifikan. Model ini menunjukan ketepatan peramalan yang besar dengan nilai R^2, 0.553 untuk menerangkan niat keusahawanan dan nilai R^2, 0.640 untuk menerangkan tingkah laku keusahawanan. Manakala, PLSpredict menunjukkan bahawa model mempunyai kuasa peramalan yang sederhana. Dapatan ini menegaskan keperluan untuk Kerajaan merancang dan melaksanakan program keusahawanan yang berasaskan kepada ciri-ciri kemandirian diri dan norma subjektif di samping menggalakkan sikap positif terhadap keusahawanan dalam kalangan masyarakat Orang Asli.

Kata Kunci: Keusahawanan, Tingkah laku keusahawanan, Niat keusahawanan, Orang Asli, Kemiskinan, Teori Tingkah Laku Terancang, Teori Identiti Kendiri

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LIST OF ABBREVIATIONS

ABC   Actual Behavioural Control

ATT   Attitude

B40   Bottom-income Group – Bottom 40%

CCM   Companies Commission of Malaysia

DOSM   Department of Statistics Malaysia

EB   Entrepreneurial Behaviour

EI   Entrepreneurial Intention

GDP   Gross Domestic Product

JAKOA   Jabatan Kemajuan Orang Asli

M40   Middle-income Group – Middle 40%

MEDAC   Ministry of Entrepreneur Development and Cooperative

NDP   National Development Plan

NEP   New Economic Policy

NEP2030   National Entrepreneurship Policy 2030

NGO   Non-government Organization

PBC   Perceived Behavioural Control

PLS-SEM   Partial Least Structural – Structural Equation Modelling

SEM   Structural Equation Modelling

SME   Small Medium Enterprise

SN   Subjective Norms

SPSS   Statistical Package for Social Science

SR   Self-Reliance

SS   Self-Sufficiency

SUHAKAM   The Human Rights Commission of Malaysia

TPB   Theory of Planned Behaviour

TRA   Theory of Reasoned Action

UNITEN   Universiti Tenaga Nasional

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

The first chapter presents the background of the study, the research problem, research questions, research objectives and scope of the study. Besides that, the significance of the study based on theoretical and practical perspectives are also presented. The key terms used in this thesis are also operationally defined. The chapter ends with a description of the thesis structure and a brief summary to consolidate the overall content.

1.1   Background of the Study

The background of the study discusses the poverty issue in Malaysia and the efforts on poverty eradication and sustainable development goals. The discussion focuses on the plight of the Orang Asli in Malaysia as a minority group with significant high poverty rate which could be addressed through participation in entrepreneurship. Henceforth, this section also included the potential of entrepreneurship as a viable solution to liberate the Orang Asli community from poverty.

1.1.1   Poverty Eradication and Sustainable Development Goals in Malaysia

Poverty is considered as a global social phenomenon which still becomes a focus of interest among politicians, academics, researchers and the general public. At the global level, poverty continues to become a key interest in the United Nation's Sustainable Development Goals (SDGs) with a strong stance to eradicate poverty by 2030. The first goal of SDGs is "to end poverty in all its forms and everywhere". The World Bank established the poverty lines for lower middle-income countries (LMICs) and upper middle-income countries (UMICs) to $3.65 and $6.85 per person per day respectively. In 2022, it was estimated that 1.85 billion people or 26 percent of the global population lived

below the $3.65 a day threshold and 3.71 billion people or 46 percent of the global population did not surpass the $6.85 a day threshold. Although the majority of people living in extreme poverty is located in Sub-Saharan Africa, estimated at 62 percent of its people, it was also noted that extreme poverty was also experienced by 4 percent of people in East Asia and the Pacific in 2022. However, as can be seen from Figure 1.1, efforts at the global level have reduced the percentage of people living in poverty.
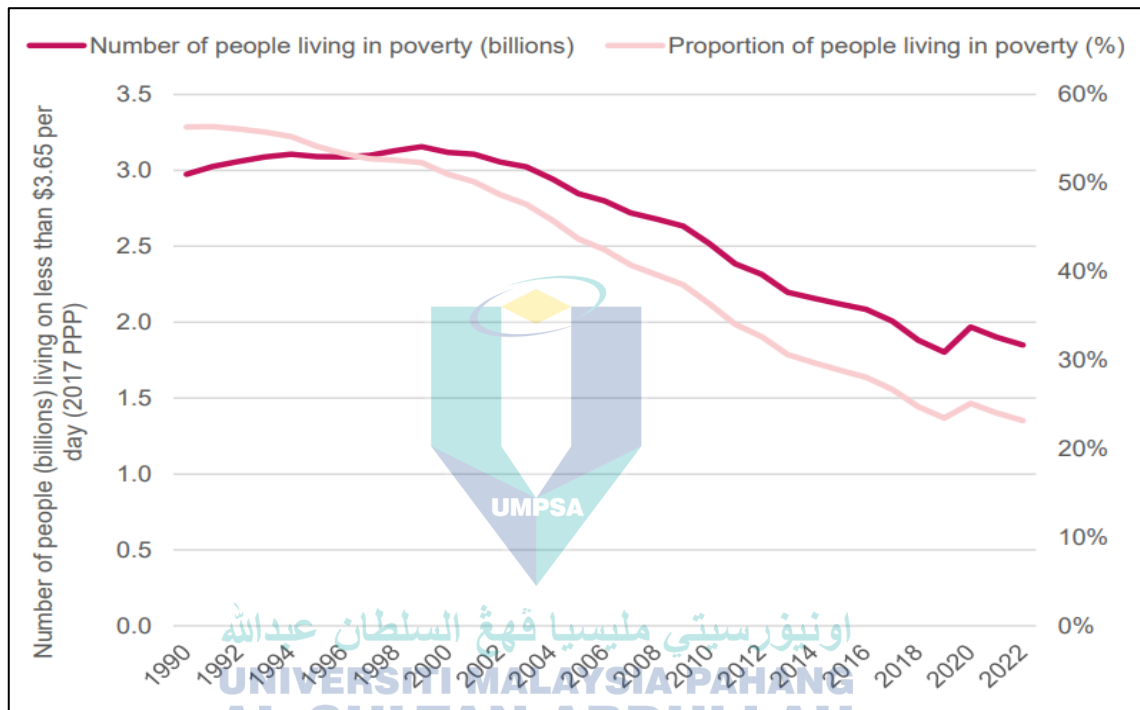
Figure 1.1   Global Trends of People Living in Poverty Below the $3.65 Threshold (1990-2022)
Source: Mahler et al. (2022); Development Initiatives (2023)

Countries around the world, including Malaysia have aimed to reduce the incidence of poverty and undertake this issue as an important agenda in national development plans. Poverty and income inequality are still significant challenges in Malaysia. Every increase in poverty and income disparity directly impacts economic growth. Since the 1970s, the Malaysian government has made numerous significant attempts to alleviate poverty and reduce economic disparity (Economic Planning Unit, 2020; Islam et al., 2017). At the national level, Malaysia has targeted poverty eradication as a national agenda since the First Malaysia Plan (1966-1970) and through the implementation of the New Economic Policy (1970-1990). Further efforts to address the

poverty issue continued under the National Development Policy (1991-2000) and the National Vision Policy (2001-2020). In the current Twelfth Malaysia Plan (2021-2025), the Shared Prosperity Vision which encompasses economic empowerment, environmental sustainability and social re-engineering extended the effort to eradicate poverty among the people in Malaysia (Ministry of Economy, 2021).

Such early endeavors led to significant reduction of poverty from 49.3 percent of the population living in poverty in 1970 to 12.4 percent in 1992 (Department of Statistics Malaysia, 2023). However, poverty issue continues to become a national problem and the disparity among different communities were aggravated even more during and after the COVID-19 pandemic (Daud, 2021; Rongen et al., 2022; Zakaria et al., 2023). Despite its progress in reducing poverty, Malaysia still has a vulnerable minority of impoverished individuals due to geographical and societal factors where poverty generally exists in rural and urban areas (Asadullah et al., 2023; Nungsari et al., 2022). In Malaysia, the majority of impoverished households reside in rural areas (Ravallion, 2020; Zakaria et al., 2023; Tedong et al., 2022).

1.1.2 Poverty Issues of the *Orang Asli* Community

Malaysia is a multiracial nation with the mainstream races comprising of Malay, Chinese and Indians. Orang Asli who are the indigenous people, also referred to as "Original People" or "First People" are among the minorities residing in Peninsular Malaysia (Amiruddin et al., 2020). According to the Department of Orang Asli Development (JAKOA, 2020), there are about 206,777 Orang Asli which is barely 0.62 percent of the total population in Malaysia. The Orang Asli community in Peninsular Malaysia comprises of three main tribes which are Senoi, Negrito and Proto-Malay, and each of these tribes are further classified into 18 sub-tribes (Khor & Shariff, 2019). Among them are the Kensiu, Kintaq, Lanoh, Jahai, Mendriq, Bateq, Temiar, Semai, Semoq Beri, Jah Hut, Mah Meri, Che Wong, Orang Kuala, Orang Kanaq, Orang Seletar, Jakun, Semelai, and Temuan (Ismail et al., 2018). The community of Orang Asli has their own language, linguistic structures and belief systems (Adilla et al., 2021; Rosdi et al., 2018). They normally reside in rural areas (Ab Rahman et al., 2021).

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Traditionally, the Orang Asli are known as a community that depended on forests and local natural resources as their sources of income and livelihood (Mamo et al., 2023) and quite resilient to change in their lifestyles (Nor, 2021). Hence, the Orang Asli community remains below the poverty line because of its overdependence on income from agriculture or traditional natural resources (Amiruddin et al., 2020). A report in Economic Planning Unit (2020) showed that the Orang Asli poverty rate was 33.6 percent in 2020. This rate contributed to 8.4 percent of the country's absolute poverty. It also indicates that Orang Asli is the poorest ethnic group, followed by Bumiputera or *Orang Asal* in Sabah at 22.7 percent. In comparison, Sarawak Bumiputera is at 11.2 percent while the Indians are at 4.8 percent, and Chinese at 1.4 percent (Sinar Harapan, 2021).

Poverty implies a lack of material resources (such as food and shelter) and inadequate access to essential services (i.e., health and education). These concerns typically encompass a variety of intangible situations, such as a lack of rights, instability, vulnerability, and prejudice (Ostonokulov & Sattoriy, 2023). As one of the poorest community in Malaysia, many issues arise from their poverty, including malnutrition (Anto Cordelia et al., 2019; Chew et al., 2022; Khor & Shariff, 2019; Tay et al., 2022), inequality and the lack of basic rights (Adilla et al., 2021; Chew et al., 2022; Mat Dong et al., 2022; Saifullah et al., 2021), school dropout (Abdullah, 2022; Othman, 2022; Sawalludin et al., 2020), diseases (Mahmud et al., 2022; Mohd Rosman et al., 2020), and their sustainability and resilience in mainstream society (Abdullah, 2022). They are subjected to challenges concerning their health, nutrition and education (Abdullah & Primus, 2021; Abdullah et al., 2023a, 2023b). Their extreme poverty consequently leads to lacking in education and lack of employment opportunities, and thus, causing their struggle to accept modernization and stagnation of their socio-economic level (Adilla et al., 2021; Ghani et al., 2020; Mat Dong et al., 2022; Saifullah et al., 2021; Tedong et al., 2022).

The government, especially JAKOA as the government agency responsible for the development of the Orang Asli, has planned various initiatives and programs to improve the living standards of this community (Mat Dong et al., 2022). One of the initiatives by the government to eradicate poverty as well as improve the Orang Asli's socio-economy is through entrepreneurship activities (Amiruddin et al., 2020).

1.1.3 Entrepreneurship as a Viable Solution for the *Orang Asli* Community

Over the past decades, researchers have focused on entrepreneurship as past studies have shown a clear link between entrepreneurship and economic growth (Audretsch et al., 2022; Dong et al., 2022). Entrepreneurship is acknowledged as a crucial component of national economies that considerably boosts employment and reduces poverty (Hazudin et al., 2023; Kim & Maritz, 2021). The government has emphasized entrepreneurship because it not only eradicates poverty but also assists the nation in building human resources and improving the quality of life (Boubker et al., 2021; Morris et al., 2020).

The government of Malaysia is committed to reducing poverty on a national scale. Henceforth, Malaysia has been engaged in an ambitious and protracted process of economic, social, and political changes over the past few decades to enhance socioeconomic well-being, promote entrepreneurship, and battle poverty at all levels of society (Ariffin et al., 2022; Nik Hussin & Abdul Aziz, 2021; Nik Mahdi et al., 2022). Planning for Malaysia's development has always been governed by the principle of growth with equity. This principle has guided the country's initiatives to eradicate poverty (Abdul Manaf & Ibrahim, 2017; Asadullah et al., 2023). It places a high priority on enhancing the status and quality of life of the lower-income population.

The development of the Orang Asli is under the prerogative of a specific department, JAKOA which was established since 1950 (Mat Dong et al., 2022). JAKOA serves as a government agency and act as an intermediary to collaborate with other organizations to execute social development programs for the Orang Asli (Manaf et al., 2021). Amiruddin et al. (2020) further explained that JAKOA's primary goal is to protect the Orang Asli's way of life from the rapid rise of civilization and exploitation by outside society while at the same time, offering facilities and aids for education, health and socioeconomic development. Hence, JAKOA is the main government agency that plays a prime role to promote entrepreneurship as a means of improving the livelihood of Orang Asli in Malaysia.

Under the 12th Malaysia Plan, the government encourages more Malaysian from all levels and races including Orang Asli to get involved and become entrepreneurs (Ministry of Entrepreneur Development and Cooperative, MEDC, 2019). According to JAKOA (2022), six main categories of Orang Asli businesses were already included and introduced in the 11th Malaysia Plan (2016-2020) which are: agriculture, agro-based industry, retail, services, manufacturing, and construction. Each of these categories comprises of sub-categories as shown in Table 1.1, thus implying that businesses and entrepreneurship endeavors are not something new to the Orang Asli community.

Table 1.1   Types of *Orang Asli* Businesses in Peninsular Malaysia

Categories	Sub-Categories
Agriculture	Making stables for cattle, goats, chickens, stingless bees (beekeeping), nurseries, farming, fish cage, sweet potato planting, cattle ranching, goat breeding, poultry, herbs, and roots.
Agro-based Industry	Producing and sell banana chips, stingless downstream beekeeping, salted fish, oud oil, *kelong* entrepreneurship, and fishing.
Retail	Selling used items, grocery shop, fishing tackle shop, bundle store, wholesaler, used furniture, freshwater fishmonger, bamboo bargaining.
Services	Bridal boutique, car workshop, motorcycle workshop, homestay, cybercafe, sewing shop, barbershop, restaurant, tourism, supply, transportation, car washing, beauty salon, cupping tools shop and massage, paid fishing pools.
Manufacturing	Handicraft workshop, boat making, textile, cake, and bakery entrepreneurs.
Construction	Construction

Source: JAKOA (2022)

Traditionally, driven by their rich knowledge and wisdom on nature management inherited from previous generations, the Orang Asli are hunter-gatherers, fishers and arboriculture cultivators (Jamak et al., 2014; Dhir, 2015). For instance, the Mah Meri and Jah Hut tribes are excellent in the art of wood carving and have the potentials to improve their life through involvement in the tourism sector (Shah et al., 2018; Cheng & Helen,

2021). The Semelai tribe or also known as "Semaq Tasik" (lake people) and the Jakun tribe are involved in hunting and gathering animals, and collecting rattan, bamboo and tree resins while some work in rubber estates (JAKOA, 2022). Many of the people in these tribes still depend on the forests for their income to survive, but they have begun to understand the importance of the outside world and the demands of the emerging new economy (Amiruddin et al., 2020). Meanwhile, the Senoi, Orang Kuala, and Orang Seletar sub-ethnic groups live by the coastal area and work as fishermen (Pah et al., 2017). Other sub-ethnic groups such as the Temiar, Che Wong, Jah Hut, and Semoq Beri tribes usually cultivate swidden or hill rice, while Jahai and Lanoh, who are still semi-nomadic, usually sell the seasonal bounties from the forest as their income (Liu & Chen, 2018; Masron et al., 2013; Pah et al., 2017). Table 1.2 shows the main traditional economic and entrepreneurial activities of the Orang Asli in Peninsular Malaysia. The list of economic and entrepreneurial activities of the Orang Asli implies that there are ample opportunities from entrepreneurial endeavors that can be tapped on to improve the livelihood of the community from a more concerted focus on entrepreneurial development among its people.
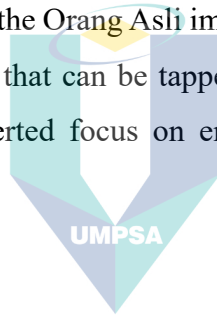
Table 1.2   Summary of Main Traditional Economic and Entrepreneurial Activities of the Orang Asli in Peninsular Malaysia

Tribes	Fishing	Rubber	Oil Palm	Cocoa Farm	Forest Harvest	Swidden (Hill Rice)	Hunting and Gathering	Trade	Wood Carving
Bateq		✓	✓	✓	✓	✓	✓	✓	
Jahai					✓	✓	✓	✓	
Kintaq		✓	✓	✓	✓	✓	✓	✓	
Mendriq	✓	✓	✓	✓	✓		✓		
Kensiu						✓	✓	✓	
Lanoh		✓	✓	✓	✓	✓	✓	✓	
Temiar		✓	✓	✓		✓		✓	
Jah Hut		✓	✓	✓		✓	✓	✓	✓
Semoq Beri		✓	✓	✓		✓	✓		
Semai		✓	✓	✓	✓	✓		✓	
Che Wong		✓	✓	✓		✓	✓		
Mah Meri	✓	✓	✓	✓			✓		✓
Orang Seletar	✓						✓		
Orang Kuala	✓								
Temuan		✓	✓	✓	✓			✓	
Jakun		✓	✓	✓	✓			✓	
Semelai		✓	✓	✓	✓	✓		✓	
Orang Kanaq		✓	✓	✓				✓	

Source: Liu & Chen (2018); Masron et al. (2013); Pah et al. (2017)

1.1.4 Entrepreneurial Activities Among the *Orang Asli* Community

The involvement of Orang Asli in entrepreneurship is regarded as a new approach to changing the fortunes and economy of their community. The government has provided various opportunities and assistance to the Orang Asli community to facilitate their involvement in entrepreneurship. Despite various programs and initiatives provided to the Orang Asli community to venture into entrepreneurship, but up to now, their involvement in entrepreneurship is still considerably low (Rosli et al., 2018). Figure 1.2 shows the breakdown of Orang Asli entrepreneurs by States, according to 10th Malaysia Plan (2011-2015) and 11th Malaysia Plan (2016-2020).
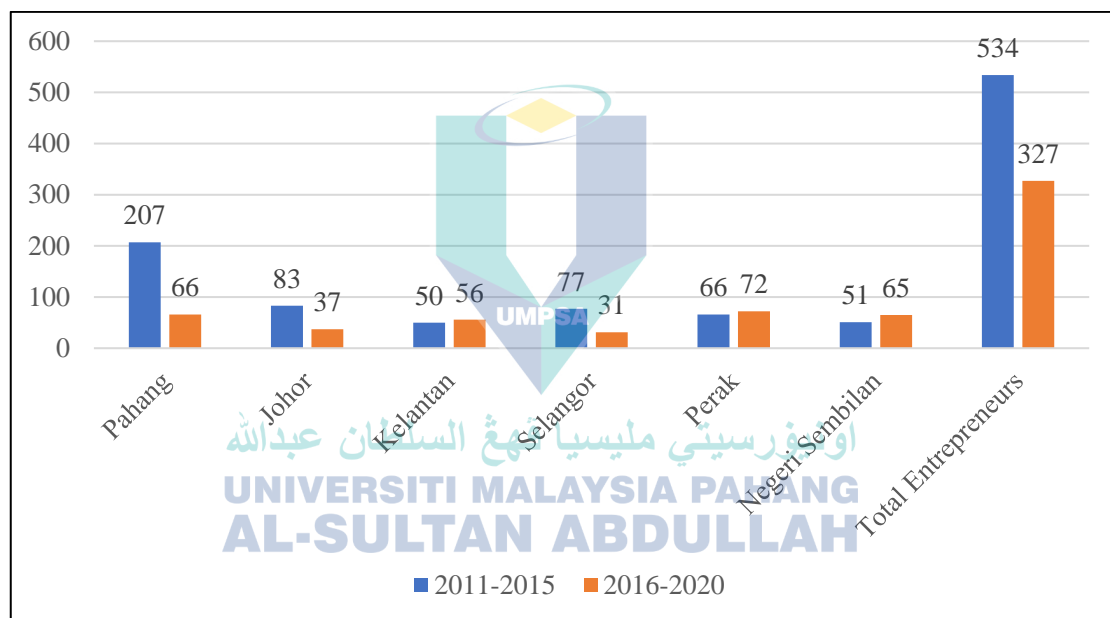
Figure 1.2   Breakdown of Orang Asli Entrepreneurs by States
Source: JAKOA (2022)

As can be gleaned from Figure 1.2, there were only 534 registered entrepreneurs with JAKOA from 2011 to 2015 and a total of 327 between 2016 and 2020. Comparatively, Pahang registered the largest number of Orang Asli entrepreneurs but the State also showed the most declining number of entrepreneurs between the two Malaysia plans period. Considering that the total population of Orang Asli in Malaysia is 209,211, the number of registered entrepreneurs with JAKOA is quite low (Amiruddin et al., 2020; Cheng & Helen, 2021; Rosdi et al., 2018). Derweanna et al. (2018) argued that one of the reasons for low involvement among the Orang Asli with JAKOA's entrepreneurial

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programmes is due to these programmes being ad-hoc and temporary, as well as being carried out in different places and areas. Rosli (2021) added that other issues such as untraceable entrepreneurs due to death, moving away to different locations and impacts of COVID-19 are also reasons for the declining number of registered entrepreneurs with JAKOA. Masron et al. (2013) argued that the Orang Asli community lives very close to the forest and nature and they regard the forest as the source of livelihood and survival. The community at large, still adheres to cultures, customs, and beliefs to be passed down to future generations (Mamo et al., 2023). Hence, their entrepreneurial behaviour could be unique in its own way which could influence their ability and determination to become successful and resilient entrepreneurs (Amiruddin et al., 2020; Othman et al., 2011).

1.2   Research Problem

The Shared Prosperity Vison guiding the national development in the 12th Malaysia Plan (2020-2025) continued to eradicate incidences of poverty among the people in Malaysia, including the marginalized communities of *Orang Asli* (Ministry of Economy, 2021). Based on the records of registered entrepreneurs with JAKOA, the number of *Orang Asli* entrepreneurs is still low (JAKOA, 2022). Most of the *Orang Asli* people are still embarked on traditional economic activities that is significantly influenced by their environment and ancestors' practices (Abdullah et al., 2015; Adilla et al., 2021; Ghani et al., 2020; Manaf & Ibrahim, 2017; Mat Dong et al., 2022; Saifullah et al., 2021; Tedong et al., 2022). Inasmuch, their entrepreneurial behaviour is still not fully understood. Cai et al. (2018) stated that entrepreneurial behaviour is crucial in entrepreneurship endeavours are it allows individuals to identify opportunities and convert them into good values. To gain more profound knowledge and understanding, it is necessary to study entrepreneurial behaviour in a more specific research context (Bi et al., 2021). This requires the integration of theoretical insights from the perspective of psychology, cognitive science, neuroscience and social sciences together with behavioural insights approaches, including behavioural economics and human-centred design, in order to provide a deeper understanding of the reason why an individual decides to engage in a specific behavior (Metallo et al., 2021). Hence, in the context of *Orang Asli*, the understanding of their entrepreneurial behaviour should consider both cognitive and non-cognitive perspectives.

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The Theory of Planned Behaviour (TPB) is a popular cognitive theory popularized by Ajzen (1985) to determine the reason why an individual engage in a specific behaviour such as becoming an entrepreneur (Bi et al., 2021; Wang et al., 2022). Numerous studies have used the TPB framework to understand the entrepreneurial behaviour of individuals in various contexts (Al Halbusi et al., 2023; Arshad et al., 2023; de Andrade & Calvalho, 2023). However, this theory alone might not be sufficient to explain the entrepreneurial behaviour of *Orang Asli*. The non-cognitive measure of entrepreneurial behaviour should be included such as the influence of culture and environment. Calza et al. (2020) explained that cultural values can bridge the gap in understanding entrepreneurial behaviour. It has been argued that *Orang Asli* in Peninsular Malaysia are still in adherence to their traditional belief about the environment and forest as their source of living (Amiruddin et al., 2020; Khor & Shariff, 2019; Mamo et al., 2023; Nor, 2021; Shah et al., 2018). Further to that, the low number of registered *Orang Asli* entrepreneurs with JAKOA implies that their self-reliance might be a reason for them to forego subsistence agricultural items in favour of generating cash from forest harvests, rather than relying on government or external assistance (Amiruddin et al., 2020; Cheng & Helen, 2021). Self-sufficiency which refers to an individual's ability to meet their own needs without expecting help from others (Al-Mamary & Alraja, 2022) is ingrained in the *Orang Asli* community as they cling to their locus of cultural identity, ethnic sanctuary and economic opportunities (Pah et al., 2017; Rosdi et al., 2018; Norhayati & Ramle, 2021).

Thus, this study investigates the theory of planned behavior by considering its major characteristics, which indigenous people could use as a strategy to cognitively reframe their entrepreneurial intention so that they can perform such entrepreneurial behavior in entrepreneurial activities as well as the addition of self-reliance and self-sufficiency to provide a non-cognitive perspective to understand the uniqueness of entrepreneurial behaviour among the *Orang Asli*.

1.3   Research Questions

The research questions in this study relate to the need to understand entrepreneurial behaviour by using the TPB framework and extending this theory with

non-cognitive perspective of self-reliance and self-sufficiency of the *Orang Asli* people. The research questions are posed as follow:

1. To what extent is the effect of attitude and subjective norms on entrepreneurial intention?
2. Does perceived behavioural control moderate the relationships of attitude and subjective norms with entrepreneurial intention?
3. To what extent is the effect of actual behavioural control on perceived behavioural control?
4. Does perceived behavioural control moderate the relationship of entrepreneurial intention with entrepreneurial behaviour?
5. Does actual behavioural control moderate the relationship of entrepreneurial intention with entrepreneurial behaviour?
6. To what extent is the effect of self-reliance and self-sufficiency on entrepreneurship intention?
7. To what extent is the effect of self-reliance on self-sufficiency?
8. Does self-sufficiency mediate the relationship of self-reliance with entrepreneurial intention?
9. To what extent is the effect of entrepreneurial intention on entrepreneurial behaviour?

1.4   Research Objectives

There are nine research objectives that are aligned to the research questions of this study which are stated as follow:

1. To determine the extent of the effect of attitude and subjective norms on entrepreneurial intention;
2. To assess the moderating effect of perceived behavioural control on the relationships of attitude and subjective norms with entrepreneurial intention;
3. To determine the extent of the effect of actual behavioural control on perceived behavioural control;
4. To assess the moderating effect of perceived behavioural control on the relationship of entrepreneurial intention with entrepreneurial behaviour;

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5.   To assess the moderating effect of actual behavioural control on the relationship of entrepreneurial intention with entrepreneurial behaviour;

6.   To determine the extent of the effect of self-reliance and self-sufficiency on entrepreneurship intention;

7.   To determine the extent of the effect of self-reliance on self-sufficiency;

8.   To assess the mediating effect of self-sufficiency on the relationship of self-reliance with entrepreneurial intention; and

9.   To determine the extent of the effect of entrepreneurial intention on entrepreneurial behaviour.

1.5   Scope of the Study

This study aimed to determine the factors that influence entrepreneurial intention and entrepreneurial behaviour among *Orang Asli* entrepreneurs using a TPB framework that has been enriched with two additional variables, self-reliance and self-sufficiency, which are derived from the Self-Identity Theory. Hence, this study focuses on the interrelationships of the variables to explain entrepreneurial intention and entrepreneurial behaviour among *Orang Asli* entrepreneurs. By using a partial least square structural equation modelling (PLS SEM), this study determined the effects of personal attitude, subjective norms, perceived behavioural control, actual behavioural control, self-reliance and self-sufficiency on entrepreneurial intention and entrepreneurial behaviour of *Orang Asli* entrepreneurs.

Besides that, this study focuses only on the *Orang Asli* in Peninsular Malaysia, and not inclusive of the indigenous communities in Sabah and Sarawak. More specifically, the study involved *Orang Asli* entrepreneurs who have registered with JAKOA and owns a registered business under Companies Commission of Malaysia (CCM). Those who were not registered with JAKOA and do not have a valid trading license are not included in this study.

1.6 Significance of the Study

This study provides beneficial insights to understand entrepreneurial behaviour among *Orang Asli* community in Peninsular Malaysia based on the integrated Theory of Planned Behaviour and Theory of Self-Identity. The significance of this study is discussed more specifically from the context of theories and practices.

1.6.1 Theoretical Significance

This study contributes towards the enrichment of the Theory of Planned Behaviour with the two variables from the Self-Identity Theory which are: self-reliance and self-sufficiency. These variables are non-cognitive in nature and could add to insights by integrating them to a cognitive and behavioural framework of the Theory of Planned Behaviour (Metallo et al., 2021). More importantly, this study justified the aptness of TPB to guide the development of the conceptual framework with a substantial predictive power to explain entrepreneurial intention and behaviour among the *Orang Asli* entrepreneurs. Past studies have considered variables such as demographics, entrepreneurial traits, transferable skills, financial aids, government policies and programs to explain successful entrepreneurship among the indigenous communities (Amiruddin et al., 2020; Ghani et al., 2020; Rosdi et al., 2018). Yet, there appears to be insufficient information in the literature pertaining to entrepreneurial behaviour (Çelik et al., 2021).

Further to that, the enrichment of TPB with the two variables from the Self-Identity Theory which are self-reliance and self-sufficiency provide greater insights to explain *Orang Asli*'s unique entrepreneurial disposition. Ugochukwu and Adebola (2019) stated that self-reliance and self-sufficiency positively correlate with the likelihood of becoming an entrepreneur. As the *Orang Asli* are governed by their dependence on nature and forest for survival, the inclusion of these variables provided a glimpse of insights that could better explain the entrepreneurial behaviour of these people.

1.6.2 Practical Significance

The development of entrepreneurship among the *Orang Asli* community in Peninsular Malaysia is the main responsibility of JAKOA that played the intermediary

between this community and other departments and agencies of both the public and private organizations, as well as the non-government organizations. The realization of a shared prosperity vision in the 12th Malaysia Plan (2020-2025) and beyond is very much influenced by the capabilities of JAKOA and the collaborative organizations to bring out the *Orang Asli* community from poverty. The success of any initiatives, plans and programmes on entrepreneurship for the *Orang Asli* depends on deeper understanding of the people's entrepreneurial behaviour. Findings from this study can be used to devise and design strategic programmes to encourage more *Orang Asli* to become successful entrepreneurs. Despite substantial government financing and attempts at entrepreneurship and mentoring programs, Malaysia's total number of indigenous people entrepreneurs is deemed low, particularly in the productive economy (Amiruddin et al., 2020). Hence, by matching the needs of the *Orang Asli* based on their entrepreneurial behaviours, the response to entrepreneurial initiatives, plans and programmes executed by JAKOA and other organizations can be improved, and subsequently realizing the concept of equitable growth and development across the diverse communities in Malaysia.

1.7   Definition of Key Terms

This study employs six variables to explain the entrepreneurial intention and behaviour of the *Orang Asli* in Peninsular Malaysia. These key terms are explained in Table 1.3.

Table 1.3   Definition of Key Terms

Terms	Definitions
Attitude	An attitude is a collection of emotions, beliefs, and behaviors towards a particular object, individual, or event. Attitudes are frequently the result of experience or upbringing, and they can exert a compelling influence on behavior (Ajzen et al., 2018).
Subjective Norms	Subjective norms are determined by one's referent group's normative expectations and drive to act following these expectations. Individuals may engage in behavior as long as it benefits their reference group (Alsaad, 2021).
Perceived Behavioural Control	Perceived behavioural control refers to control-related perceptions about the factors that may facilitate or obstruct behavior, including the required skills and knowledge, the availability or lack of time, money, or other resources, and the presence or absence of individuals, among others (Ajzen, 2020).
Actual Behavioural Control	Actual behavioural control refers to the extent to which an individual possesses the necessary skills, resources, and other prerequisites to conduct the desired behavior (Ajzen, 2019; Keke et al., 2022).
Self-reliance	This describes a state of mind and emotional fulfilment resulting from the highest regard in pursuing and attaining goals based entirely on one's own mental and material resources (Fonchingong & Fonjong, 2003).
Self-Sufficiency	This refers to the sufficiency lifestyle, which is based on modest goals and focuses on using local resources and knowledge-based job development (Janmaimool & Denpaiboon, 2016).
Entrepreneurial Intention	Entrepreneurial intentions are a plan or a desire to establish a new company or business activity where entrepreneurial intentions are the first and most crucial step in the entire process of entrepreneurial behavior (Dao et al., 2021).
Entrepreneurial Behaviour	Entrepreneurial behavior generally refers to the actions taken during the entrepreneurial process (Metallo et al., 2021). Entrepreneurial behavior is classified into technical capabilities, personal traits, and managerial characteristics. Technical skills include writing, speaking, listening, and processing information. Personal characteristics include innovation, persistence, adaptability, risk-taking, and vision. Management characteristics include areas of creation such as marketing, management, and organization development such as administration, finance, and operations (Schmidt et al., 2022).

1.8   Thesis Structure

The current chapter introduces the context of the research covering including the introduction of the research, research background, research problems, research questions, research objectives, scope of the study, significance of the research, key term definitions, and overall thesis structure. To explain further insight into this research, the remaining sections of the thesis are as follows:

Chapter 2 represents a literature review for this study, which consists of a thorough explanation of the conceptual and key definitions related to entrepreneurial behaviour, followed by the underpinning theories of entrepreneurship behaviour. The chapter also reports on factors influencing entrepreneurial behaviour based on the constructs from TPB and self-reliance and self-sufficiency from the Self-identity Theory. Then, the conceptual framework is presented alongside with the research model and development of the research hypotheses.

Chapter 3 presents the research design and its execution plan. It includes an explanation of the research philosophy and research design followed by a description of the population and sampling. The research instrument is also discussed followed by validity and reliability measures, pilot study, and data collection and analysis procedures.

Chapter 4 entails the research findings that cover the descriptive and inferential results from statistical procedures used in the study. The presentation of the research findings is aligned to the research questions posed in the first chapter.

Chapter 5 is the final chapter that concludes the study by discussion elaborately on the research findings and deliberating the findings' implications from theoretical, methodological and practical viewpoints. The limitations and future research suggestions were also included in this chapter.

1.9   Summary of the Chapter

This chapter has provided an elaborate explanation of the research background by explaining poverty eradication and sustainable development goals in Malaysia, the poverty issues among the *Orang Asli* community, the consideration for entrepreneurship as a viable option to bring the *Orang Asli* community out of poverty, and the current entrepreneurial activities carried out by the *Orang Asli* community. The research problems highlighted the need to understand entrepreneurial behaviour following the low level of participation among the *Orang Asli* community in JAKOA's entrepreneurial programs by using an extended TPB framework that is enriched by self-reliance and self-sufficiency variables from the Self-Identity Theory. Further to that, the research questions and research objectives were presented along with the scope and the significance of the study. Key terms were also defined in this chapter. The organization of the thesis is also described as an overview of the remaining four chapters.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter reviewed past literature to provide an understanding about the concept of entrepreneurial intention and entrepreneurial behaviour. The explanation also included indigenous entrepreneurship and its practice among *Orang Asli* in Peninsular Malaysia. The theoretical framework that introduces the underlying theories in this study followed through. Based on these theories, factors from the two theories, TPB and Self-Identity Theory were discussed and described. Further to that, the conceptual framework includes an identification of research gaps, presentation of the research model and development of the research hypotheses.

2.2   Entrepreneurial Behaviour

Entrepreneurship is typically defined as the capacity of an individual or a group to create or discover an opportunity and use it for the greater good of society, thereby bringing success to the innovators and their organizations (Ismail et al., 2018). Indisputably, entrepreneurship is not only important for economic growth and development (Donthu & Gustafsson, 2020; Metallo et al., 2021) but also for sustainability (Bouncken et al., 2022; Gu & Wang, 2022). According to Cervelló-Royo et al. (2022), the term "entrepreneur" constantly changes to reflect the current environment. As a result, the most recent buzzword for entrepreneurship was created by combining a few words, including "intrapreneurship," which refers to entrepreneurship within an existing organization, and "technopreneurship" which combines technological expertise with entrepreneurship skills (Azizan et al., 2015; Koe, 2020). People have recently learned that entrepreneurship is crucial to economic prosperity, including eradicating poverty (Liu & Chen, 2018). Furthermore, entrepreneurship intention is an important predictor of

entrepreneurial behaviour (Porfirio et al., 2023). Earlier on, Ajzen (1991) argued that intention leads to behaviour whereby in order to follow through a task, intent must exist first. Nevertheless, there have been encounters where intention does not translate into behaviour (Tsou et al., 2023). Therefore, gaining a deeper understanding of entrepreneurial intention and entrepreneurial behaviour is important.

2.2.1 Defining Entrepreneurship Intention

According to Krichen and Chaabouri (2022), the concept of entrepreneurial intention is complex as there are many factors that can influence it (Wan Nawang, 2023). These factors could be based on cognitive process (Entriaglo & Iglesias, 2020) or based on perception process (Wan Nawang, 2023). Hence, the definition of entrepreneurial intention is contextual. Morales-Alonso et al. (2022) further explained that cognitive traits are the immediate variables related to entrepreneurial decision process while other constructs such as demographic and human capital are antecedents. Nevertheless, earlier definition by Krueger et al. (2000) identified entrepreneurial intention as a potential entrepreneur's subjective attitude and expectation to engage or not in entrepreneurial endeavors. Quite similarly, Thompson (2009) defined entrepreneurial intention as a self-declared desire of an individual to start a new business or planning to set one in the near future. Gonzalez-Serrano et al. (2023) used the definition of entrepreneurial intention given by Bird (1988) who regarded it as a state of mind directing the attention, experience and action of an individual towards a concrete purpose of creating and growing a business.

Jones et al. (2020) added that entrepreneurs are involved in risk-taking, resilience, being creative and proactive due to need of innovation to facilitate change. Since entrepreneurial intention implies the commitment of an individual to startup, intention is considered as a cognitive state of mind that precedes entrepreneurial behaviour (Maleki et al., 2023; Shabsough et al., 2021). In other words, a person may have the potentials to become an entrepreneur but without having such intention, it might not lead to entrepreneurial behaviour (Kautonen et al., 2013; Bazkiaei et al., 2020).

2.2.2 Defining Entrepreneurship Behaviour

The entrepreneurship field has received tremendous attention from academics and practitioners, especially in a nation's economic growth and socio-economy (Cervelló-Royo et al., 2022). In order to understand entrepreneurship, Schmidt et al. (2022) referred to the term under two theoretical outlines, which are economic and behavioural; whereby, from the perspective of economics, understanding the importance of entrepreneurship activities involved and how it impacted society. Meanwhile, entrepreneurial behaviors refer to human behaviors and its essence to ensure that the entrepreneurial process is a success. Entrepreneurial behaviors contribute significantly to surviving external changes. It also significantly contributes towards gaining a competitive advantage (Wang et al., 2022). From a behavioural perspective, this is fundamentally aimed towards applying evidence-based observations about human behaviors to solve practical problems (Li et al., 2020).

Entrepreneurial behaviors significantly affect an individual or enterprise's entrepreneurial activities (Dong et al., 2022). According to Cai et al. (2018), entrepreneurial behaviors are behaviors sets during the process of entrepreneurship. Thus, entrepreneurial behaviors are viewed as "joining ideas, capital, and resources along with elements of creativity and empowerment" (Neto et al., 2020). Entrepreneurial behaviors are essential because it is considered and viewed as a crucial prerequisite for individual and enterprise growth and performance during time of uncertainties (O'Gorman, 2019). Schmidt et al. (2018) had identified and summarized eight entrepreneurial behaviors dimensions essential to make successful entrepreneurs, which are: self-efficacy, persistence, opportunity detector, sociability, creativity, planning, risk taker, and leader. Table 2.1 presents each of these dimensions with their respective definitions. During an entrepreneurial process, opportunity becomes the main focal point for an entrepreneur, whereby opportunity recognition is typically the initial stage of entrepreneurial behaviors, while resources confirm its basic security (Cai et al., 2018).

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Table 2.1   Entrepreneurial Behaviour Dimensions and Definition

Dimensions	Definitions
Self-efficacy	His or her belief capacity to control the internal and external necessary resources for his or her project's success.
Opportunity detector	Alertness to market opportunities that may arise for new products and services.
Sociable Creative	The easiness to effectively interact with other people.
Creative	One who relates ideas, facts, necessities, demands, and resources, producing new concepts for products, services, and processes.
Planner	The person that prepares for the future is trying to foresee the necessary steps to reach his or her goals.
Risk taker	The willingness to commit significant resources to a project in the face of uncertainty.
Leader	The ability to inspire or influence the behavior of others.
Persistent	The determination needed to keep working on a project and reaching its objectives, even under critical circumstances and adversity.

Source: Schmidt et al. (2018)

Entrepreneurial behaviors are crucial in entrepreneurship activity because it allows individuals or enterprises to identify opportunities and convert them into good values (Cai et al., 2018). Since studying entrepreneurial behaviors is essential, researchers need to study entrepreneurial behaviors in a more specific research context to gain more profound knowledge and understanding (Bi et al., 2021). In doing so, researchers had combined theoretical insights from the perspective of psychology, cognitive science, neuroscience and social sciences together with behavioural insights approaches, including behavioural economics and human-centered design, in order to provide a deeper understanding of the reason why an individual decides to engage in a specific behavior (Metallo et al., 2021).

2.2.3   Defining Indigenous Entrepreneurship

Parhankangas and Colbourned (2022) explained indigenous entrepreneurship as a process that draws value from community-based resources such as people, land, capabilities and culture, and contributing this value back in a way that it is responsive to

the socioeconomic situation of the community. Although it is argued that the indigenous people have been engaged in entrepreneurial activities for a long time, the concept of indigenous entrepreneurship was recently proposed. According to Jalaskoski (2023), the culture and uniqueness of the indigenous people are often not compatible with the basic assumptions of mainstream entrepreneurship theories. Hence, indigenous entrepreneurship is a contextual term that is defined as the creation, management and development of new ventures of the indigenous people for their benefits (Gouvea et al., 2022). Jalaskoski (2023) further explained that the culture and geographic location of indigenous entrepreneurs tend to influence their entrepreneurial traits.

Most of the indigenous-owned business are rooted in unique cultural context with influence from traditional knowledge and connection with natural resources (OECD, 2020). While contemporary entrepreneurship is driven by commercialization of innovation, Hindle and Landsdowne (2005) stated that indigenous entrepreneurs are more concerned with cultural heritage preservation and self-determination. Toombs (2022) added that entrepreneurial activities among the indigenous people tend to be associated with land-based activities such as harvesting, hunting and fishing. Hence, their venture into entrepreneurship and seeking for economic opportunities are related to the use of their traditional knowledge of the land and natural resources for sustainability and conservation (Njieassam, 2019).

Besides their emphasis on cultural heritage conservation, Jalaskoski (2023) also highlighted another peculiarity of indigenous entrepreneurs that deviates from contemporary entrepreneurial practices. Dana (2015) explained that social organizations among the indigenous people are based on "kinship ties" and therefore, they are not driven by the need to make market demands. Lindsay (2005) further added that the indigenous entrepreneurial venture is extended to the family, other family members and the community as well. Thus, it is natural that the engagement of the family members and extended family members as stakeholders is an essential tool to face their entrepreneurial challenges such as funding and lack of representation in the business world (Jalaskoski, 2023). This also implies that due to kinship ties, the indigenous entrepreneurs also value collective goals and interest of the community rather than their own (Dalton, 2019). Hence, entrepreneurship motives of the indigenous people are associated with

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"community-based economic development" (April & Itenge, 2020; George, 2019). Behrendt (2019) explained that indigenous enterprises are based on value-driven social enterprise business model whereby there is balance between profit and purpose. Jalaskoski (2023) argued that the entrepreneurial behaviour of the indigenous entrepreneur might not be adaptive to the larger economic system which are mainly controlled by non-indigenous people. This potentially spells out the need to find a balance between the indigenous people's cultural values and the western-oriented market (Barr et al., 2018).

2.2.4 Indigenous Entrepreneurship Among *Orang Asli* in Peninsular Malaysia

Indigenous peoples include Native Americans, Aboriginal and Torres Strait Islander Peoples in Australia, Maori Peoples in New Zealand, Sami in Northern Europe, the indigenous minority in Africa, and various tribal peoples throughout Asia, including Malaysia (Dhir, 2015; Dockery, 2020). Approximately 370-500 million indigenous people live in over 70 nations across six continents, accounting for around 5 percent of the global population and representing over 5000 languages and cultures and this minority society account for 15 percent of the world's impoverished (Dawson et al., 2020; Du, 2017). According to the 2020 Census, Malaysian indigenous peoples or Orang Asal account for around 0.62 percent of the country's 33.5 million inhabitants (Dawson et al., 2020). The indigenous peoples of Peninsular Malaysia are known as the *Orang Asli*, and their population was estimated to reach 209,211 in 2022 (JAKOA, 2022). In Sarawak, the Dayaks are a collective title for various indigenous groups. The Dayaks make up about 40 percent of Sarawak's population. The "Iban" and "Bidayuh" are the two major groups in the Dayak community. Meanwhile, in Sabah, 39 indigenous groups account for over 60 percent of the state's population. The major indigenous groups in Sabah are the "Kadazan-Dusun," "Bajau," and "Murut" (Khor & Shariff, 2019).

Although the indigenous people such as the *Orang Asli* in Peninsular Malaysia makes up a small portion of the entire society, the concept of shared prosperity and equity in national development propagated in national policies such as the 12th Malaysian Plan and international policies such as SDGs have asserted the inclusion of all including *Orang Asli* communities. The Malaysian government has implemented various national policies

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such as the Malaysia Plans, New Economic Policy (1970–1990), National Development Policy (NDP, 1991–2000), "Vision 2020," Industrial Master Plans, National Agriculture Policies, Privatization Master Plan, and the New Economic Model (NEM, 2010) (Manaf & Ibrahim, 2017). In addition to that, Malaysia also formed the Ministry of Entrepreneur Development and Cooperatives (MEDAC) to lead and support the government in creating a holistic and favorable entrepreneurial environment to support the country's socioeconomic development strategy (MDEC, 2019). These policies strive to eradicate poverty which among others, encourage Malaysian citizen, particularly the Bumiputera or Malays to participate in entrepreneurial activities (Ismail et al., 2018).

Nevertheless, the participation of *Orang Asli* in entrepreneurship might not be driven by the same factors as other ethnic groups or races. The indigenous people including *Orang Asli* are considered as unique because they are among the exclusive society that adheres to cultures, customs, and beliefs to be passed down to future generation (Du, 2017). Since their lives are so near the forest and nature, the reliance on nature, mainly the forest, stems from their ancestors' conviction that the forest contains numerous treasures that provide a source of livelihood and survival (Curry et al., 2016). Due to lack of significant assimilation process, indigenous people often maintained their lives for so long without any changes in their living patterns and beliefs (Molina-Ramirez & Barba-Sanchez, 2021). Their propensity to live a simple lifestyle led them to generate cash from forest products rather than rely heavily on income earned from agricultural products or employment, resulting in low participation among this group of communities in entrepreneurship (Rosdi et al., 2018).

2.3   Theoretical Framework

In recent decades, many theories of entrepreneurship have been developed, aside from entrepreneurial behavior, due to entrepreneurial behavior being crucial in the entrepreneurial journey (Li et al., 2020). Due to its importance, understanding entrepreneurs by adapting the cognitive and behavioural approach has received much attention from scholars (Bi et al., 2021; Wang et al., 2022). Zikmund et al. (2013) stated that theory explains the logical connection between the concepts in a research model and their relationship. Thus, in this study, the theories attempt to explain entrepreneurial

behavior and the constructs that were included to develop the entrepreneurial behaviour model.

2.3.1   Theory of Planned Behaviour

The Theory of Planned Behavior, developed and initiated by Icek Ajzen (1985), is a psychological theory that links beliefs to behavior. The domain constructs attitude, subjective norms and perceived behavioural controls connected to an individual's intention (Lu et al., 2022). The TPB indicates that the stronger a person holds an intention to a specific behavior, the more likely the behavior is performed (Neneh, 2019). The TPB has become the most dominantly used model to explain and predict intentions and behavior (Maheshwari & Kha, 2021). Zaremohzzabieh et al. (2019) concluded that TPB has always been a grounded theory in quantitative or qualitative studies for identifying entrepreneurial intention and behavior. The primary or domain model of the TPB is shown schematically in Figure 2.1.
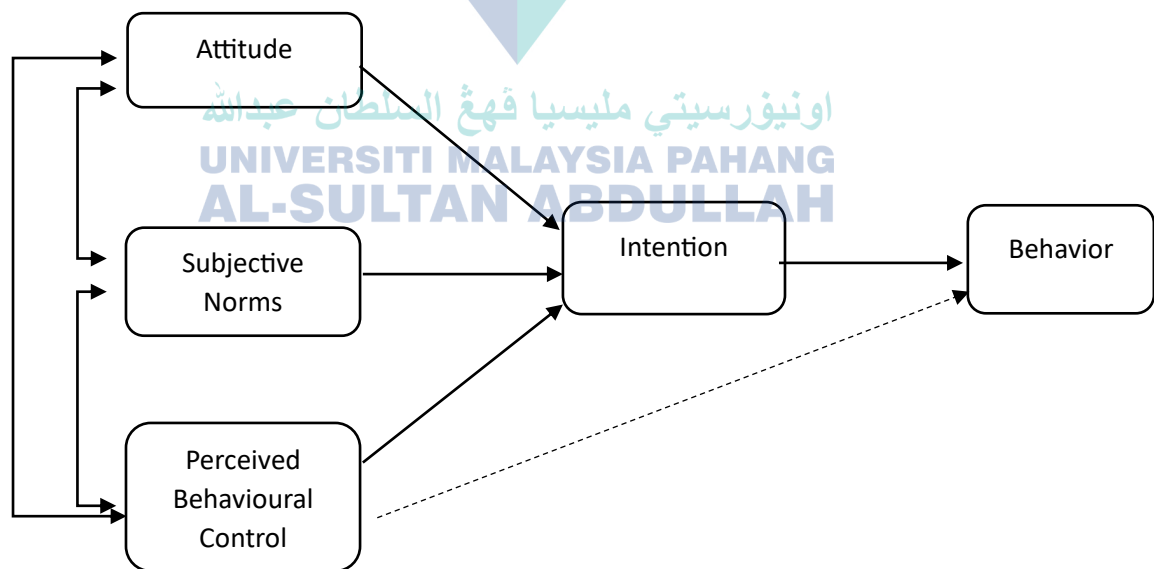
Figure 2.1   Basic Model the Theory of Planned Behaviour
Source: Ajzen (1991)

There are three considerations in the basic model of the TPB which are: behavioural beliefs, normative beliefs and control beliefs. Behavioural beliefs is the

likelihood that the behaviour will lead to the intended behaviour while normative beliefs refer to the normative expectations of others. Meanwhile, control beliefs are about the presence of factor that may facilitate or hinder the performance of a particular behaviour (Ajzen, 2012; Bosnjak et al., 2020). Besides that, the theory is represented by three primary constructs: attitude, subjective norms and perceived behavioural control. According to Ajzen et al. (2018), attitude is "an individual's positive or negative evaluation of a particular behaviour", supposing that an individual perceives the goal of joining a venture positively. In that case, attitude toward the particular behaviour should also be positive, resulting in the individual's intention to achieve the goal being firmer than before (Gieure et al., 2020). In the context of entrepreneurship, a positive attitude towards entrepreneurship reflects the preference or desire of the individual to own a business instead of being employed or hired (Nasri & Morched, 2023).

The second construct in the TPB is subjective norms, which can refer to essential people or groups such as family, friends, peers, or groups that are important for a person to decide whether or not to be an entrepreneur (Ajzen, 1991). Thus, Isma et al. (2020) concluded that if subjective norms are stronger regarding entrepreneurship, the stronger that individual intends to start a business. In other words, the individual considers the views, values and perspective of the people that are important to him or her, and this would influence his intention to become an entrepreneur (Nasri, 2023).

Then, the last construct in the TPB is perceived behavioural control, which is the individual's perception of ease or difficulty in performing the behaviour (Ajzen, 1991). In general, Aitken et al. (2020) stated that TPB believes that individuals with more favourable attitudes, positive subjective norms, and high perceived behavioural control are more likely to engage in the specific behaviour and eventually perform the actual behaviour.

The TPB is indeed a famous theoretical model for predicting an individual's intention towards a particular behaviour (Leong et al., 2023; Neneh, 2019). Thus, Ajzen (2019) has extended the theory by adding another essential construct, actual behavioural control, to strengthen the existing theory further and provide a deeper understanding of

individual behaviour (Bosnjak et al., 2020). Actual behavioural control refers to the level of skills and resources a person possesses to positively influence the relationship between intention and behaviour. It simplified that even though stronger intentions commonly influence the probability of performing a specific behaviour when actual behavioural control is low, a person may be prevented from carrying out their intentions (Ajzen, 2019). Therefore, Wang et al. (2021) concluded that an individual's actual behaviour is determined directly by his or her behavioural intention, influenced by attitude, subjective norms and perceived behavioural control towards performing the behaviour". The interactive model of the TPB is shown schematically in Figure 2.2.
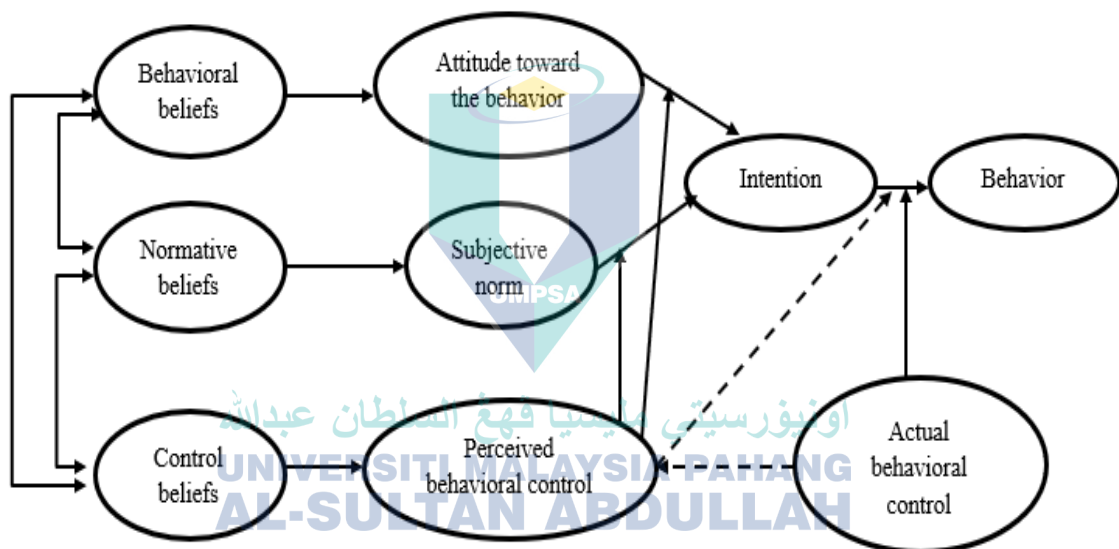
Figure 2.2 The Interactive Model of TPB
Source: Ajzen (2019)

2.3.2   Theory of Self-Identity

Alfrey et al. (2023) explained that the existence of human is due to a complex display of individual and social interactions. These interactions are responsible to form the individual's values, personal and social meanings from numerous experiences and the role plated in a situational context. Hence, identity theory explains about how a person defines herself or himself within a world that he or she exists among others. Due to their unique values and interpretations of life events, their behaviour can be explained (Meltzer

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et al., 2020). Therefore, self-identity is an individual's self-concept that influences the extent of performing a specific behaviour.

According to Stryker and Burke (2000) in Cao et al. (2023), self is the outcome of role identity that corresponds to the individual's position in the social structure. Hence, the behaviour is usually influenced by a high degree of role identity, leading to role-appropriate behaviour (Jiang et al., 2016; Gardner & Rebar, 2019). De Bruijn et al. (2012) confirmed that self-identity is linked to intention. The theory underpins self-identity and intention from the initial identity theory by Stryker (1988). Gkargkavouzi et al. (2019) postulated that self-identity is widely recognized as an essential antecedent of behaviour and intention in multifaceted fields. This is based on the fact that the identity theory explains about people considering themselves with specific and self-related characteristics in order to categorize themselves in specific roles. These roles then guide and drive people and the behaviour that they intend and act according to their self-identity (Lim & An, 2021). Additionally, self-identity is associated with intention and behaviour, and implied that an individual who has a strong self-identity is more likely to have a stronger intention to engage in a particular behaviour (Rebar et al., 2019; Strachan et al., 2018).

In this study, self-identity that drive by identity theory initiated by Stryker (1988) has been discussed and integrated to support entrepreneurial behaviour among the *Orang Asli* in Malaysia. Aligned with the statement, Jamak et al. (2000) identified that self-reliance is a significant characteristic of the *Orang Asli*, especially Semelai and Jakun tribes. Due to this characteristic, the *Orang Asli* is only dependent on forest produce instead of other jobs. The *Orang Asli* also believes that natural resources from the forest are able to fulfil their survival needs. They have long lived by relying solely on forest produce and nature, which has made the people surrounding or communities know and understand their conservative way of life (Nor, 2021). Moreover, Abdul Jamak et al. (2000) concluded that high self-reliance leads to self-sufficiency among the *Orang Asli*, resulting in them living in the status quo without worrying about significant changes in their daily life and routine.

2.3.3   Synthesis of the Underlying Theories

The inclusion of Self-Identity Theory to enrich TPB is arguably due to the limitation of the TPB itself. Wang et al. (2020) argued that TPB considers the intention or behaviour towards something from a psychological nature and not from a social perspective. The inclusion of subjective norms cannot fully explain the effects from social spectrum. (Cao et al., 2023). Self-identity is considered as a critical driver of human behaviour (Chan et al., 2020).

Further to that, Vásquez-Fernández et al. (2021) stated that indigenous people cannot be simply defined using a "one-size fits all" definition and using a western model for defining them. Their uniqueness due to their historical development, distinctive culture and beliefs and a strong adherence to ancestral knowledge prompted the need for self-identification (Mbah et al., 2023). Hence, indigenous entrepreneurship does not follow the true essence of contemporary entrepreneurship.

Thus, in this study, the interactive model of TPB which was proposed by Ajzen (2019) that included actual behavioural control along with attitude, subjective norms and perceived behavioural control was used. In addition to that, to facilitate the uniqueness of the indigenous entrepreneurs among the *Orang Asli* community, the Self-Identity Theory that explores the concept of self-reliance and self-sufficiency were also added to enrich the TPB framework.

2.4   Factors Influencing Entrepreneurial Behaviour

Based on the uniqueness of indigenous entrepreneurship and contribution from the theoretical framework, several factors were identified to predict entrepreneurial intention and entrepreneurial behaviour. Basically, these factors are grouped under the two underlying theories which are the TPB and the Self-Identity Theory. Elaboration on these factors is given in the following sub-sections.

2.4.1 Constructs from Theory of Planned Behaviour

The Theory of Planned Behaviour identified three main antecedents to entrepreneurial intention, which are: attitude, subjective norms and perceived behavioural control (Ajzen, 1991). Further along the way, actual behaviour was added to the TPB model which acts directly on perceived behavioural control and entrepreneurial behaviour, as well as indirectly on entrepreneurial intention through interaction with attitude and subjective norms. Hence, four variables were used to explain entrepreneurial intention and entrepreneurial behaviour from the TPB framework.

2.4.1.1 Attitude

Attitude refers to an individual's favourable and unfavourable state of behaviour. It is usually influenced by beliefs, personalities and issues (Aboelmaged, 2021), and attitudes can be positive, negative, neutral, latent and generalized (Jena, 2020). Ajzen et al. (2018) postulated that attitude differs from traits because attitude refers to the evaluative character toward specific targets. In entrepreneurship, scholars identified entrepreneurial attitude as a determinant variable (Santika et al., 2022). Hence, attitude may refer to personal characteristics such as innovativeness, risk-taking, need for achievement, self-confidence and locus of control (Wardana et al., 2020).

In entrepreneurship, attitude plays a crucial role because of the connection with valuable, beneficial and favourable behaviour in a business (Mahfud et al., 2020). Additionally, Soleimanof et al. (2021) argued that understanding entrepreneurial attitude is significant, especially in starting, managing and growing a business. An entrepreneurial attitude can be measured by three main components: feelings and emotions, cognition or thoughts, beliefs and perceptions related to actions and behaviours (Majeed et al., 2021). In other words, three significant components of attitude are affective, cognitive and behavioural. The cognitive component consists of an individual's beliefs, thoughts and knowledge about the behaviour; affective components refer to an individual's emotional reaction and feelings to the behaviour; and the last component is behavioural, which refers to how an individual responds or reacts to a specific set of behaviour (Jena, 2020).

2.4.1.2 Subjective Norms

Ajzen (1991) defined subjective norms as influential referent individuals or groups who approve or disapprove of behaviour, referring to whether these groups approve of an individual joining a business or vice versa. Subjective norms represent the social reference groups' views, such as family, friends and community, on whether an individual should perform the intended behaviour. However, it depends on how important and vital these groups are to the particular individual making the decision about the intended behaviour (Fenech et al., 2019a). According to Kim et al. (2019), subjective norms can be measured directly or indirectly. Direct measures involve asking the individuals to identify these groups' perceptions of specific behaviour. In contrast, indirect measures through the sources of the individual's beliefs and the extent to which they stand out personally.

In the entrepreneurship process, subjective norms are essential as the individuals or groups are the primary motivation for a particular individual to start a business and comply with other people's views (Miranda et al., 2017; Mohammed et al., 2017). Since it becomes the motivation for an individual to act following these groups' expectations, individuals may choose to act a behaviour as long as it is favourable to their reference group (Alsaad, 2021). Ultimately, subjective norms refer to the rules and regulations governing certain behaviours to be performed when there is mutually agreement between the individual entrepreneur and the society (Gultom et al., 2020).

2.4.1.3 Perceived Behavioural Control

Perceived behavioural control is a person's view or opinion whether the intended behaviour would be easy or difficult to carry out (Haddad et al., 2021). In an earlier theory of intentional behaviour, the Theory of Reasoned Action (TRA) had initially omitted perceived behavioural control to determine intentional behaviour (Ajzen, 1991). However, the subsequent improved theory from TRA to TPB had included perceived behavioural control because it is believed that intention is a not a volitional process but has to do with locus and control (Ajzen, 2002).

Further to that, Ajzen (1991) stated that perceived behavioural control is a proxy of self-efficacy and thus, refers to it as an individual's self-perception of his or her capacity to perform a specific behaviour, including starting a new venture. Perceived behavioural control is a TPB component extended from the self-efficacy theory developed by Bandura's (1977) theory of Social Cognitive (Romero-Galisteo et al. 2022).

Combining internal (self-efficacy and perceived control ability) with external factors (knowledge of the behaviour and skills) can cause an effect on the individual's intention to participate in a specific behaviour (Ru et al., 2018). Perceived behavioural control is therefore, considered as an essential mechanism in dealing with uncertainties often related to new ventures (Doanh & Bernat, 2019).

2.4.1.4 Actual Behavioural Control

Actual behavioural control refers to a sufficient degree of skills and resources that an individual has to perform an intended behaviour. Perceived behavioural control is used as a yardstick to predict behaviour if identification of actual behaviour control is challenging in difficult situations (Agmeka et al., 2019; Ajzen, 2019). According to So et al. (2021), the actual behaviour of an individual in the TPB model is due to his or her behavioural intention, which comes from his or her attitudes, subjective norms and perceived behavioural control in performing the behaviour.

2.4.2 Constructs from Self-Identity Theory

The case for including self-identity as an additional predictor in the TPB stems from theorists arguing that identity processes should be considered in predicting specific behaviours and empirical evidence that self-identity predicts behavioural intentions after considering attitudes and norms (Rise & Sheeran, 2010). The Self-Identity Theory extended the role of identity and social interactions that could potentially lead to entrepreneurial intention. Thus, two other constructs were added from this theoretical perspective, which are self-reliance and self-sufficiency.

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2.4.2.1 Self-Reliance

Self-reliance is an individual taking full ownership and independently working on any task without input or guidance from others (Nel & Binns, 2000). Fongchingong et al. (2003) regarded self-sufficiency not just a need but also a matter of survival. It can be concluded that self-reliant individuals prefer to control their own decisions and tend to work best independently with their characteristics (Schultz et al., 2017). In reality, self-reliance is essential to community development discourse and is linked to similar concepts such as self-help, mutual help, indigenous participation, and rural development. It promotes the need for people to improve their circumstances through local activities and available resources. The approach is quickly becoming recognized as a new recipe for community development (Fongchingong et al., 2003).

The *Orang Asli* in Peninsular Malaysia is ranked among the most demoted Malaysians today, specifically in their ability to determine their fate (Colin, 1999). They are also characterized by their desire to exercise full autonomy in their traditional territories, both in control and ownership of lands and in determining their way of life and how they dealt with the dominant society (Abdul Halim & Nordin, 2021). *Orang Asli* in general, freely determine their political status and pursue economic, social and cultural development (Norhayati & Ramle, 2021), leading to independence and individuality.

Initially, the *Orang Asli* were a dispersed group of local communities with their locus of cultural identity and ethnic refuge and found their economic opportunities (Rosli, 2021). In the context of political and economic implications, the rights of the *Orang Asli* to own and manage their territories and to lead separate lives from the dominant society are acknowledged by the government at the State and national levels (Abdul Halim & Nordin, 2021; Pah et al., 2017). Since the *Orang Asli* are determined to preserve their ancestral territories and identity, they insist on their traditional way of life by depending on forest-based produce and nature for a living.

Thus, self-reliance is one of the critical constructs to determine the causal factor for entrepreneurial behaviour among the *Orang Asli*. Self-reliance is a vital characteristic that represents the *Orang Asli* identity including the Jakun and Semelai ethnic groups

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(Jamak et al., 2000). This characteristic allows the *Orang Asli* to depend on no one else and nothing but forest to provide them with the continuation of living. The *Orang Asli* community is well-known as an independent group of people for generations. To continue living, they usually provide effectively for themselves and their family through forest resources, natural resources and subsistence farming (Masron et al., 2013). Since self-reliance is considered as a significant characteristic of the *Orang Asli* in Peninsular Malaysia, this study included this construct to gain more understanding of entrepreneurial behaviour among the *Orang Asli* based on their affinity towards self-reliance.

2.4.2.2 Self-Sufficiency

Once, our forefathers enjoyed the simplicity of life by being self-sufficient in their daily routine; thus, self-sufficiency refers to an individual's ability to meet their own needs without expecting help from others (Al-Mamary & Alraja, 2022). Self-sufficiency has become ingrained in the *Orang Asli*'s community. Traditionally, the *Orang Asli* have clung to their locus of cultural identity, ethnic sanctuary and economic opportunities (Pah et al., 2017). Despite the numerous programmes planned and implemented by the government, the *Orang Asli* stayed with their current status because the government programmes sometimes contrasted with their identity in the context of the development planned for them (Rosdi et al., 2018). Hence, the *Orang Asli* community go on with their daily lives by using what is around them, including forest products, to make a living while neglecting or rejecting any development provided or planned by the government (Marzuki et al., 2017; Norhayati & Ramle, 2021). In addition to that, their scattered locations led the *Orang Asli* community to choose to rely on forest products rather than getting involved in government development projects (Cheng & Helen, 2021; Nor Emmy Shuhada, 2020; Pah et al., 2017). The failure to involve the *Orang Asli* community in any development projects could lead to increased poverty and inequality in Malaysia (Shah et al., 2018).

The unique characteristic of the *Orang Asli* or aborigines across the globe is that this group of minority people thrived on the essence of a self-sufficient culture (Mark, 2015). The indigenous people and aborigines could live comfortably and sustainably in harmony with the forests and rely much on the nature they live. For instance, Bainbridge

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et al. (2014) stated that all aborigines in Australia maintained a single source of income through hunting and gathering while relying only on agriculture and aquaculture for survival. The self-sufficient culture among the aborigines allowed and showed their respect towards nature, which they believed provided them with food and necessity. It led them to live simply with limited reliance on updated technologies and materials (Leo-Paul, 2007; Mark, 2015). In continuing their lives, the aborigines usually worked with the seasons and used plants, animals and other resources (Du, 2017). Hence, these indigenous communities believe that self-sufficient cultures improved their lives significantly.

Self-sufficiency was one of the vital constructs in identifying entrepreneurial behaviour among the *Orang Asli* in Peninsular Malaysia in a study by Jamal et al. (2000). They found that self-sufficiency is derived from a self-reliant attitude, and implied that when *Orang Asli* has a high level of self-reliance, this could potentially lead to high self-sufficiency. In this study, extending the TPB with two constructs from the *Orang Asli*'s significant characteristics, namely; self-reliance and self-sufficiency, could provide a deeper understanding of entrepreneurial behaviour among the *Orang Asli*.

2.5   Conceptual Framework

The conceptual framework presents the research gaps, the research model and development of the research hypotheses in their respective sub-sections.

2.5.1   Research Gaps

Miller (2017) posited that there are seven types of research gaps that can be used to guide the course of a research. These include the theoretical gap, knowledge gap, evidence gap, practical gap, empirical gap, methodological gap and population gap. Table 2.2 presents the description of these gaps.

Table 2.2   Gaps in Research

Gap Types	Description
Theoretical Gap	Theoretical gap is explained in a way that existing theories are lacking in explaining certain issues and therefore, creating a theory application void gap.
Knowledge Gap	Knowledge gap refers to the lacking or void in desired research results. For instance, there is not much knowledge known about entrepreneurial behaviour among *Orang Asli* in Malaysia.
Evidence Gap	Although there are findings available from past studies, there could be some contradictions of finding which require more studies to close the evidence gap.
Practical Gap	Although entrepreneurial intention and behaviour have been investigated in various setting, practices among the indigenous entrepreneurs are still showing deviation from past studies, resulting in the need for more research. Sometimes the practical aspects have not been covered in past studies.
Empirical Gap	Research is still needed for empirical verification of findings in previous studies.
Methodological Gap	There could be some variations in research methods used in past studies and causing a need for newer methods to provide greater insights on the phenomenon of interest.
Population Gap	Issues on a particular population such as the indigenous entrepreneurs among the *Orang Asli* community have been under-researched and thus insisting on coverage.

Source: Miles (2017)

Based on the seven gaps presented above, this study identifies the existing gaps relating to entrepreneurial intention and behaviour among the *Orang Asli* communities in Peninsular Malaysia. The identified gaps consist of theoretical gap, empirical gap, methodological gap and population gap. Table 2.3 presents the identified research gaps of this study.

Table 2.3   Identified Gaps

Gap Types	Description
Theoretical Gap	This study extended the TPB framework by adding two additional variables; self-reliance and self-sufficiency which are explained by Self-Identity Theory. The extension of the TPB framework is common in past studies but the addition of self-reliance and self-sufficiency in the framework is new.
Empirical Gap	This study provides more empirical evidence to support the popular notion based on past findings that attitude, subjective norms, perceived behavioural control, self-reliance and self-sufficiency directly influence entrepreneurial intention and indirectly contributed to entrepreneurial behaviour through moderation and mediating effects of identified variables.
Methodological Gap	Previous studies have relied on first-generation statistical measures such as regression analysis with SPSS but there have been more studies using second-generation statistical measure such as PLS-SEM that could provide more in-depth understanding of entrepreneurial behaviour using a complex model.
Population Gap	There is a lacking in research on entrepreneurial behaviour among the *Orang Asli* community in Malaysia. Hence, this study provides to remedy this situation and close the gap by adopting the indigenous entrepreneurs among the *Orang Asli* in Peninsular Malaysia as the research population of this study.

2.5.2   Research Model

The TPB framework is applied in this study besides the addition of two other constructs, self-reliance and self-sufficiency as a consideration of the unique characteristics of the *Orang Asli* in Peninsular Malaysia. Hence, the research predictive model to examine entrepreneurial intention and entrepreneurial behaviour among the *Orang Asli* community is presented in Figure 2.3.
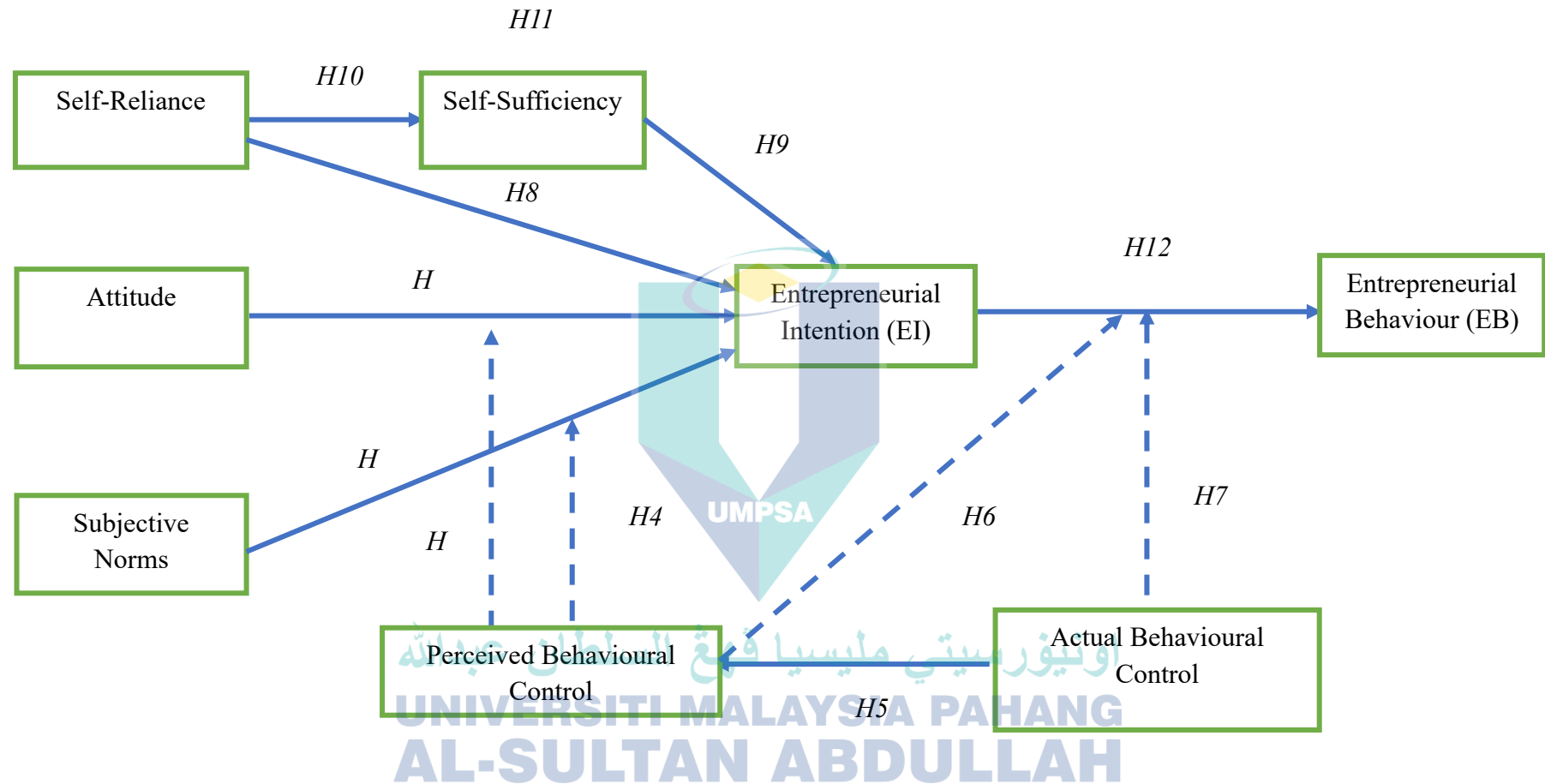
Figure 2.3   Conceptual Framework

2.5.3 Research Hypotheses Development

Based on the research model as shown in Figure 2.3, 12 research hypotheses were proposed to understand how the variables from TPB and Self-Identity Theory influence entrepreneurial intention and entrepreneurial behaviour among the *Orang Asli* entrepreneurs in Peninsular Malaysia.

2.5.3.1 Effect of Attitude on Entrepreneurial Intention

Ajzen (1991) explained that attitude is about the extent to which an individual evaluates a behavior positively or negatively. In the context of this research, attitude refers to how the *Orang Asli* thinks and feels about entrepreneurship. There are two types of behavioural attitudes: affective and instrumental. A person's affective attitude refers to whether or not they perceive a behaviour as pleasurable. In contrast, instrumental attitude refers to whether the behaviour is beneficial or detrimental. The attitude toward the behaviour (entrepreneurship) is a crucial aspect of the perception of desirability that influences entrepreneurial intent (Amofah & Saladrigues, 2022). Liñán et al. (2011) and Santos et al. (2016) claimed that attitude influences entrepreneurial intention positively.

Attitude positively impacts entrepreneurial intention (Ajzen et al., 2018). The definition was supported by those who found that attitude is one of the primary constructs in the TPB (Ajzen, 1991). Attitude is defined as a mental readiness of a person's experiences with controlled perspective as it can act as a guide by indicating how an individual would respond to all the objects and situations. Attitude towards entrepreneurship can be enhanced by an individual's beliefs, thinking development, behaviours, experiences and social background (Gervase et al., 2021; Iwu et al., 2019). Attitude is a psychological trait that has, in every individual, resulted from a critical observation and evaluation of any event (Mishra & Singh, 2022). Previous studies have confirmed the relationship between attitude and entrepreneurial intention (Amofah & Saladrigues, 2022; Haddad et al., 2021; Wardana et al., 2020). Thus, the following hypothesis is presented as follow:

H1:   Attitude positively affects entrepreneurial intention

2.5.3.2 Effect of Subjective Norms on Entrepreneurial Intention

Subjective norms are an individual's perception of what people around them or people with influence, such as parents, friends, or subordinates, think about them establishing a new business (Alsaad, 2021). Scholars have proven subjective norms to be essential to entrepreneurial intention (Daliman et al., 2019; Karimi, 2020; Yurtkoru et al., 2014). In the context of this research, subjective norms refer to the *Orang Asli* normative references, including family, friends, and co-workers, which directly influence their entrepreneurial intention. Hence, the opinions or suggestions of these people could affect their decision to engage in entrepreneurial behaviour (Kim et al., 2019).

Subjective norms and beliefs positively influence entrepreneurial intention (Bhat & Singh, 2018; Martínez-González et al., 2019; Raoof et al., 2019). Individuals with the support of family and friends are more likely to have entrepreneurial intentions than those who do not have the support of family and friends (Wahyuni et al., 2019). Thus, the following research hypothesis is suggested:

H2:   Subjective norms positively affect entrepreneurial intention

2.5.3.3 Moderating Effect of Perceived Behavioural Control on Relationship between Attitude and Entrepreneurial Intention

Ajzen (1991) identified perceived behavioural control as the third determinant variable to predict intentional behaviour. PBC is regarded as the most controversial construct in the TPB due in part to the inconsistency of empirical findings about its influence on intention and in part to disagreements regarding its conceptualization and operationalization (Yap et al., 2013). This is because PBC examines the perceived feasibility of performing the behavior and its close relationship with self-efficacy perception (Fenech et al., 2019). Ajzen (1991) stated that PBC is the perceived ease or difficulty of becoming an entrepreneur. Although some researchers have compared PBC to self-efficacy, Ajzen (2019) specifies that it is a broader construct because it incorporates both the perceived controllability of the behavior and perceived controllability over the behavior.

In the original TPB formulation, perceived behavioural control was assigned the role of a moderating variable (Ajzen, 1985). However, because empirical research tended to find only main effects, later formulations and most empirical applications of the model have treated perceived behavioural control as a direct determinant of intention with a comparable status as attitude and subjective norm (Ajzen, 2012; Barbera & Ajzen, 2020a).

A high amount of PBC should increase an individual's motivation to execute the behavior, whereas a low level of PBC should decrease motivation to perform the behaviour. PBC is critical in determining an individual's control over a given scenario. It is likely to have an indirect effect on intentions and behaviour. As a result, it is regarded as an extra predictor of behaviour (Ajzen, 2022). TPB behaviour is determined by the nature, formulation, and adequacy of the PBC construct, as it has been conceptualized and operationalized in a variety of ways, and people have strong or weak perceptions of behavioural control as they are more or less likely to perform the behaviour. PBC is thus expected to moderate the effects of attitudes on behaviour (Barua, 2013). However, most research has focused on PBC's moderating effect on the intention-behaviour relationship. In contrast, relatively few studies have examined PBC's moderating effect on the attitude-intention and subjective norm-intention relationships. Several researchers (Barbera & Ajzen, 2020a, 2020b; Conner & McMillan, 1999; Hukkelberg et al., 2014; Kothe & Mullan, 2015; Yzer & Van Den Putte, 2014) have discovered a significant positive interaction between attitude and PBC in the prediction of intention. These studies implied that the more substantial the perceived control is over the behaviour, the stronger the association between attitude and intention. Therefore, based on the theory and empirical findings, the following hypothesis is formulated:

H3:   Perceived behavioural control moderates the effect of attitude on entrepreneurial intention, whereby when there is higher level of perceived behavioural control, there is greater effect of attitude on entrepreneurial intention

2.5.3.4 Moderating Effect of Perceived Behavioural Control on Relationship between Subjective Norms and Entrepreneurial Intention

PBC influences a person's self-control, whether to perform a behaviour or not. Ajzen (2019) posits that besides an individual control belief, the normative belief of the family, friends and community also influence intention. Thus, scholars suggested that PBC may also moderate the effect of subjective norms, whereby if the perception of control is low, subjective norms may have little or no effect on behaviour (Castanier et al., 2013; La Barbera & Ajzen, 2021.

Some studies had found that there is no significant moderating effect (Earle et al., 2020; Kothe & Mullan, 2015; Umeh & Patel, 2004), while others found substantial but varied patterns of interaction (Barbera & Ajzen, 2020a). Subjective norms may encourage the individual to perform a specific behaviour but with the condition that he or she has complete control of that particular behaviour (Sultan et al., 2020). Besides that, Ajzen (2019) stated that to have solid normative beliefs, an individual needs a high level of motivation, which can influence his or her perceived behavioural control. With such assumption that as perceived behaviour increases, the relationship between subjective norms and entrepreneurial intention also increases. Predictions of intention are higher and stronger when an individual has high subjective norms compared to when they have low perceived behavioural control (Yzer & Van Den Putte, 2014). Thus, perceived behavioural control expects to moderate the effects of subjective norms of intention on behaviour in the context of the *Orang Asli* in Peninsular Malaysia. The discussion above led to the fourth hypothesis:

H4:   Perceived behavioural control moderates the effect of subjective norms on entrepreneurial intention, in which the higher the perceived behavioural control, the greater the effect of subjective norms on entrepreneurial intention

2.5.3.5 Effect of Actual Behavioural Control on Perceived Behavioural Control

Actual behavior refers to the individual behavior that is impacted by their purpose to act and attitude. Furthermore, actual behavior refers to people deciding where to spend

their time, money, and effort purchasing goods or services. Actual behavior is related to the Theory of Reasoned Action (TRA), which describes how individuals perceive others' opinions and how this affects people's intentions and attitudes. TRA can also be used to forecast behaviour (Agmeka et al., 2019; Yu et al., 2017).

An empirical study by Laguia et al. (2019) showed that control beliefs determine an individual behavioural intention or the actual behavior itself and the capacity to succeed in certain behaviours is determined and based on his or her own experience and also, others' experience. The TPB thus assumes that actual behavior is assertive if those individuals hold high perceived behavioural control (Ajzen, 2019). Individuals with high perceived behavioural control are more likely to engage in a behaviour and therefore, act as a direct precursor to actual behaviour (Aitken et al., 2020). Consequently, perceived behavioural control should reflect actual control, and the perceived behavioural control-behavioural relationship should be more substantial. Thus, the following hypothesis was formulated and developed:

H5:   Actual behavioural control positively affects perceived behavioural control

2.5.3.6 Moderating Effect of Perceived Behavioural Control on the Relationship between Entrepreneurial Intention and Entrepreneurial Behaviour

Hagger et al. (2022) claimed that PBC moderated the intention-behavior relationship while based on the assumption that, as the value of perceived behavioural control increases, the relationship between entrepreneurial intention and entrepreneurial behaviour also increases (Doanh & Bernat, 2019). Further to that, Romero-Colmernares and Reyes-Rodriquez (2022) reported that while perceived behavioural control remained realistic, it explained twice as many behavioural differences than unrealistic perceived behavioural control. In addition, when perceived behavioural control is realistic, it moderates the intention-behaviour relationship, whereas perceived behavioural control does not apply when it is unrealistic. Perceived behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behaviour, whereby the higher the perceived behavioural control, the greater the effect of entrepreneurial intention on

entrepreneurial behaviour (Barua, 2013; Castanier et al., 2013). The following hypothesis was formulated and developed:

H6:   Perceived behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behavior, in which the higher the perceived behavioural control, the greater the effect of entrepreneurial intention on entrepreneurial behavior

2.5.3.7 Moderating Effect of Actual Behavioural Control on the Relationship between Entrepreneurial Intention and Entrepreneurial Behaviour

Scholars should pay more attention to the connection of actual behavioural control with entrepreneurial intention and entrepreneurial behaviour since these relationships have received less attention than other constructs. Thus, in the context of the *Orang Asli*, this study addressed the issue by investigating the moderating effect of actual behavioural control toward the effect of entrepreneurial intention in predicting entrepreneurial behavior among the *Orang Asli* in Peninsular Malaysia.

Consequently, successful behavioural performance depends on not only good intentions but also an adequate level of behavioural control (Metallo et al. 2021). Thus, scholars have postulated that intention links with an individual's behavior. It assumes that as the value of actual behavioural control increases, the relationship between entrepreneurial intention and entrepreneurial behavior also increases (Ajzen, 2019). Henceforth, once perceived behavioural control is accurate, it is used as a standard for predicting an individual's future behavior (Wang et al., 2021). Thus, the following hypothesis is formulated:

H7:   Actual behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behavior, in which the higher the actual behavioural control, the greater the effect of entrepreneurial intention on entrepreneurial behavior.

2.5.3.8 Effect of Self-Reliance on Entrepreneurial Intention

Anderson et al. (2006) and Dana (2015) identified that self-reliance beliefs have a significant association with entrepreneurial intention because as an entrepreneur lacks

these characteristics, entrepreneurship is also likely to have a negative occurrence. According to Michaelis et al. (2020), successful entrepreneurs tend to have self-reliant behavior that helps them accomplish their goal of self-sufficiency. Othman et al. (2011) concluded that displaying more self-reliant behaviours leads to self-sufficiency.

Researchers have proposed that self-reliance is a significant construct that an entrepreneur should possess, and if entrepreneurs lack this characteristic, their entrepreneurial engagement could be higher (Ness et al., 2020). Self-reliant individuals denote a perception of locus of control and autonomy ((Bauernschuster et al., 2012; Curry et al., 2016; Dana, 2015). Since the significant characteristic of the *Orang Asli* in Malaysia is self-reliance, it is necessary to include this as an additional construct to determine the factors of entrepreneurial behaviour among these people. Generally, the more favourable their self-reliance and self-sufficiency are, their intention to perform the behaviour would be more. This leads to the eighth hypothesis:

H8:   Self-reliance negatively affects entrepreneurial intention.

2.5.3.9 Effect of Self-Sufficiency on Entrepreneurial Intention

Self-sufficiency is the personal level of belief of individuals so that they can arrange and carry out activities to reach definite results (Pfitzner-eden, 2016). Empirical research showed that high self-sufficiency is essential for most human functions. Since self-sufficiency positively influences human functions, it expects to provide similar results in the context of entrepreneurship (Ozgur et al., 2017). Thus, high self-sufficiency leads to individuals' higher motives to take action for entrepreneurship. The following hypothesis is posited:

H9:   Self-sufficiency positively affects entrepreneurial intention

2.5.3.10 Effect of Self-Reliance on Self-Sufficiency

Self-reliance refers to a person who strongly believes and trusts he or she can succeed (Schultz et al., 2017). People with high levels of self-reliance tend to survive in dynamic and changing events without any help from other parties because individuals

who have self-reliant believe that they have control over the outcome of events in their lives, as opposed to being conquered by external forces beyond their control (Ness et al., 2020). In short, self-reliance refers to the perception of the "self" being responsible for successes and failures ((Bauernschuster et al., 2012; Dana, 2015; Fonchingong et al., 2003).

In this study, the researcher examined the impact of self-reliance on self-sufficiency following findings from Amiruddin et al. (2020) and Othman et al. (2011), who concluded that self-reliance motivates the *Orang Asli* to forego subsistence agricultural items in favor of generating cash from forest harvests and not overly reliant on government or other outside assistance that refers to self-sufficiency. Shortly, self-reliance positively impacts self-sufficiency (Jamak et al., 2000). In general, the greater the *Orang Asli*'s self-reliance, the stronger is their self-sufficiency. The empirical studies above led to the tenth hypothesis:

H10: Self-reliant positively affects self-sufficiency

2.5.3.11 Mediating Effect of Self-Sufficiency on the Relationship between Self Reliance and Entrepreneurial Intention

In addition, self-sufficiency is directly and indirectly associated with self-reliance as a mediating or intervening variable. This view is supported by Dana (2007) and Othman et al. (2011) who concluded that for generations, the *Orang Asli* were known for their high self-reliance. This characteristic has led to them being self-sufficient. Thus, self-sufficiency was tested as an additional construct to examine entrepreneurial intention and entrepreneurial behaviour among the *Orang Asli* in Peninsular Malaysia. The testing of the mediating effect of intention between self-reliance and self-sufficiency is crucial. The discussion above led to the eleventh hypothesis:

H11: Self-sufficiency mediates the effect of self-reliance on entrepreneurial intention

2.5.3.12 Effect of Entrepreneurial Intention on Entrepreneurial Intention

Individual entrepreneurial intention has frequently been considered the most appropriate way to describe entrepreneurial behavior (Neneh, 2019). Understanding individual entrepreneurial intention is widely regarded as the best way to understand entrepreneurial behavior within the context of entrepreneurship (Maheshwari & Kha, 2021). Evidence, however, indicates that not all intentions can be converted into behaviour, as there are several contingent factors may cause otherwise (Neneh, 2019). This could be true especially among minority societies such as the *Orang Asli*, who have been statistically reported with lower participation in entrepreneurial activities carried out by JAKOA (2022).

Ajzen (1991) defined entrepreneurial intention as the people's readiness to engage in entrepreneurial conduct or their commitment toward starting a new enterprise (Fabg et al., 2917; Kautonen et al., 2015; Yu et al., 2017). This idea that claims entrepreneurial intention benefitting entrepreneurial behavior is supported by researchers (Laguia et al., 2019; Tseng et al., 2022). Prior research recognized the importance of entrepreneurial intention models in understanding the entrepreneurial phenomenon and demonstrated that they effectively influence entrepreneurial behavior (Li et al., 2020; Schmidt et al., 2022).

Findings by Ceresia and Mendola (2019) and Eyel and Vatansever Durmaz (2019) have confirmed that entrepreneurial intentions may constitute a necessary criterion for an individual to start a new venture. Besides that, Celik et al. (2021) concluded that an individual with a firm intention toward a specific behaviour is likelier to invest much effort to engage in the behaviour. In contrast, if the entrepreneurial intention is positively firm, it will be significantly associated with the entrepreneurial actions he or she will take (Kanonuhwa et al., 2018). As a result, persons with a higher level of entrepreneurial intention are more likely to engage in actual action toward the establishment of new businesses. As a result, the current investigation proceeds with the following hypothesis:

H12: Entrepreneurial intention positively affects entrepreneurial behavior

2.6   Summary of the Chapter

In order to design and address the research framework of this study, a thorough literature review of recent and previous research reviews was done. The research framework was developed by incorporating four variables from TPB and two different constructs from Self-Identity Theory representing critical features of the *Orang Asli* to determine entrepreneurial intention and entrepreneurial behavior. Finally, twelve hypotheses reflecting the research questions, objectives, research problems, and theoretical framework were developed to evaluate the link between the constructs. The following chapter provides a clear and comprehensive explanation of the research methodology that was employed in this study

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research philosophy and research design of this study. The population and sampling method is also described. Besides that, the research instrument and its validity and reliability are also discussed. This is followed by reporting the pilot study and an explanation of the ethical considerations undertaken in this study. Finally, the procedures of data collection and analyses were also described.

3.2 Research Philosophy

Taherdoost (2021) stated that research is a systematic way of solving a specific identified problem. The determination of the research methodology begins with the identification of the research paradigm and philosophy (Saunders et al., 2023). It is crucial and necessary to identify the philosophy approach as this can help the researcher to get to the truth about the research subject (Bougie & Sekaran, 2019). Research philosophy refers to fundamental beliefs about the world, which explain how the phenomenon should be gathered and analyzed, as well as guiding all decisions in each research stage (Creswell & Creswell, 2018). According to Creswell and Vicki (2018), there are five elements to describe the research philosophy. These are: (1) ontology; (2) epistemology; (3) axiology; (4) rhetoric, and (5) methodology. Figure 3.1 portrays the importance of each of these elements in describing the choice of research philosophy and ultimately, the design of the study.
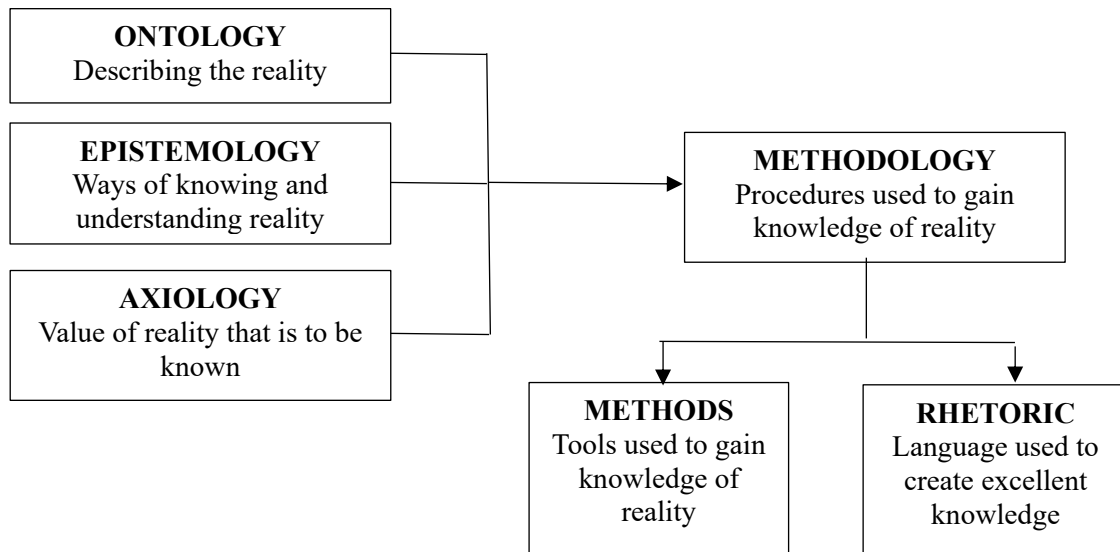
Figure 3.1   Elements Guiding the Research Paradigm

3.2.1   Ontology

Ontology helps researchers to obtain information regarding the nature or field of the study (Creswell & Creswell, 2018; Saunders et al., 2023). The ontological philosophy justifies that the method to be applied was selected based on the research questions of the study (Bougie & Sekaran, 2019). All nine research questions in this study are concerned with the objective nature of reality. Since this study focuses on objective dimensions or a singular reality, there is a need for a quantitative stance to provide an absolute understanding of the research problem (Creswell & Creswell, 2018).

The use of a quantitative study led to post-positivism assumptions or also known as a post-positivism worldview (Bisel & Adame, 2017; Creswell & Creswell, 2018). According to Saunders et al. (2023), a post-positivism worldview allows researcher to use multiple methods to conduct the study based on the research questions while minimizing personal biases between the researcher and respondents, and ensuring that the subjects are viewed from more than one single angle or perspective (Panhwar et al., 2017).

Post-positivism evolved from a positivism paradigm; whereby empirical data are transformed from the results into knowledge through informative collaboration with other scholars' viewpoints (Bisel & Adame, 2017). Post-positivism was used instead of a

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positivism paradigm to provide a more profound understanding, especially in studying human behaviours and actions (Creswell & Creswell, 2018; Tanlaka et al., 2019). Post-positivism conceives that assumptions can only be determined and explained when data is analyzed through a contradictory framework (Panhwar et al., 2017). Firstly, post-positivism ontology holds a feature of determinism that refers to causes and effects. Related to this feature, this study investigated the determinant factors affecting *Orang Asli*'s entrepreneurial behaviour. Moreover, post-positivism allows the researcher to use existing theories (theory verification), which in the case of this study refers to TPB and Self-Identity Theory. to develop and relate all the variables through hypotheses testing.

The next feature of a post-positivism ontology is reductionism. This refers to the intent of reducing ideas into a small and discrete set to test them (Creswell & Creswell, 2018). From several anticipated theories related to entrepreneurship, TPB was selected as it is the most dominant and broadest theory in the entrepreneurship context. Post-positivism ontology recommends that the nature of the research should be narrow as possible for better understanding (Saunders et al., 2023). Thus, from massive theories related to entrepreneurial behaviour, TPB which is extended by Self-Identity Theory was used in this study to investigate the effects of identified factors on entrepreneurial intention and behaviour of the *Orang Asli* people.

In post-positivism ontology, the research usually starts with the existing theories. Then, the research framework is developed using the related theories, and data are collected to test the theories from which, improvements are made based on the findings (Ryan, 2018). To enable this, a face-to-face survey was conducted in this study. All the measurement items were assessed using a set of closed-ended questionnaires. Finally, the theory verification was applied in the post-positivism ontology. Based on the features provided, the post-positivism ontology is most accurate and appropriate to represent this study. Table 3.1 shows features of post-positivism ontology that were used in this study.

Table 3.1   Features of Post-Positivism Ontology

Features	Actions Taken in This Study
Determinism philosophy (cause and effect; outcomes) is based on predetermined theory	Identifying the determinant factors (cause) of entrepreneurial behaviour (outcome) among the *Orang Asli* in Peninsular Malaysia.
Reductionism	Focus on the most dominant and related theory of entrepreneurial behaviour. TPB and Self-Identity Theory are the main theories used in this study.
Objective and Empirical	Conduct a face-to-face survey for data collection.
Theory Verification	The formulated framework was evaluated and tested through theory verification.

Source: Creswell and Creswell (2018)

3.2.2   Epistemology

Besides ontology, the subsequent philosophy underpinning this study is epistemology. Epistemology has to do with the relationship of the mind to reality (Creswell & Poth, 2018). Epistemology involves knowledge that necessarily represents a thorough understanding of what that knowledge requires (Saunders et al., 2023). In short, epistemology is a research philosophy involving knowledge that needs scientific methods, including natural science testing and measuring methods, to uncover any knowledge that is acceptable and communicated, regardless of its discipline (Kivunja & Kuyini, 2017; Rehman & Alharthi, 2016).

Table 3.2 shows the features of post-positivism epistemology. Post-positivism epistemology identifies the relationship between the variables by formulating appropriate measurements to test the predetermined hypotheses (Chowdhury, 2019). Thus, developing a numeric measurement is a crucial aspect of post-positivism (Creswell & Creswell, 2018; Kivunja & Kuyini, 2017). In order to explain and give a more profound knowledge of determining factors of entrepreneurial behaviour (causal), post-positivism epistemology applies through empirical data collection, which is a face-to-face survey.

Table 3.2   Features of Post-Positivism Epistemology

Features	Actions Taken in This Study
The nature of the reality	Objective (based on the nature of the research questions)
Aim	To test the hypotheses
Starting point	Theory (TPB and Self-Identity Theory)
Design	Testing
Technique	Measurement of items
Outcome	Determining factors of entrepreneurial behaviour (causality)
Analysis	Theory verification

Source: Chowdhury (2019); Creswell and Creswell (2018)

3.2.3   Axiology

The researcher follows the axiology philosophy to ensure that this study is value-laden and that biases are minimized in the study context. Creswell and Poh (2018) described axiology as values in research with the underpinning argument being that the researcher must have integral, often assumed values in addition to moral and ethical stances when conducting the research. Axiology is an ethical issue that must be addressed when developing research work. In short, axiology is about creating, analyzing, and comprehending conceptions of right and wrong behaviours concerning the research (Kivunja & Kuyini, 2017; Loan Nguyen, 2019).

In this study, post-positivism axiology was used to ensure that the study was value-laden while keeping biases and ethical considerations in mind at all phases of the research process (Creswell & Poth, 2018). To demonstrate the importance of this research, various past relevant studies that validated the measuring items were described. Furthermore, validity and reliability of the were tested and assessed using interviews with entrepreneurship academics and JAKOA officers. The questionnaire was initially created in English. The researcher used Brislin (1970) back-translation process to preserve the original context and content to ensure that *Orang Asli* could complete it correctly. According to Beddiar et al. (2021), back translation is a technique that translates text data

to another language and then back to the original language. Further to that, to prevent interpretation bias in the quantitative analysis, the researcher used many statistical tests, including outlier test, normality, construct validity, construct reliability, discriminant validity and others relevant methods in the study. Additionally, the researcher only used data from appropriate sources to support the data, such as peer-reviewed journal papers, edited academic books, professional journal articles, statistical data from government websites, and website material from professional associations.

3.2.4 Rhetoric

Huckin et al. (2012) define rhetoric as using words in a study to create more excellent knowledge. In other terms, rhetoric is the study's language style. This study uses formal academic language to present ideas and arguments clearly, convincingly, and professionally. It is corroborated by Creswell and Vicki (2018), who acknowledged the rhetorical element and practice. The study of post-positivism employs a formal style of terminology that refers to agreed-upon definitions of variables.

Driven by post-positivism, the researcher employed objective academic language that adds meaning and is unbiased because it is based on facts and evidence offered by other scholars and data collected; personal feelings do not impact it (Polkinghorne & Given, 2021). Thus, quantitative rhetorical markers such as causality, relationship (cause and effect), functional and, because this study is empirically based on language statistics, terms such as statistics, reliability, validity, generalizability, normality, effect, objectivity, and content validity (internal and external) were used and applied with their meaning understood generally in the context of research (Saunders et al., 2023).

3.2.5 Methodology

Creswell and Poth (2018) defined methodology as the research design that outliers how the research is conducted and completed. Methodology focuses on two types of reasoning: deductive and inductive reasoning. This study emphasizes on logical reasoning that is based on the research topic and the nature of reality. Deductive

techniques typically emphasize causality to make and verify results predictions (Loan Nguyen, 2019; Rehman & Alharthi, 2016).

In general, deduction is about what is thought as scientific research (Zikmund et al., 2013a). Deduction is a method through which the researcher arrives at a justifiable conclusion by making generalizations from available information. Overall, a deductive research approach has several characteristics: (1) the explanation of causal relationships; (2) the ability to test hypotheses; (3) the constructs are operationalized in order to be measured quantitatively; and (4) generalization can be drawn on a larger population using the deductive approach. It is mainly concerned with the positivistic paradigm when linking the deductive approach to philosophy (Creswell & Creswell, 2018).

The inductive method is the upbeat version of deduction. As previously said, deduction arose from natural sciences research. On the other hand, social scientists are skeptical of the cause-effect link established in natural research without considering how humans interpret their social world (Sekaran & Bougie, 2016), and thus, highlighting the strength of an inductive approach. As a result, induction research is primarily concerned with theory construction rather than theory testing. The inductive approach can be used to interpret the detailed meaning of data (Saunders et al., 2023). The fundamental contrasts between deductive and inductive techniques are illustrated in Table 3.3.

Table 3.3   Inductive and Deductive Reasoning

Features	Inductive Reasoning	Deductive Reasoning
Aim	Generation of new theory emerging from data	Testing theory
Starting point	Specific observation	Theory
Emphasis	Exploring new phenomena or looking at previous phenomena from different perspectives (method for discovery)	Causality (Methods of verification & explanation)
Method	Commonly associate with qualitative research	Quantitative

Source: Creswell and Creswell (2018)

In this study, the researcher began with a deductive method, selecting relevant theories for the study and building a research framework based on these theories. The researcher then produced hypotheses and tested them through measurement to answer the research questions using the developed research framework.

3.3   Research Design

In every research topic, the research design is one of the most important plans that the researcher should examine (Greener & Martelli, 2018). According to Creswell and Vicki (2018), research design involves formal procedures such as data collection, analysis, interpretation, and reporting in research studies. They are instrumental in assisting and guiding the researcher to choose the appropriate methods and decisions during the study and in making interpretations at the end of the research.

Since this study aims to analyze the causal factors among the constructs, a deductive reasoning based on a post-positivism worldview is deemed appropriate. Therefore, it also affirms that quantitative rather than qualitative research is acceptable (Creswell & Creswell, 2018). The study begins with an aim, which refers to testing, predicting, conforming, and exploring the existing theory, followed by hypotheses formulated based on the theory, testing the hypotheses, and finally, either confirming or rejecting the hypotheses through data analysis to answer the research.

Besides that, this study uses a quantitative approach to analyze the causal factors influencing entrepreneurial behavior among *Orang Asli* in Peninsular Malaysia. In the first phase of this quantitative investigation, the researcher TPB and Self-Identity Theory as the underlying theories that could explain behaviours of the *Orang Asli* people. To evaluate the hypotheses, the researcher employed questionnaires via face-to-face survey, beginning with measurement development and pre-testing of the study instrument.

During the first step of questionnaire development, expert panel comprising of academicians and JAKOA officers was used to validate the questionnaire. The instrument was adopted and adapted based on feedback from the expert panel. Face-to-face survey was carried out to allow the researcher to establish rapport with potential respondents and

thus gain their cooperation to participate in the survey. Zikmund et al. (2013) stated that face-to-face surveys allow high participation among the respondents. G*Power was utilized to determine the minimum sample size because it is the most generally used power analysis program in social and behavioural research, particularly in correlation and regression analyses (Erdfelder et al., 2009; Faul et al., 2007). Kang (2021) concurred that the G*Power software enables sample size and power calculation for various statistical methods (F, t, X², z, and exact tests). This software assists researchers in estimating sample size and carrying out power analysis.

Further to that, this study used a cross-sectional survey approach to measure the outcome of the study. According to Creswell and Creswell (2018), cross-sectional data can be acquired simultaneously. Although scholars argued that intention and behavior should have a gapped scale in order to measure an individual's behavior, this study used a cross-sectional survey design, emphasizing two important items such as 1) individuals who do not take action and 2) those who do not intend to act but do take action, which reflects the *Orang Asli*'s past behavior after taking into account, the various ethnicities that are involved. Zikmund et al. (2013) added that cross-sectional survey design is used to study correlations between variables via cross-tabulation to diverse sectors of the population and to reflect on their past behavior. Furthermore, the cross-sectional survey methodology is suited for this study given that the indigenous people are constantly on the move. This research style is chosen to avoid discrepancies in data collection and analysis. Likewise, Zikmund et al. (2013) characterized cross-sectional study as capturing a snapshot of the current situation.

3.4   Population and Sampling Method

Taherdoost (2016) explained that the sampling process is a systematic flow of actions beginning with identification of the study population, and followed by selecting a sampling frame for a known population, determining the sampling method, calculation of the sample size, and lastly, collection and analysis of data. Figure 3.2 illustrates the steps taken in determining study population and samples of the study.
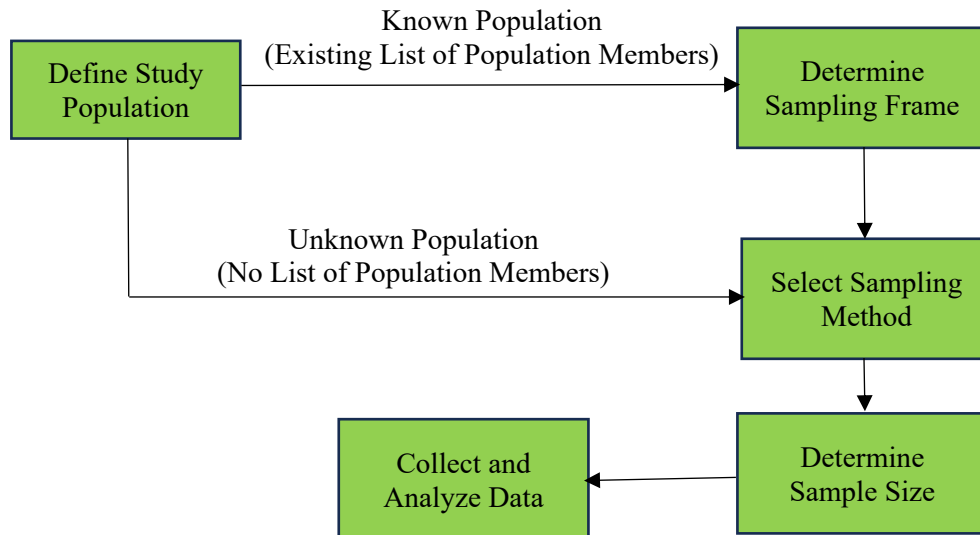
Figure 3.2   Sampling Process
Source: Taherdoost (2016)

3.4.1   Identifying Study Population

It is critical to determine the unit of analysis for this study before identifying the population and samples. According to Bougie and Sekaran (2019), the unit of analysis is the level of where information is sourced out. Conclusions drawn from answering the research questions are mostly influence by identification of the correct unit of analysis. In this study, the unit of analysis is at the individual level, or more specifically, the *Orang Asli* entrepreneurs who are registered with JAKOA regardless of age and gender as long as they have owned or ran family-owned businesses for more than a year.

Having identified the unit of analysis, the population which refers to the entire group of people that the research intends to investigate is also identified. Creswell and Creswell (2018) explained that the population comprises of individuals with common features that are specified by the researcher. Hence, in this study, the population is identified as *Orang Asli* entrepreneurs from States in Peninsular Malaysia which include Pahang, Johor, Selangor, Kelantan, Negeri Sembilan, and Perak. These entrepreneurs are registered with JAKOA.

Available statistics on registered *Orang Asli* entrepreneurs with JAKOA was only for the 11th and 12th Malaysia Plans with a declining number of registered entrepreneurs at 534 and 327 respectively. Current statistics at the time of the survey was not available and an estimation was made based on the assumption that the population of *Orang Asli* entrepreneurs are about 500, following the statistics from the 11th Malaysia Plan (JAKOA, 2022). It is assumed that there would be an increase in the number of registered entrepreneurs among the *Orang Asli* as JAKOA has been actively implementing more vigorous entrepreneurial events and activities for the community.

3.4.2 Determining Sampling Frame

Bryman and Bell (2019) stated that a sample refers to a portion of the population that is chosen to represent the population. For a known population, a sampling frame which lists down all members of the population, can be used to draw out samples to represent the population (Taherdoost, 2016). The choice of sampling method depends on the availability of a sampling frame. When sampling frame is not available, probability random sampling cannot be used. In this study, the sampling frame is not available, and thus, leading to the option of using a non-probability sampling method (Saunders et al., 2023).

3.4.3 Selecting Sampling Method

The sampling design used in this study is non-probability sampling, and the sampling technique is judgment (purposive) sampling. Judgment sampling entails the selection of the most advantageous people in or within the best position to provide the essential information with certain relevant features required by the researcher (Bougie & Sekaran, 2019; Benoveva & Tanardi, 2022; Jena, 2020). Judgment sampling method is utilized because respondents are chosen based on predetermined criteria provided by the researcher. Due to the *Orang Asli* having dispersed settlements in Peninsular Malaysia, the researcher has a restricted number of persons capable of providing the necessary information.

Therefore, respondents in this study were selected based on the following criteria: (1) officially part from the three ethnolinguistic groups; (2) involvement in entrepreneurship; and (3) business ownership or government assistance. The primary concern for ensuring that this study was conducted ethically is on confidentiality. Therefore, respondents were only required to provide their identities or other information on the survey form if it was relevant to the study. Since this study employed and tested the validity of the TPB concerning the entrepreneurial behaviour of the *Orang Asli* population in Peninsular Malaysia, judgment (purposeful) sampling was chosen and deemed appropriate.

Sekaran and Bougie (2019) cautioned that the use of a non-probability sampling might limit the generalization of findings to the study population. However, since this study is aimed at determining the effects of TPB's constructs along with self-reliance and self-sufficiency to explain entrepreneurial intention and behaviour, statistical generalization is given more emphasis rather than population generalization (Saunders et al., 2023).

3.4.4 Determining Sample Size

Adequacy of sample representation of the population is a critical aspect of research to ensure that errors and biases in sampling are avoided (Taherdoost, 2016). Too small a sample might not be suitable for certain statistical analysis such as factor analysis in PLS-SEM (Hair et al., 2019). According to Saunders et al. (2023), the calculation of sample size of a known population size is based on an error margin of 5 per cent, a confidence level of 95 per cent and a 50 per cent estimated variance or heterogeneity of the population. The formula shown below is often used to calculate the sample size.

$$n = p\,(100-p)\,z^2 / E^2 \qquad\qquad \text{[Exhibit 3.1]}$$

where n is the required sample size;

P is the percentage of an event to happen;

E is the percentage of maximum error required; and

Z is the value showing the required level of confidence.

However, with the availability of online sample size calculator such as Raosoft.com (URL: http://www.raosoft.com/samplesize.html), sample size can be calculated automatically by inserting the size of the population. As shown in Figure 2.3, the sample size for a population of 500 *Orang Asli* entrepreneurs yielded 218 samples.

Figure 3.3   Sample Size Calculation Using Raosoft Online Calculator
Source: Raosoft.com (2023)

Power analysis can also be considered as a way of determining sample size of a study. Cohen (1992) suggested the use of 0.80 statistical power to reduce the likelihood of Type I or Type II error in hypothesis testing. A high-power analysis reduces Type I and Type II errors (Simmons et al., 2011). In hypothesis testing, a type I error (false-positive) is rejecting a null hypothesis that is in actual fact true while a type II error (false-negative) is rejecting a null hypothesis that is in actual fact false with regards to the population (Banerjee et al., 2009). Cohen (1988) further suggested that a power analysis should consider five factors which are significance level or criterion (α), effect size (f2), desired power ($1 - \beta$), estimated variance (δ) and sample size (n).

The significance level is normally fixed at 0.05 (Ary et al., 2014; Kim, 2015). Meanwhile, the extent to which a false null hypothesis is achieved is referred to as the effect size (Cohen, 1988). According to Hair et al. (2014), 0.02 is considered the cut-off value for small effect while 0.15 and 0.35 are the cut-off values for medium and large effect sizes respectively. A moderate-size effect is considered desirable and appropriate in most fields of research as it represents an effect that is "visible to the naked eye of a careful observer" (Cohen, 1992: 156).

G*Power analysis program can be used to facilitate the calculation of sample size based on power analysis. G*Power is a general stand-alone power analysis application intended for statistical tests and is most widely used in social and behavioural research (Kang, 2021). To determine the sample size using G*Power, the calculation is based on F-test and linear multiple regression for a fixed model with R2 deviation from zero, at a 0.80 statistical power, 0.15 effect size and a 0.05 significance level. The number of predictors refers to the greatest number of predictors of a given dependent variable. In this study, the research model in Figure 2.3 shows that entrepreneurial intention has the greatest number of predictors with four direct relationships of variable (attitude, subjective norms, self-reliance and self-sufficiency), one direct relationship of the moderator (perceived behavioural control), and two indirect moderation effects (attitude and perceived behavioural control, and subjective norms and perceived behavioural control), totaling seven predictors. Hence, the minimum sample size to ensure sampling adequacy is 103.

Based on these calculations, the minimum sample size required to reach sampling adequacy is 103 using power analysis and 218 if sample size is calculated using the formula for known population size. Nevertheless, it has to be noted that the actual population size is not known and only estimated. Hence, having a sample size between 103 and 218 is considered adequate to avoid sampling errors and biases.
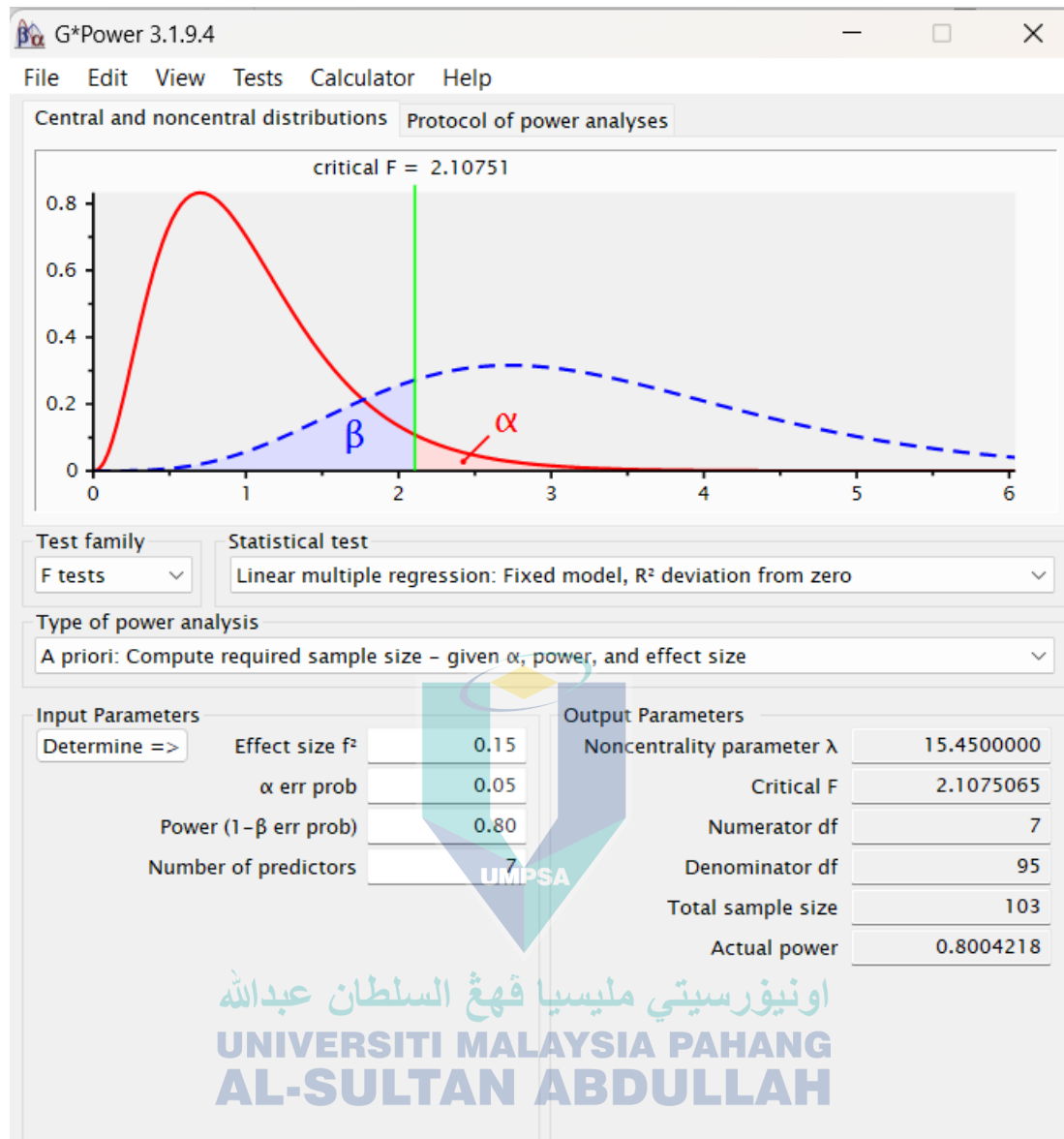
Figure 3.4   Sample Size Calculation Using G*Power

3.5   Research Instruments

This study is based on a quantitative approach whereby the best method to acquire information from the respondents in by using research questionnaire. The development of the questionnaire allows the researcher to use the right measurement scales that can accurately and systematically be evaluated to provide findings to answer the research questions based on items in the measurement that are relevant, powerful, clear, and easy to answer (Connell et al., 2018). For this purpose, a closed-ended questionnaire is

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designed which is considered as appropriate for this study since the respondents are asked to choose from a range of choices and allow for quick responses, as well as enabling adjustments in future research (Hair et al., 2020; Patricia, 2017).

3.5.1 Development of the Research Questionnaire

The development of the research questionnaire is guided by the framework provided by Tsang et al. (2017). It entails an initial consideration to identify the research constructs and search for existing validated questionnaire. Then, it undergoes the process of translation if the questionnaire needs to be translated to the language that is familiar to the respondents. In the event where there are no available measurement scales, the questionnaire needs to be developed. Otherwise, for questionnaire that need translation, an expert panel might be needed. This is then followed by preliminary pilot testing to determine the reliability and validity of the questionnaire. Figure 3.5 presents the framework for developing the research questionnaire.
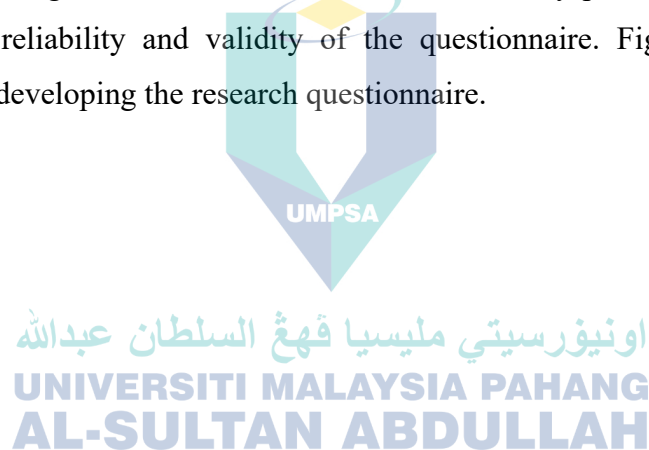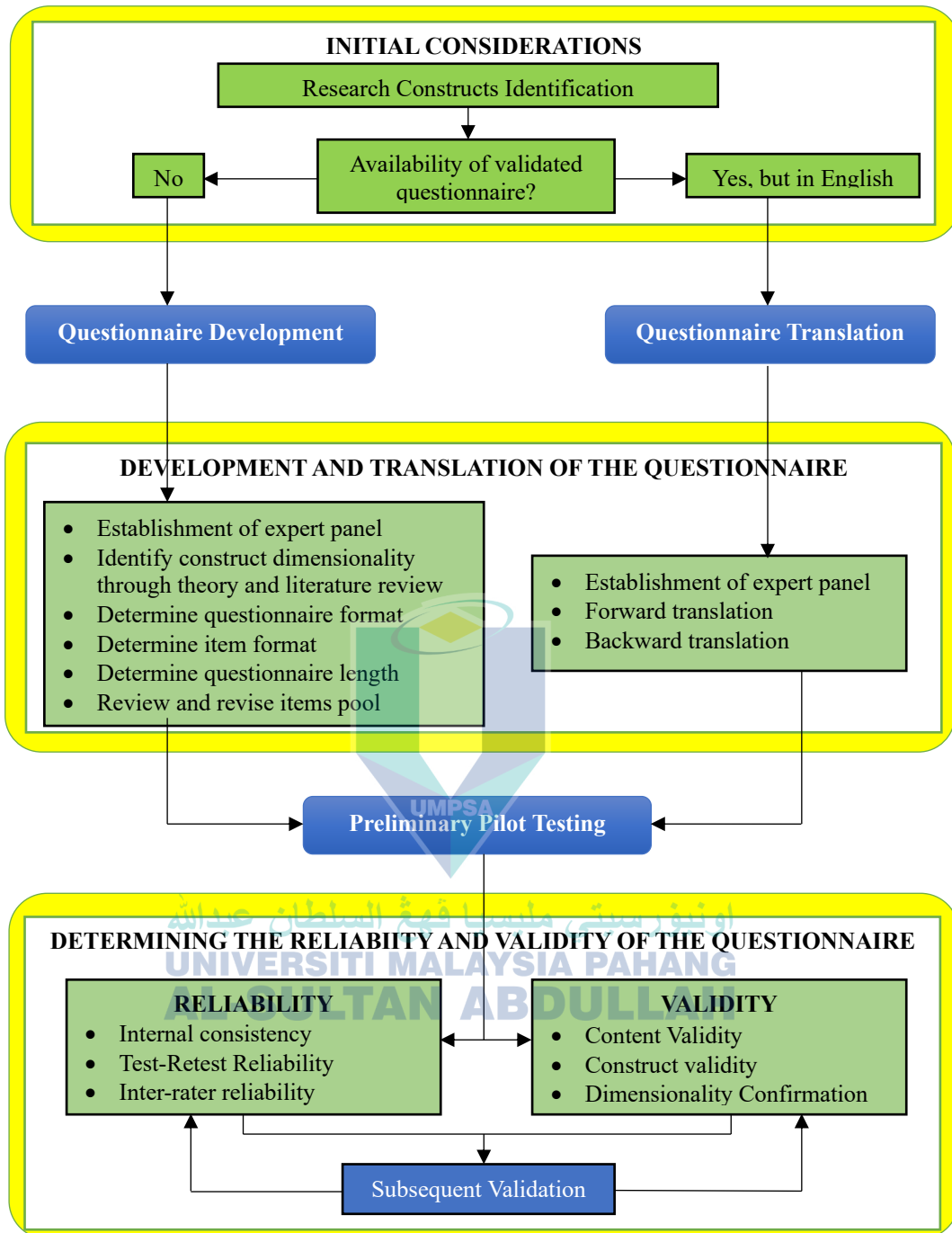
Figure 3.5   Procedures of Questionnaire Development
Source: Tsang et al. (2017)

3.5.2 Operational Definition of the Research Constructs

An operational definition boosts the objectivity of theory and experiment (Gillespie & Giardino, 2018; Ribes-iñesta, 2003; Zimmermann et al., 2007) by providing

the researcher with a standard form for measuring each variable. According to Bougie and Sekaran (2019), variable measurement is an integral feature of research and an important aspect of study design. Since this study measures constructs such as attitudes and feelings, it is necessary to define constructs operationally and ensure reliability and consistency during the measurement phase, whereby the researcher measures what was intended to be measured. Operational definitions pertain to how the research construct is measured (Bougie & Sekaran, 2019). Appendix A presents the operational definitions of the research constructs in this study.

3.5.3   Measurement Scales and Items

There are eight research constructs in the research model which are represented by their respective measurement scales. In each of these measurement scales, the items were adopted or adapted from previous studies. Hence, the questionnaire is divided into four main components. Section 1 is for demographic profile. Gender, age, ethnicity, subgroup/tribe, business ownership, categories of entrepreneurship, sort of business, years of business establishment, and academic qualification were among the nine closed-ended questions in this section.

Meanwhile, Section 2 collects information about all the independent constructs. Attitude (three items), subjective norms (three items), perceived behavioural control (four items), and actual behavioural control (five items) were included in this section. Besides that, self-sufficiency (eight items) and self-reliance (seven items) were also included in Section 2. Section 3 collects information about the respondents' entrepreneurial behaviour with six items and Section 4 is for entrepreneurial intention with four items. The questionnaire is available in English as shown in Appendix B.

The interval scale was employed in this study to measure each item in the measurement scales. According to Bougie and Sekaran (2019), the interval scale is a multipoint scale that taps the differences, the order, and the equality of the magnitude of the differences in the response. The interval scale features arbitrary starting points, backed by Parreira and Ana Lorga (2016), who determined that measuring with a zero origin to each item is highly improper in behavioural investigations because attitude or behaviour

would only have relevance in a relative sense. Researchers do not usually measure attitude or behaviour as zero or nothing (Zikmund et al., 2013). Since the interval scale lacks a "true zero-point," it shows that the order and value between each item (Bougie & Sekaran, 2019). As a result, the interval scale is appropriate for this research. Furthermore, in consideration of common method variation, multiple scales were used which are: five-, six-, and seven-point interval scales. When the estimates of the associations between two or more constructs are biased because they are measured using the same method, this could contribute to common method variance (Tehseen et al., 2017). To limit and control common method bias in this study, standard scale features was eliminated by converting the response formats to five- to seven-point interval scales to measure and characterize each construct (Jordan & Troth, 2020). Hence, attitude, subjective norms, perceived behavioural control, actual behavioural control, self-reliance and self-sufficiency were measured using a five-point interval scales while entrepreneurship intention was measured with seven-point interval scale and entrepreneurship behaviour used a six-point interval scale.

The adoption and adaptation of existing measurement scales for the eight constructs in this study are explained below.

(a) **Attitude**

The attitude of *Orang Asli* was measured in this study using these three primary criteria. They refer to an individual's feelings, emotions, beliefs, or rational arguments concerning entrepreneurial behaviour, as well as their mental state, whether they act consciously or subconsciously (Doanh & Bernat, 2019; Ozaralli & Rivenburgh, 2016). Five-item questions measured these three primary criteria for attitude on a five-point interval scale ranging from 1 (strongly disagree) to 5 (strongly agree). Table 3.4 illustrates the original and modified items representing attitude.

Table 3.4   Attitude Scale Items

No.	Original Scale Items	Modified Items
1	A career as an entrepreneur is attractive for me.	A career as an entrepreneur is attractive for me.
2	Being an entrepreneur would entail great satisfactions for me.	Being an entrepreneur would entail great satisfactions for me.
3	Among various options, I would rather be an entrepreneur.	Among various options, I would rather be an entrepreneur.
4		I am always keen to take advantage of new business opportunities.
5		I would rather be my own boss than has a secure job.

(b)   Subjective Norms

The researcher examined subjective norms in this study by asking *Orang Asli* about their significant others' perspectives on their entrepreneurial behavior. The significant others include family members, friends, and members of their tribe. People assess if a behavior is normal, effective, typical, adaptive, or acceptable by examining the behaviors of those around them (Yurtkoru et al., 2014). Since these people are important in a person's life, it becomes their drive to hold those beliefs (Lu et al., 2022; Yuanyuan et al., 2022) which is directly related to involvement in entrepreneurial activity. When measuring subjective norms among the *Orang Asli*, two concepts: "should do" and "how to do" were given consideration (Doanh & Bernat, 2019; Leong, 2008).

Respondents were asked to indicate on a 5-point interval scale ranging from 5 (strongly disagree) to 1 (strongly agree) the extent to which they agreed with the statements describing the importance of reference groups when deciding to involve in business activity. The 5-item measurement of subjective norms, including the modified items (where applicable), is shown in Table 3.5.

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Table 3.5   Subjective Norm Scale Items

No.	Original Scale Items	Modified Items
1	If I decided to create a firm, my closest family would approve of that decision.	If I decide to create a firm, my closest family would approve of that decision.
2	If I decided to create a firm, my closest friends would approve of that decision.	If I decided to create a firm, my closest friends would approve of that decision.
3	If I decided to create a firm, people who are important to me would approve of that decision.	If I decided to create a firm, people who are important to me would approve of that decision.
4		I believe that my closest family thinks that I should pursue a career as an entrepreneur.
5		I believe that my closest friends think that I should pursue a career as an entrepreneur.

(c)   Perceived Behavioural Control

In this study, concerning entrepreneurial behavior among the *Orang Asli* in Peninsular Malaysia, these aspects are examined; (1) previous experiences related to entrepreneurial activity that represents attitude; (2) the level of confidence in their ability to perform the behavior that represents subjective norms; (3) the perception of an individual concerning the ease or difficulty of carrying out the task of starting or running a business that represents perceived behavioral control and (4) the current level of skills and resources to perform a behavior that represents actual behavioral control (Dinc & Budic, 2016; Doanh & Bernat, 2019).

For perceived behavioral control measures, respondents were asked to indicate on a 5-point interval scale ranging from 1 (strongly disagree) to 5 (strongly agree) the extent to which they perceived concern the ease or difficulty of carrying out the task of starting or running a business. Table 3.6 provides only the original scale items used, as none were modified.

Table 3.6   Perceived Behavioural Control Scale Items

No.	Original Scale Items
1	To start a firm and keep it working would be easy for me.
2	I am prepared to start a viable firm.
3	I can control the creation process of a new firm.
4	I know the necessary practical details to start a firm.

(d)   Actual Behavioural Control

The following measures were examined in this study: (1) the *Orang Asli*'s level of existing skills; (2) their access to monetary and non-monetary resources; (3) the additional skills required to perform entrepreneurial behaviour; and (4) the skills required to ensure the business operates successfully (Agmeka et al., 2019; Vamvaka et al., 2020).

For actual behavioural control measures, respondents were asked to indicate on a 5-point interval scale ranging from 1 (strongly disagree) to 5 (strongly agree) the extent of their level of existing skills and resources to run a business activity. Table 3.7 provides only the original scale items used, as none were modified.

Table 3.7   Actual Behavioural Control Scale Items

No.	Original Scale Items
1	I have a positive self-thinking to run my own business.
2	I have innovative skills that will help me in facing uncertainties in business.
3	I have self-confidence to cross all hurdles in doing business.
4	I have enough capital to run my business.
5	I have the capability of need for achievement.

(e)   Self-Reliance

The self-reliance of the *Orang Asli* was assessed based on the following criteria: (1) self-statement to control emotional action; (2) how *Orang Asli* solves problems based on the strategy they have; (3) *Orang Asli*'s ability to achieve immediate satisfaction; and (5) *Orang Asli* level of self-efficacy (Bauernschuster et al., 2012; Ness et al., 2020).

Self-reliance comprises of seven items corresponding to emotional control action to the ability to achieve immediate satisfaction whereby the measurement scale was adapted to fit the population of this research. The respondents were asked to rate their agreement or disagreement based on a 5-point interval scale ranging from (1) strongly disagree to (5) strongly agree. Table 3.8 provides the original and modified of the scale items used in this study. Initially, there were 11 items from the original scale but only six items were used and modified to suit the needs of this study.
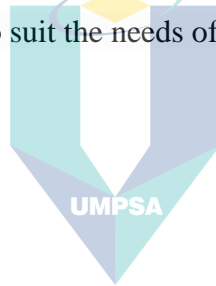
Table 3.8   Self-Reliance Scale Items

No.	Original Scale Items	Modified Items
1	I am always competence in displaying proficiency in business.	I am competent and adequate enough to achieve what I have desire.
2	I have the ability to handle emotional or psychological problems.	I am remained open mindedness when considering new ideas and differing thoughts from my own.
3	I have competencies in spotting problems early enough.	I am optimizing my skills and resources to create new idea and improve my business.
4	I am able to identify and apply correct steps to problem-solving in my business.	I am able to identify and apply correct steps to problem-solving in my business.
5	I am consistent in decision making.	I am able to create solutions with limited resources.
6	I have managerial competency.	I have the ability to make decision quickly to avoid delays in business growth.
7	I am able to identify sources of funds for my business.	
8	I have knowledge of statutory registration of a business organization.	
9	I have competency in the choice of suitable business location.	
10	I have ability to evaluate business progress.	
11	I have competency in time management.	

(f)   Self-Sufficiency

In the context of *Orang Asli* entrepreneurs, self-sufficiency refers to expressed functioning. It was measured in terms of the level of self-sufficiency in many domains (Ali et al., 2012; Marzuki et al., 2017; Tosun et al., 2018) as listed below:

1.   Finances, which refers to the money that the *Orang Asli* have in their hands or as savings to meet their individual or family needs.

2.   The level of existing skills and knowledge, which refers to assessments of the *Orang Asli*'s knowledge and ability to obtain the food and money they need to meet their individual or family needs.

3.   Community participation in survival activities, which refers to assessments of the nature of the *Orang Asli*'s immediate survival needs.

The self-sufficiency scale consists of seven items, which capture entrepreneurial behaviours. Respondents were asked to rate their self-sufficiency regarding how financial condition, existing skills and knowledge, and community participation will fulfil their survival needs. A 5-point interval scale ranging from (1) strongly disagree to (5) was employed. Table 3.9 provides only the original scale items used, as none were modified.

Table 3.9   Self-Sufficiency Scale Items

No.	Original Scale Items
1	My current income is sufficient to fulfil my needs.
2	I do not need any additional skills to earn more money.
3	I do not need any help from other tribes to meet basic needs.
4	I am happy with what I have now financially and physically.
5	Guidance from my tribe is sufficient for me.
6	Simple living is enough for my survivals.
7	Relying on traditional way in food gathering is sufficient for my survivals.

(g)   Entrepreneurial Intention

Entrepreneurial intention was measured using several factors, including (1) the needs of *Orang Asli* to become entrepreneurs; (2) the values that *Orang Asli* have and receive once they become entrepreneurs; (3) want, which refers to what individuals want to achieve when they have decided to become entrepreneurs, including support from their closest people and other parties; and (4) habits, which can be defined as an interest or hobby that affects a person's intention (Doanh & Bernat, 2019).

Respondents were asked to indicate on a 7-point interval scale ranging from 1 (strongly disagree) to 7 (strongly agree) the extent to which they agreed with the statements describing the existence of an intention to become an entrepreneur. The 4-item measurement of entrepreneurial intention, including the modified items (where applicable), is shown in Table 3.10.

Table 3.10   Entrepreneurial Intention Scale Items

No.	Original Scale Items	Modified Items
1	I will make every effort to start and run my own firm.	I try my best to start and run my own firm.
2	I am determined to create a firm in the future.	I am determined to create a firm in the future.
3	I have very seriously thought of starting a firm.	I have a very seriously thought of starting a firm.
4	I am ready to do anything to be an entrepreneur.	
5	My professional goal is to become an entrepreneur.	
6	I have the firm intention to start a firm someday.	I have the firm intention to start a firm someday.

(h)   Entrepreneurial Behaviour

Three aspects of entrepreneurial behaviour were examined to measure entrepreneurial behaviour among *Orang Asli*: (1) opportunity recognition, or whether *Orang Asli* can take advantage of opportunities to better themselves and their businesses, involves the identification and active pursuit of opportunities that can lead to success; (2) risk management, which refers to a calculated tolerance of risk in a person's business, as opposed to irresponsible risk behaviour among *Orang Asli*; and (3) initiative, which refers to actions taken based on identified opportunities (Liñán et al., 2015; Neto et al., 2020).

A total of six item questions were used to measure entrepreneurial behaviour on a 6- point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Table 3.11 illustrates the original and modified items used.

Table 3.11   Entrepreneurial Behaviour Scale Items

No.	Original Scale Items	Modified Items
1	I have experience in starting new projects or businesses.	I actively addressed problems that happen in my business.
2	I am capable of developing a business plan.	I am ready to make anything to be an entrepreneur.
3	I know how to start a new business.	I willingly took risk in my business
4	I know how to do market research.	I am able to resolve conflicts and crises.
5	I have invested in an informal manner in some business.	I can utilize all resources to run my business.
6	I can save money to invest in a business.	I developed clear goal setting for my business.
7	I belong to a social network that can promote my business.	

3.6   Validity and Reliability of the Research Instrument

The validity and reliability of the research instrument are determined before being used in the actual study. The process of determining the validity and reliability of the research instrument include three main phases: (1) translation of the research questionnaire in Malay language; (2) using a panel of expert for content validation; and (3) testing the questionnaire in the pilot study.

3.6.1   Translation of the Questionnaire

Language is an important element of communication which should also be given emphasis in questionnaire development (DiMaggio et al., 2013; Kunnan, 2013). Hence, the wording, phrasing and sensitivity of items in the questionnaire must be assessed (Birley and Moreland, 2013; Lietz, 2010; Neuman, 2016). Since this study is conducted

in Peninsular Malaysia, involving the *Orang Asli* community, it was crucial and relevant for the questionnaire to be presented in two languages, English and Malay. This accommodates an effective communication among the *Orang Asli* entrepreneurs who might be more proficient in Malay language. The questionnaire was not translated into any of the tribe's language as it is assumed that they are quite proficient in Malay and English. The main medium of instruction in Malaysian primary and secondary schools is Malay, which is also the country's national language, whereas English is a compulsory subject taught in school (Prime Minister Department Malaysia, 2019). Both languages are compulsory in the Malaysian school curriculum. Thus, presenting the questionnaire in dual language can facilitate effective communication and understanding of the questionnaire among the *Orang Asli*. Three translation processes were undertaken to ensure that the concepts used in the questionnaire items matched those used in the community. This strategy is aligned to Brislin's (1970) back-translation method. It entails that the first person translates the questionnaire from English (original language) to Malay (targeted language). Then, the second person translates the translated Malay version back to English. Another translator then assessed that the true meaning of the items in both languages were retained. The Malay version of the research questionnaire is shown in Appendix C.

3.6.2 Expert Validation of the Questionnaire

Validity is a concept which explains whether or not the collected data are adequate to explain the phenomenon under study (Field, 2005). Face validity entails a subjective judgment of the operationalization of the research variables to ensure that there is feasibility, readability and consistency of the style and format as well as clarity of the language employed in the research questionnaire that were assessed (Taherdoost, 2016). In this study, the grammatical accuracy, clarity of item, spelling, sentence structure and format of the questionnaire were evaluated by the expert panel (Oluwatayo, 2012). Their comments and feedback were considered in revising the questionnaire item so that there is greater relevance and ease of comprehension of the contents by the respondents (Blaxter et al., 2010; Bryman, 2015; De Vaus, 2013). Basically, the experts accepted all the items with some amendments in terms of sentence format, removal of double-barrel

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meaning in the items and grammatical errors to ensure that the items were comprehensible to the respondents.

According to Bougie and Sekaran (2019), content validity is critical in the research process since it ensures that the measure chosen is suitable and that the sets of items represent the entire concept of the research. As a result, content validity was used and recommended in this study to ensure that the items were in the correct sequence and connected to the constructs, as this study developed a new model by adding to the current theory based on related and recent works of literature (Halek et al., 2017). A thorough review of the initial questionnaire by an expert meets the intended goal and adds value to the questionnaire (Ikart, 2019).

The content validity of the research instrument was assessed by a panel of academicians teaching and experts in research methodology and entrepreneurship, as well as JAKOA officers. Two academicians from Universiti Malaysia Pahang (Academicians 1 and 2), who are experts in the subjects of entrepreneurship and research methodology, respectively, and an academician from UNITEN Muadzam Shah (Academicians 3), who are experts in the subject of entrepreneurship, were selected to review the content and identify problems with the questions, response options, and measurement in the survey. Meanwhile, representative from JAKOA Rompin (Officers 1 and 2) who are the Community Development Officers working in the Economic Development Section, reviewed the questionnaire's content. They were specifically requested to assess the anticipated degree of understanding among *Orang Asli* when answering the questionnaire to meet the research objectives, as well as to construct an easy-to-understand questionnaire based on the *Orang Asli*'s level of knowledge and understanding. The academicians' and practitioners' feedback were used to generate clear measuring items, which are given in Appendix D. Table 3.12 presents a summary of the comments and feedback from the expert panel.

Table 3.12   Summary of Comments and Feedback from the Expert Panel

Expertise (reviewer)	Comments/Feedback	Action taken based on the comments and feedback
Expertise 1 (Officer from JAKOA Rompin)	To include "Others" in Section 1 for education, ethnicity and age.	Added column for "Others" for education, ethnicity and age in demographic profile (Section 1).
Expertise 2 (Officer from JAKOA Rompin)	To measure all items using only five-point interval scales.	Discarded the comment due to avoid common method variance and biases.
Expertise 3 (Academician 1 from UMP)	To translate the questionnaire into Bahasa Melayu.	The revised questionnaire uses a multilingual survey in Bahasa Melayu and English.
	To use a different scale for each construct and section.	Each section has been revised using a 5 to 7 interval scale to avoid common method variance and biases.
Expertise 4 (Academician 2 from UMP)	Revise the Entrepreneurial Behaviour Section, as the items were unrelated to behaviour measurement.	Section 3 (Entrepreneurial Behaviour) items have been revised, adapted and adopted based on journals related to entrepreneurial behaviour.
	Revise and add more items for attitude, subjective norms and perceived behavioural control.	Added two more items for attitude, subjective norms and perceived behavioural control based on related journals.
	To include self-sufficiency items in Section 2.	8 items were adopted and adapted from related journals for variable self-sufficiency in Section 2
Expertise 5 (Academician 3 from UNITEN)	To revise the age of the respondents in Section 1	The age groups were revised and classified into 6 groups.
	To include a column for the respondents to indicate whether they own or do not own a business in Section 1.	Added a column for business owners in the demographic profile (Section 1).
	Use only yes and no answers for each item.	Discarded the comment due to avoid common method variance and biases.

3.7   Pilot Study

The primary objective of performing a pilot study is to improve research quality, which can be accomplished in numerous facets of the research process where it usually conducted to identify the consistency of the questions and an understanding of the respondents to the questionnaire (Malmqvist et al., 2019). Purposive sampling was used in selecting the sample in the pilot study. Following the suggestion made by Jackson (2003), the number of parameter estimations should be used to calculate the sample size (N:q rule). In this study, the minimum item is five for eight constructs. Thus, a ratio of 5:1 is acceptable. Forty respondents were involved in the pilot study to allow the running of proper statistical testing procedures. Respondents were reasonably aware of the research objectives and were among entrepreneurs who registered with JAKOA or CCM.

Based on comments from the respondents in the pilot study, several flaws were highlighted and amended before the questionnaire was presented in the actual study. The respondents suggested that the written instructions be simplified, and particularly for business type, more options were given as some of the respondents run more than one business at a time and thought that they had to choose only one. It was also proposed that putting each concept on its page would make the questionnaire easier to read.

The Cronbach alpha coefficient was used to assess the reliability of the measurement scales. According to Taherdoost (2018), reliability is the first measure to consider when assessing instrument quality. Cronbach's alpha has a lower acceptability limit of 0.60 to 0.70 (Hair et al., 2020). In this study, the constructs' reliability ranges from 0.804 to 0.929, within the acceptable range indicated in the literature. Table 3.13 presents the reliability test using Cronbach's Alpha measures. Following the reliability test, confirmatory factor analysis should be used to assess convergent and discriminant validity. However, this was done in the actual data analysis because the PLS-SEM approach has a factor analysis component which could provide the measure of validity and reliability assessment of the measurement scales.

Table 3.13   Internal Consistency Based on Cronbach's Alpha in the Pilot Study

Variables	No. of Items	Cronbach's Alpha
Attitude	5	0.857
Subjective Norms	5	0.899
Perceived Behavioural Control	4	0.856
Actual Behavioural Control	5	0.850
Self-Reliance	7	0.804
Self-Sufficiency	7	0.825
Entrepreneurial Intention	6	0.929
Entreprenerial Behaviour	4	0.920

3.8   Ethical Considerations

This study also considers ethics, particularly when acquiring information from respondents, including letting respondents participate voluntarily, gaining informed consent, and protecting respondents' privacy, anonymity, and confidentiality (Creswell & Vicki, 2018). In this study, the researcher emphasized ethical considerations when conducting the survey, particularly concerning *Orang Asli* beliefs and traditions, because the *Orang Asli*'s lives are greatly influenced by nature and the practices left by their forefathers (Abdul Halim & Nordin, 2021; Mohd Nur Syufaat, 2013; Norizan & Ayob, 2012; Shah et al., 2018. The work ethics as defined by JAKOA were adhered to when the study was implemented, such as getting authorization from JAKOA HQ to conduct the study on the *Orang Asli* and acquiring other authorization letters to run the survey. These documents are shown in Appendix E, F, G and H.

3.9   Data Collection Procedures

Underpinned by the post-positivism ontology nature of reality, which stated that quantitative study has an objective view, questionnaires were used to collect data from the *Orang Asli* entrepreneurs. Initially, data collection was carried out during the *Orang Asli* Entrepreneurs Carnival (*Karnival Usahawan Orang Asli*) on 24-26 June, 2022. By using a screening process of asking the participants at the carnival to determine whether

they comply with the three inclusion criteria for sample selection, the questionnaire is given to them and requested for return before or at the end of the Carnival. The three inclusion criteria: (1) officially part from the three ethnolinguistic groups; (2) involvement in entrepreneurship; and (3) business ownership or government assistance were asked before the questionnaire was released. A brief explanation about the research was also given to the individuals and they were made aware of their rights to participate or not to participate in the survey. They were also informed about the ethical considerations of the survey such as confidentiality, volitional participation and their rights to withdraw from the survey at any time. At the end of the carnival, out of 200 distributed questionnaires, only 130 questionnaires were returned.

Using the experience from the carnival and to address the inadequacy of sample size, another phase of data collection was carried out involving *Orang Asli* entrepreneurs who were actively trading in government-provided stores, such as the Kedai-Kedai *Orang Asli* under JAKOA's programme. Similarly, the screening process of asking the questions based on the three inclusion criteria was carried out. Additionally, briefing and information were provided to the entrepreneurs who were sought to become respondents for the survey. The researcher stayed in close vicinity to answer any queries from the traders under these enterprises. The targeted collection of questionnaires was set at 100. However, only 55 sets of questionnaires were collected. A period of one month was allocated for collecting questionnaires from these entrepreneurs.

The challenges of collecting the adequate number of questionnaires were analyzed after these two phases. It was then decided that instead of distributing the questionnaires and giving the individuals ample space and time to fill in and return the questionnaires, a face-to-face survey was used. The face-to-face survey technique allowed the researcher to read survey questions to respondents who could answer them verbally (Neto et al., 2020) or those who could not read due to a lack of formal education and to ensure that respondents gave correct answers. As a result, a face-to-face survey was the best way to maximize the response rate (Logan et al., 2020).

The next phase of data collection was to source out the *Orang Asli* entrepreneurs based on their formal address registered with JAKOA. Using the assistance from the Village Chief or Tok Batin, these entrepreneurs were tracked down. However, the *Orang Asli* people have the tendency of moving from one place to another that they might not be at the formal address that they were supposed to be. While most of the respondents were met in person based on their given address, the number of respondents were not enough. Nevertheless, by using face-to-face survey, the chances of returned questionnaire was high as this approach ensures that each respondent's response was received instantly. Data collection proceeded until the sampling size was fulfilled (Logan et al., 2020). A total of 75 questionnaires were collected using this method.

3.10   Data Analysis Procedures

Data analysis is the application of reasoning to interpret the collected data from the survey to support or reject the proposed hypotheses (Bougie & Sekaran, 2019). As a result, data analysis in this study included statistical analyses such as Microsoft Excel, SPSS 26.0 and SmartPLS 4.0 (Creswell & Creswell, 2018; Hair et al., 2019; Saunders et al., 2023).

3.10.1 Descriptive Analysis

Descriptive analysis was carried out using Microsoft Excel and SPSS 26.0. Microsoft Excel was used to evaluate categorical data to evaluate the demographic profile of the respondents. Hair et al. (2017) defined categorical data as separable data with numerous mutually exclusive categories. Pivot tables in Microsoft Excel was used to conduct cross-tabulation analysis. Pivot tables are powerful tools in Microsoft Excel that can improve data analysis efficiency (Grech, 2018). One of the pivot table functions is that it may be used primarily to aggregate the frequency of multiple discrete data and create a frequency distribution cross table (Dobashi, 2017).

Other descriptive analyses of data were done using SPSS 26.0. This includes determination of outliers, normality assessment, and descriptive assessment of the

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research variables. Mean and standard deviation are the main statistical output to describe the distribution of responses for each of the research variables.

3.10.2 Partial Least Squares – Structural Equation Modelling (PLS-SEM)

Descriptive analysis was carried out using Microsoft Excel and SPSS 26.0. Microsoft Excel was used to evaluate categorical data to evaluate the demographic profile of the respondents. Hair et al. (2017) defined categorical data as separable data with numerous mutually exclusive categories. Pivot tables in Microsoft Excel was used to conduct cross-tabulation analysis. Pivot tables are powerful tools in Microsoft Excel that can improve data analysis efficiency (Grech, 2018). One of the pivot table functions is that it may be used primarily to aggregate the frequency of multiple discrete data and create a frequency distribution cross table (Dobashi, 2017).

Data from the questionnaire were analyzed using the SmartPLS 4.0 software that is based on the PLS-SEM approach. Since the early 1980s, SEM has been widely used in theoretical explorations and empirical validations across several study disciplines (Dash & Paul, 2021; Zeng et al., 2021). PLS-SEM enables the testing and evaluation of complex causal relationships among many constructs (Roemer et al., 2021). Hair et al. (2020) indicated that PLS-SEM is a second-generation multivariate technique that can analyze and examine the relationships of observed (manifest) variables and unobserved (latent) variables simultaneously. Since this study has multiple variables, PLS-SEM is considered as an appropriate technique to analyze the data gathered through the survey and transformed into findings to answer the research questions.

Another method based on SEM approach is the covariance-based SEM or CB-SEM which can also assess multivariate models (Zeng et al., 2021). However, CB-SEM would be a better choice if the research objectives are concerned with testing and confirmation of existing theory (Hair et al., 2020). Meanwhile, PLS-SEM is preferable for theory development and prediction purposes (Dash & Paul, 2021). Since this study is for exploring the relationships among the construct, this study applied PLS-SEM with SmartPLS 4.0.

Besides that, PLS-SEM is effective with small sample sizes and complex models (Hair et al., 2020; Ramayah et al., 2018). Furthermore, unlike the maximal likelihood-based CB-SEM which requires data with normal distribution, PLS-SEM makes no distributional assumptions. Thus, it is suitable for data collected using non-parametric measures such as purposive or judgmental sampling (Hair et al., 2021; Shmueli et al., 2019).

Hair et al. (2020) explained that the PLS-SEM approach in SmartPLS 4.0 is carried out using a two-step approach. firstly, the measurement model assessment, and then the structural model assessment. The statistical procedures used in these stages are explained below.

(a)   Step 1: Building and Testing the Measurement Models

The first step in PLS-SEM approach entails the use of maximum probability factor analysis to validate the measurement model and formally analyze the validity of its constructs (Hair et al., 2021). In this study, the reflective measurement models were assessed to determine the reliability of both the indicators and the constructs. Outer loading was used to assess the indicator reliability while construct reliability can be gleaned from the Cronbach's Alpha, Rho_A and Rho_C. Guenther et al. (2023) explained that Cronbach's alpha is a very conservative measure of reliability and less precise because the indicators were unweighted in the calculation. However, composite reliability (rho_a) used weighted items based on the indicator's individual loading of the construct and thus, offers a more reliable measure of reliability. The cut-off value for outer loading, Cronbach's Alpha, Rho_A and Rho_C is 0.708 or higher.

Besides that, the average variance extracted (AVE) is used to examine the construct validity. A value of 0.50 or more must be attained for AVE to indicate acceptable construct validity. When reliability of the indicators and constructs and validity of the constructs are acceptable, this implies that convergent validity has been satisfied. In the case that construct validity was not met, indicators with outer loading between 0.40 and 0.60 can be considered for deletion. However, if AVE has been satisfied, these indicators can be retained. Nevertheless, indicators with outer loading less than 0.40 should be

deleted (Hair et al., 2020). In addition to that, discriminant validity was assessed using heterotrait-monotrait (HTMT) correlation ratio (Hair et al., 2021). The cut-off value to accept discriminant validity is 0.850 or less (Shmueli et al., 2019). Previously, Fornell-Larcker criterion was used to determine discriminant validity but this method was not accurate especially when the outer loadings of the indicators are only slightly different (Henseler et al., 2015; Roemer et al., 2021). Besides that, collinearity assessment with variance inflated factor (VIF) is also carried out at the construct level to ensure that there are no collinearity issues among the constructs. The cut-off value for VIF is 5.0 or less (Hair et al., 2022).

(b)   Step 2: Building and Testing Structural Model

Once the researcher has confirmed the validity and reliability of the measurement models, the next stage is to evaluate the structural model results. The researcher used bootstrapping and a one-tailed test to assess the directional hypotheses for direct relationships and two-tailed analysis for the moderation and mediation analysis in SmartPLS 4.0 (Hair et al., 2020). SmartPLS 4.0 software is a graphical user interface with advanced reporting features for variance-based SEM using the partial least squares path modelling method (Zeng et al., 2021). SmartPLS 4.0 is suitable for analyzing the complex research models which is proposed as an estimation framework incorporating related theories and empirical data (Sobaih & Elshaer, 2022). PLS-SEM parameter estimation aims to maximize the variance explained by the endogenous latent variables. The performance of the model in predicting endogenous variables is evaluated. The fundamental criteria for evaluating the structural model in PLS-SEM are: the significance of the path coefficient; predictive accuracy (R^2) level; effect size (f^2); and the model's predictive power (PLSPredict) (Basbeth et al., 2018; Hair et al., 2022; Leguina, 2015).

3.11   Summary of the Chapter

The purpose of this chapter is to go through the research methodology used to assess the determining factors influencing entrepreneurial behaviour among *Orang Asli* entrepreneurs in Peninsular Malaysia. This chapter has explored the research paradigm and chosen a post-positivist philosophy to guide the research methods. The population of

the study was duly defined, judgmental sampling technique was chosen and sample size was determined using sample size calculation for known population and Power analysis. The quantitative approach employed in this study was realized by using a face-to-face survey to distribute questionnaires to eligible respondents. The questionnaire was developed rigorously to ensure its validity and reliability. It was translated in Malay to facilitate greater understanding of its content and went through an expert panel to determine its content validity. Pilot study was also conducted to test the questionnaire and determined its internal consistency. The questionnaire sought to ascertain how respondents' attitudes, subjective norms, perceived behavioural control, actual behavioural control, self-reliance, and self-sufficiency influenced their entrepreneurial intention and behaviour. PLS-SEM was used for data analysis as it allows the simultaneous assessment of the correlations among multiple variables. This chapter provides evidences that a systematic and appropriate methodological approach was used to gather data to answer the research questions in this study.

CHAPTER 4

RESEARCH FINDINGS

4.1 Introduction

This chapter presents the research findings based on the analysis of data using both descriptive and inferential analyses method with Microsoft Excel, SPSS 26,0 and SmartPLS 4.0. The presentation of the research findings begins with an explanation of the preparation of dataset. This entails the response rate, missing values and extreme outliers as well as normality test and assessment of common method variance. Then, this is followed by descriptive statistical output to describe the distribution of the respondents based on their demographic profiles and distribution of responses in each of the eight constructs. The outcome from the SmartPLS 4.0 analysis using PLS-SEM approach follows through beginning with assessment of the measurement models and then, the assessment of the structural models. The presentation of the inferential statistical output is aligned to the research questions and research hypotheses. Lastly, the model's predictive accuracy, relevancy and power are presented along with assessment of the effect sizes of the research variables to explain entrepreneurial intention and entrepreneurial behaviour.

4.2 Preparation of Dataset

The preparation of dataset is crucial before testing of the research variables is carried out. In this preparatory phase, the response rate, missing values and extreme outliers are examined, as well as assessment of normality and common method variance.

4.2.1 Response Rate

The total number of *Orang Asli* in Peninsular Malaysia is estimated at 206,777 (JAKOA, 2022). These *Orang Asli* communities reside in Johor, Kedah, Kelantan,

Melaka, Negeri Sembilan, Pahang, Perak, Selangor, and Terengganu. However, this study is focused on *Orang Asli* entrepreneurs which according to the records in JAKOA, could be about 300 to 500. Based on the determination of sample size, power analysis yielded a minimum sample size of 103 while the use of sample calculation based on a population of 500 *Orang Asli* entrepreneurs, the minimum sample size required is 218. Hence, it is expected that a sample size between 103 and 218 is considered adequate for this study. The distribution and collection of questionnaires were done in three phases. Firstly, 200 sets of questionnaires were distributed to participants who attended the *Orang Asli* Entrepreneurs Carnival (24-26 June, 2022) and a total of 130 sets of questionnaires were returned. Due to ethical consideration, the participants at the carnival were invited to fill in the questionnaire at their own volition but only 130 respondents returned the questionnaires. The return rate was 65%. Out of the 130 questionnaires however, 35 were rejected due to incomplete information.

In the second phase, the targeted distribution of questionnaires was set at 100 but the number of collected questionnaires were only 55. Most of the entrepreneurs were not willing to participate in the survey. The returned rate was 55%. Meanwhile, a total of 10 questionnaires were rejected due to incomplete information. During the third phase, 100 was also used as the targeted distribution and this time, a total of 75 questionnaires were returned with none being rejected. The returned rate was 75%.

Figure 4.1 summarizes the collection process of questionnaires during the three phases. The returned rate improved in the third phase because face-to-face survey was used whereby the researcher meticulously guided the entrepreneurs to answer the research questions. The researcher only serves to explain the items and did not interfere with the responses that were given by the entrepreneurs. Overall, after discounting the rejected questionnaires, the total number of usable questionnaires is 216.
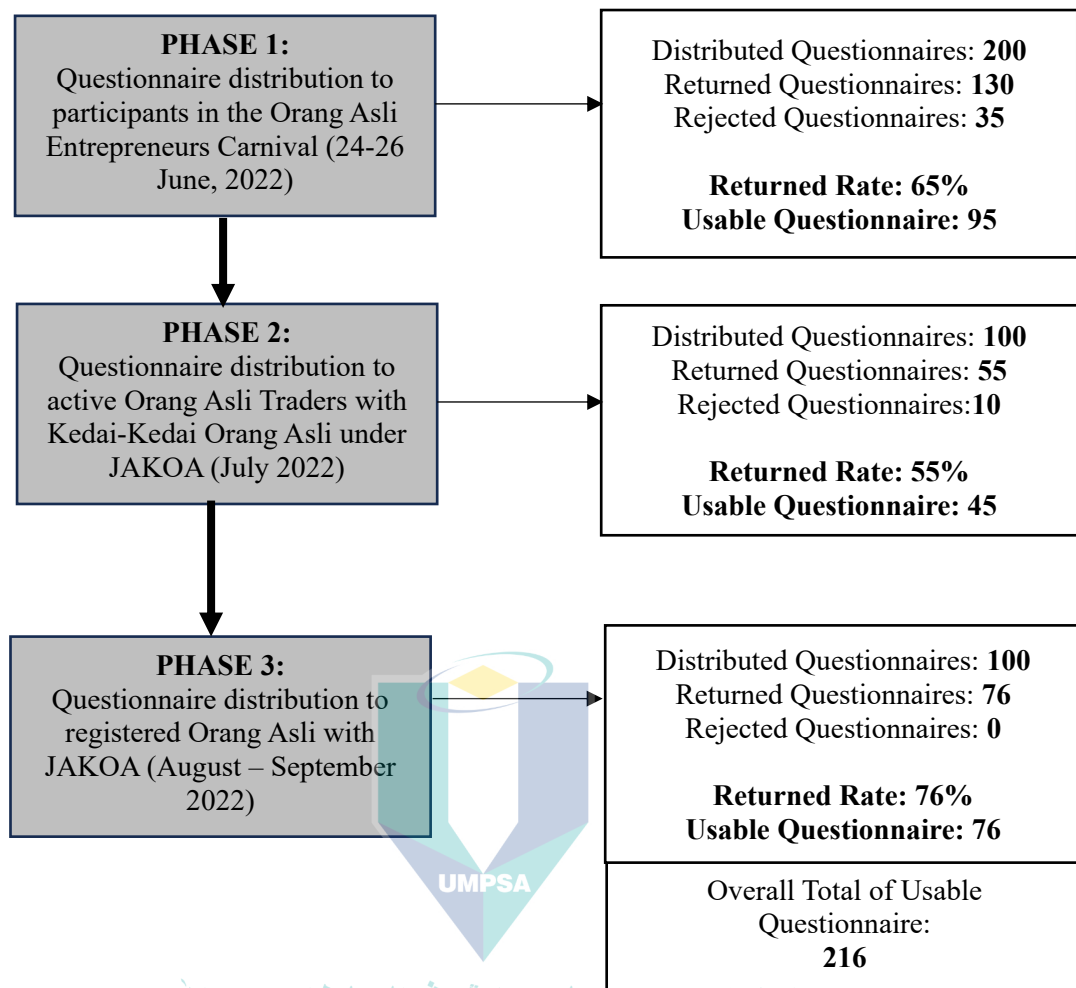
Figure 4.1   Collection of Questionnaires

4.2.2   Missing Values and Extreme Outliers

The total number of questionnaires collected from the three-phase survey was 261 but 35 sets of questionnaires were rejected during the first phase and another 10 sets of questionnaires were rejected during the second phase. No questionnaires were rejected during the third phase. The main reasons for rejecting the questionnaires in the first and second phases were due to missing values and extreme outliers. According to Polit and Beck (2021), missing value is due to non-response to an item or items in the questionnaire and causing incomplete information. Graham et al. (1997) stated that missing values that are more than 10% should consider rejecting the questionnaire. Out of the 45 questionnaires that were rejected, 32 questionnaires had more than 10% missing values. The remaining 13 sets of questionnaires were identified with extreme outlier issues.

Outliers refer to responses to items in the questionnaire that are consistently too positive or too negative, causing a standard deviation of zero (Hair et al., 2019; Polit & Beck 2021; Srijan & Rajagopalan, 2024). Hence, these questionnaires were also not accepted for the final analysis. Overall, only 216 valid datasets were available for the final analysis after rejecting 45 sets of questionnaires.

4.2.3   Normality Test

A normality test determines if a sample was drawn from a normally distributed population. It is commonly used to identify whether or not the data in the study has a normal distribution (Orcan, 2020). Normality test is often tested using Skewness and Kurtosis. Skewness refers to the direction of data distribution which could be positive, negative or symmetrically skewed. Kurtosis on the other hand, is the distribution curve of either peaked or flat. Leptokurtic refers to a high curve with positive kurtosis value while a platykurtic is the low curve shape with negative kurtosis value (Hair et al., 2020). According to Hair et al., (2017), acceptable values of Skewness and Kurtosis is between -3 and +3 to imply a normal distribution of the individual variables. Mardia's (1970) multivariate Skewness and Kurtosis are also used for a multivariate model as in the case of this study (Chowdhury et al., 2022; Wulandari et al., 2021). Zhang and Yuan (2018) explained that a dataset is normally distributed when the p values for Kurtosis and Skewness are more than 0.05. The Mardia's multivariate skewness and kurtosis calculation can be performed online at WebPower website (https://webpower.psychstat.org/models/kurtosis/) which is shown in Figure 4.2.

Figure 4.2   Online Software for Skewness and Kurtosis Assessment

Meanwhile, Table 4.1 presents the univariate and multivariate analysis of Skewness and Kurtosis for the dataset of this study. Based on the result, the univariate skewness and kurtosis assessment showed that the skewness values for all the variables are between ±3.0, and thus implying a normal distribution horizontally. However, for kurtosis, all other variables yielded values between ±3.0 except for attitude with kurtosis value of 5.19, which exceeded 3.0. This suggests a leptokurtic curve and implying a non-normal distribution of data. Nevertheless, Hair et al. (2021) stated that PLS-SEM does not impose a strict requisite for a normal distribution of data as long as the skewness and kurtosis are between ±7.0 to suggest extremely non-normal distribution. In this case, none of the variables had skewness and kurtosis values less than -7.0 or more than +7.0. Further to that the multivariate skewness (b = 20.942, p < 0.05) and multivariate kurtosis (b = 111.653, p < 0.05) also indicated non-normal distribution. Sarstedt et al. (2016) stated that PLS-SEM is based on a series of ordinary least squares regressions without distributional assumptions. Hence, these results on normality test further strengthens the notion that PLS-SEM is the appropriate approach for analysis rather than CB-SEM.

Table 4.1   Univariate and Multivariate Skewness and Kurtosis of Dataset

Variables	Skew	SE_skew	Z-skew	Kurt	SE-Kurt	Z_Kurt	Normal
ATT	-2.16	0.17	-13.06	5.19	0.33	15.76	No
SN	-1.58	0.17	-9.53	2.58	0.33	7.83	Yes
PBC	-0.54	0.17	-3.26	-0.53	0.33	1.55	Yes
ABC	-0.85	0.17	-5.14	0.51	0.33	1.55	Yes
SR	-0.96	0.17	-5.79	1.23	0.33	3.74	Yes
SS	0.17	0.17	1.04	-1.02	0.33	-3.08	Yes
EI	-1.75	0.17	-10.55	2.70	0.33	8.21	Yes
EB	-1.49	0.17	-9.00	2.43	0.33	7.37	Yes
Mardia's multivariate skewness and kurtosis							
	b	z	p-value				
Skewness	20.942	753.928	0				
Kurtosis	111.653	18.389	0				

Key: Skew – Skewness; SE-skew – Standardized error for Skewness; Z-skew – Z score for Skewness; Kurt – Kurtosis; SE_Kurt – Standardized error for Kurtosis; Z-Kurt – Z score for Kurtosis; ATT – Attitude SN – Subjective Norms; PBC – Perceived Behavioural Control; ABC – Actual Behavioural Control; SR – Self-Reliance; SS – Self-Sufficiency; EB – Entrepreneurial Behaviour; EI – Entrepreneurial Intention

4.2.4   Common Method Variance

Common method variance (CMV) is an issue associated with cross-sectional studies because of the use of the same respondents to answer the research questions for all variables (Ramayah et al., 2018). The use of the same respondents or the same scale can cause measurement error and threaten the reliability of the research findings (Podsakoff et al., 2012). One way of minimizing the occurrence of this issue is by using multiple scales which was employed in this study. A 5-point Likert scale was used for capturing responses to the independent variables, a 6-point Likert scale for entrepreneurial behaviour and a 7-point Likert for entrepreneurial intention.   Besides that, reducing ambiguity by presenting the items in the questionnaire with clarity also helps to minimize CMV (Ramayah et al., 2018).

Statistical measures are used to determine the presence or absence of CMV in the dataset. For instance, the latent variables' correlation matrix can be generated from SmartPLS 4.0 or from SPSS 23.0 as a means of determining the presence of CMV (Bagozzi et al., 1991; Hair et al., 2022). Kock et al. (2021) concluded that CMV is ruled out if the correlations among the latent variables did not exceed 0.90. As shown in Table 4.2, none of the correlations exceeded 0.90, thus implying that CMV was absent from the dataset.

Table 4.2:   Correlations among Latent Variables

	ATT	SN	PBC	ABC	SR	SS	EI	EB
ATT	1	0.617	0.460	0.549	0.551	0.047	0.662	0.624
SN	0.617	1	0.560	0.631	0.584	0.141	0.636	0.565
PBC	0.46	0.56	1	0.658	0.624	0.409	0.356	0.478
ABC	0.549	0.631	0.658	1	0.787	0.362	0.500	0.621
SR	0.551	0.584	0.624	0.787	1	0.3	0.571	0.688
SS	0.047	0.141	0.409	0.362	0.300	1	0.012	0.133
EI	0.662	0.636	0.356	0.500	0.571	0.012	1	0.745
EB	0.624	0.565	0.478	0.621	0.688	0.133	0.745	1

Key: ATT – Attitude SN – Subjective Norms; PBC – Perceived Behavioural Control; ABC – Actual Behavioural Control; SR – Self-Reliance; SS – Self-Sufficiency; EB – Entrepreneurial Behaviour; EI – Entrepreneurial Intention

4.3   Descriptive Statistical Analysis Result

Descriptive statistical analysis of the dataset was carried out for two purposes. The first one is to tabulate the respondents based on their demographic profiles, and the second one is to tabulate the responses towards the research variables based on mean, mode, median and standard deviation values.

4.3.1   Demographic Profiles of the Respondents

Microsoft Excel was used to perform the cross-tabulation analysis of categorical data by using Pivot table to describe the demographic profile of the respondents. Demographic data are important and should be thoroughly examined (Hair et al., 2020) as it provides a complete description of the participants and allowing comparisons among replications of studies (Zikmund et al., 2013). Table 4.3 summarizes the demographic profiles of the respondents in terms of gender, age, ethnicity, and subgroups/tribes. It is shown that majority of the respondents are female (n = 117, 54.17%) compared to male (n = 99, 45.83%). In terms of age, most of the respondents were within the age range of 19 to 25 years old (n = 57, 26.39%), 26 to 35 years old (n = 44, 20.37%) and between 36 and 45 years old (n = 43, 19.91%). The others are within the age range of 12 to 18 years old (n = 27, 12.50%), 46 to 55 years old (n – 24, 11.11%) and more than 55 years old (n = 21, 9.72%). Hence, most of the entrepreneurs are young adults between the age of 19 to 45 years old.

The breakdown of respondents based on ethnicity indicated that a majority are Proto-Malays (n = 111, 51.39%) and Senoi (n = 94, 43.52%). The remaining smaller number of respondents are Semang @ Negrito (n = 8, 3.70%) and others (n = 3, 1.39%). In terms of subgroups or tribes, majority of the respondents are Jakun (n = 99, 45.83%), Temiar (n = 56, 25.93%) and Semai (n = 37, 17.13%). The remaining respondents are Jahai (n = 6, 2.78%), Temuan (n = 5, 2.31%), Semelai (n = 4, 1.85%) and Orang Kuala (n = 3, 1.39%). Besides that, there was one respondent each (0.46%) for the tribes of Jah Hut, Lanoh, and Semoq Beri, while another three respondents (1.39%) were from other unspecified tribes.

Table 4.3   Demographic Profiles of the Respondents (N = 216)

Demographic Characteristics	Frequency (n)	Percentage (%)
Gender		
Male	99	45.83
Female	117	54.17
Age		
12-18 years	27	12.50
19-25 years	57	26.39
26-35 years	44	20.37
36-45 years	43	19.91
46-55 years	24	11.11
Above 55 years	21	9.72
Ethnicity		
Proto-Malays	111	51.39
Semang @ Negrito	8	3.70
Senoi	94	43.52
Others	3	1.39
Subgroups/Tribes		
Jah Hut	1	0.46
Jahai	6	2.78
Jakun	99	45.83
Lanoh	1	0.46
Orang Kuala	3	1.39
Semai	37	17.13
Semelai	4	1.85
Semoq Beri	1	0.46
Temiar	56	25.93
Temuan	5	2.31
Others	3	1.39

Table 4.4 describes the demographic profiles of the respondents based on business ownership, categories of entrepreneur, nature of business, year of business establishment, and academic qualification. The breakdown of respondents based on business ownership showed that a majority of them owned their business (n = 127, 58.80%) while others are family-owned business (n = 89, 41.20%). In terms of entrepreneur categories, majority of the respondents (n = 135, 62.50%) have small enterprises while others have medium enterprises (n = 55, 25.46%) and micro enterprises (n =25, n = 12.04%). Meanwhile, the respondents are mainly in services (n = 96, 44.44%), retail (n = 45, 20.83%), agriculture (n = 42, 19.44%) and manufacturing (n = 24, 11.11%). Only a few of the respondents are in agro-based industry (n = 7, 3.24%) and construction (n = 2, 0.93%).

It is also shown that a majority of the respondents have established their businesses between 2 and 5 years (n = 90, 41.67%) while others have started their business in less than a year (n = 81, 37.50%), and a few for 6 years and above (n = 45, 20.83%). Hence, it can be gleaned from this profile that most of the *Orang Asli* have just started their entrepreneurial endeavors.

As for academic qualification, majority of the respondents have completed primary school (n = 85, 39.35%) and secondary school (n = 82, 37.96%) while quite a few have diploma (n = 41, 18.98%). Very few of them managed to obtain higher education at bachelor degree (n = 2, 0.93%) and Master's degree (n = 2, 0.93%). Meanwhile, there were also respondents with non-formal education (n = 4, 1.85%). This implies that most of the entrepreneurs did receive formal education but not to a higher level.

Table 4.4   Demographic Profiles of the Respondents (N = 216)

Demographic Characteristics	Frequency (n)	Percentage (%)
Business Ownership		
Own	127	58.80
Family-Owned Business	89	41.20
Categories of Entrepreneur		
Micro	26	12.04
Small	135	62.50
Medium	55	25.46
Nature of Business		
Agriculture	42	19.44
Agro-Based Industry	7	3.24
Construction	2	0.93
Manufacturing	24	11.11
Retail	45	20.83
Services	96	44.44
Years of Business Establishment		
Less than 1 year	81	37.50
2 – 5 years	90	41.67
6 years and above	45	20.83
Academic Qualification		
Non-formal education	4	1.85
Primary School	85	39.35
Secondary School	82	37.96
Diploma	41	18.98
Bachelor Degree	2	0.93
Masters	2	0.93

4.3.2   Descriptive Statistics of the Research Variables

Descriptive statistics is an important first step in a study, and it should always be done before making inferential statistical comparisons (Kaur et al., 2018; Yellapu et al., 2018). SmartPLS 4.0 was used to tabulate the mean, standard deviation, excess kurtosis and skewness of the research variables. Table 4.5 presents the result of the descriptive statistics analysis.

The result showed that the predictors or independent variables used a 5-point Likert scale while entrepreneurial intention used a 7-point Likert scale and entrepreneurial behaviour with a 6-point Likert scale. In comparing the mean values of

the independent variables, it is shown that attitude has the highest mean value and lowest standard deviation value (x = 4.528, d = 0.912). This implies that the respondents generally showed positive attitude towards entrepreneurship. The mean values for subjective norms (x = 4.269, d = 1.046), actual behavioural control (x = 4.176, d = 1.079) and self-reliance (x = 4.046, d = 1.031) were comparatively higher than perceived behavioural control (x = 3.088, d = 1.423) and self-sufficiency (x = 3.190, d = 1.410). This suggests that the respondents perceived subjective norms, actual behavioural control and self-reliance greater and more positively than perceived behavioural control and self-sufficiency.

Additionally, based on a 7-point Likert scale, it can be concluded that the respondents' perception of entrepreneurial intention (x = 5.981, d = 1.491) is moderate. Besides that, their perception of entrepreneurial intention (x = 4.565, d = 1.366) is also considered to be moderate.

Table 4.5   Descriptive Statistics of the Research Variables

Construct	Min	Max	Mean (x)	Standard Deviation (d)
Attitude (ATT)	1	5	4.528	0.912
Subjective Norms (SN)	1	5	4.269	1.046
Perceived Behavioural Control (PBC)	1	5	3.088	1.423
Actual Behavioural Control (ABC)	1	5	4.176	1.079
Self-Reliance (SR)	1	5	4.046	1.031
Self-Sufficiency (SS)	1	5	3.190	1.410
Entrepreneurial Intention (EI)	1	7	5.981	1.491
Entrepreneurial Behaviour (EB)	1	6	4.565	1.366

4.4   Measurement Model Assessment

The measurement model assessment demonstrates the relationship between the latent variables and the measurement items (manifest variables). It is frequently called the outer model in PLS-SEM (Hair et al., 2017). The first step of PLS-SEM, which is the measurement model assessment was performed prior to assessing the measurement models for all latent variables in the study (Ramayah et al., 2018). The goal of

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measurement model evaluation is to analyze construct validity and reliability, as measurement model validation is essential before evaluating the structural model (Hair et al., 2019).

The purpose of measuring model evaluation is to verify the construct validity and reliability. Validity is the ability of an instrument to measure what it is supposed to assess. In contrast, reliability is the extent to which a measurement model is reliable in measuring the intended latent construct (Bougie & Sekaran, 2019). The measurement model assessment comprises of three main assessments which are convergent validity, discriminant validity and collinearity issues (Hair et al., 2021). The assessment of the measurement model was carried out in SmartPLS 4.0 using PLS algorithm with the output shown in Figure 4.3.
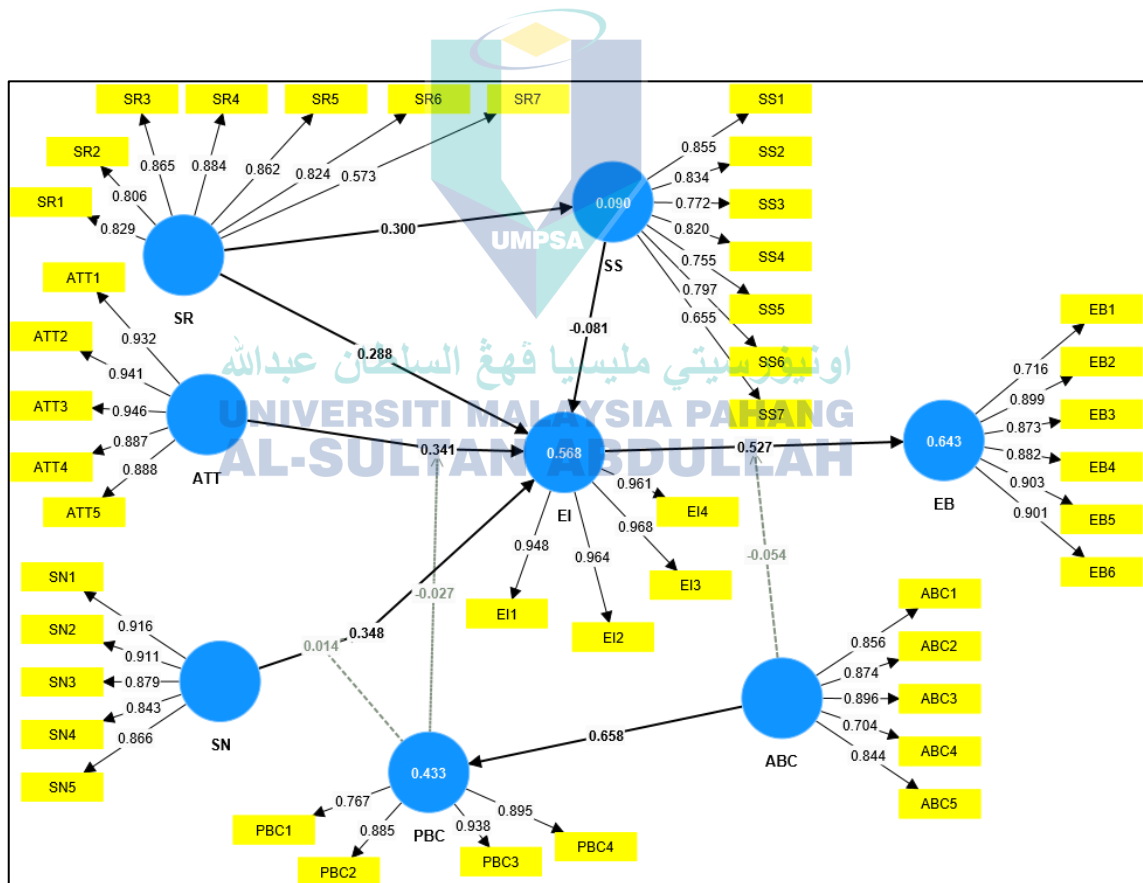
Figure 4.3   Output from PLS Algorithm

4.4.1 Convergent Validity and Construct Reliability

Convergent validity is the degree to which a measure is positively linked with other measures of the same construct (Saunders et al., 2023). In other words, the correlation between items measuring the same construct was evaluated. Two indicators were used to evaluate convergent validity. Firstly, the assessment of the outer loading to determine indicator reliability. A common rule of thumb is that the (standardized) outer loadings should be 0.70 or higher (Hair et al., 2021). This rule is because the outer loading's square (R-square) should be greater than 0.40. Indicators with outer loadings between 0.40 and 0.70 should be examined for removal from the scale only if doing so enhances the composite reliability (or the average variance extracted proposed threshold value) (Hair et al., 2017). In addition to outer loadings, average variance extracted (AVE) is evaluated in the measurement model to test convergent validity. AVE denotes the variance among the multiple items that may be linked to the latent variable. If the value of AVE is more than 0.50, it is considered valid (Hair et al., 2021). Convergent validity is attained when outer loading and AVE are satisfactory.

Besides construct validity by AVE measure, the construct reliability is also determined using Cronbach's alpha, rho_A and rho_C. Cronbach's alpha measures internal consistency while rho_A and rho_C are measures of composite reliability. According to Guenther et al. (2023), Cronbach's alpha is too conservative and its measure of reliability is less accurate that rho_A and rho_C are used to add as a more accurate measure of reliability. These measures must be at least 0.70 to ensure acceptable reliability, However, Diamantopoulos et al. (2012) stated that a value of 0.60 to 0.70 is still accepted in exploratory research. Table 4.6 shows and summarizes the results.

The results show that all outer loadings exceeded the cut-off value of 0.70 except for an indicator in self-reliance, SR7 (Outer loading = 0.573) and an indicator in self-sufficiency, SS7 (Outer loading = 0.655). However, all values of AVE exceeded the cut-off value of 0.50, and this assured the retention of SR7 and SS7 because convergent validity has been attained. Besides that, all values of Cronbach's alpha, rho_A and rho_C yielded more than 0.70, and implying that internal consistency and composite reliability

were met. Hence, the measurement models have acceptable convergent validity and construct validity.

Table 4.6   Convergent Validity and Construct Reliability

Construct	Indicators	Outer Loading	AVE	Cronbach's Alpha	Rho_A	Rho_C
Attitude	ATT1	0.932				
	ATT2	0.941				
	ATT3	0.946	0.845	0.954	0.955	0.965
	ATT4	0.887				
	ATT5	0.888				
Subjective Norms	SN1	0.916				
	SN2	0.911				
	SN3	0.879	0.780	0.929	0.932	0.947
	SN4	0.843				
	SN5	0.866				
Perceived Behavioural Control	PBC1	0.767				
	PBC2	0.885	0.763	0.896	0.917	0.928
	PBC3	0.938				
	PBC4	0.895				
Actual Behavioural Control	ABC1	0.856				
	ABC2	0.874				
	ABC3	0.896	0.701	0.892	0.906	0.921
	ABC4	0.704				
	ABC5	0.844				
Self-Reliance	SR1	0.829				
	SR2	0.806				
	SR3	0.865				
	SR4	0.884	0.659	0.912	0.930	0.930
	SR5	0.862				
	SR6	0.824				
	SR7	0.573				
Self-Sufficiency	SS1	0.855				
	SS2	0.834				
	SS3	0.772				
	SS4	0.820	0.618	0.905	0.958	0.919
	SS5	0.755				
	SS6	0.797				
	SS7	0.655				
Entrepreneurial Intention	EI1	0.948				
	EI2	0.964	0.922	0.972	0.972	0.979
	EI3	0.968				
	EI4	0.961				
Entrepreneurial Behaviour	EB1	0.716				
	EB2	0.899				
	EB3	0.873				
	EB4	0.882	0.748	0.931	0.938	0.946
	EB5	0.903				
	EB6	0.901				

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4.4.2 Discriminant Validity

Hetero-Trait Mono-Trait (HTMT) ratio of the research constructs was computed using the PLS algorithm in SmartPLS 4.0. Discriminant validity refers to the degree to which a construct differs from other constructs based on empirical standards. Proving discriminant validity implies that a construct is distinct and encompasses occurrences not covered by other constructs in the model (Basbeth et al., 2018). Hair et al. (2022) stated that discriminant validity is met when all values of the correlations between constructs are less than 0.850, which is evident from the results shown in Table 4.7. Hence, the measurement models in this study have attained an acceptable discriminant validity.

Table 4.7   Discriminant Validity with HTMT

	ATT	SN	PBC	ABC	SR	SS	EI	EB
ATT								
SN	0.653							
PBC	0.484	0.604						
ABC	0.581	0.674	0.723					
SR	0.575	0.609	0.668	0.860				
SS	0.066	0.147	0.419	0.340	0.279			
EI	0.686	0.665	0.365	0.522	0.592	0.111		
EB	0.659	0.601	0.509	0.678	0.738	0.134	0.778	

Key: ATT – Attitude SN – Subjective Norms; PBC – Perceived Behavioural Control; ABC – Actual Behavioural Control; SR – Self-Reliance; SS – Self-Sufficiency; EB – Entrepreneurial Behaviour; EI – Entrepreneurial Intention

4.4.3 Collinearity Issues

Collinearity issues must be evaluated because significant correlations between each set of predictor constructs may affect point estimates and standard errors. Since data of still study were acquired from a single source, the likelihood of common method variance must be determined. This is done by assessing the variance inflation factor (VIF) in PLS-SEM (Hair et al., 2021). The minimum threshold of VIF value is not larger than 5.0. As shown in Table 4.8, none of the VIFs exceeded 5.0, which implies an absence of collinearity issues.

Table 4.8   Collinearity Issues with VIF

Exogenous Variables	Endogenous Variables			
	SS	PBC	EI	EB
ATT			1.831	
SN			2.020	
SR	1.000		2.057	
SS			1.267	
PBC			2.047	1.765
ABC		1.000		2.052
EI				1.336

The assessment of the measurement models showed that convergent validity, construct reliability and discriminant validity were acceptable. Besides that, there was no collinearity in the measurement models. Hence, the next step of the analysis in PLS-SEM, the structural model assessment was carried out.

4.5   Structural Model Assessment

In structural model assessment, the bootstrapping analysis runs the multiple regression analysis to determine the direct and indirect effects of the exogenous construct to the endogenous constructs. The analysis also tested the research hypotheses of this study. The following sub-sections report on the findings from bootstrapping analysis and PLS predict. The output from the Bootstrapping analysis is shown in Figure 4.4.
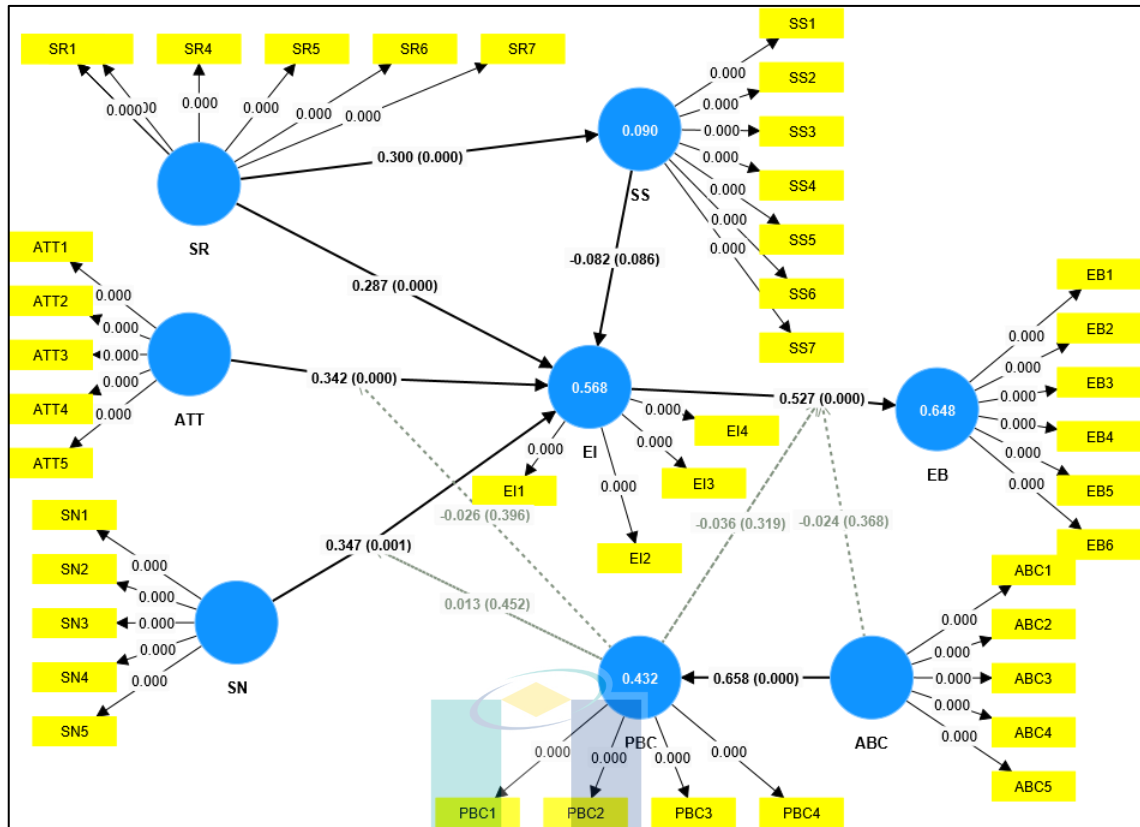
Figure 4.4   Output from Bootstrapping Analysis

4.5.1   Effect of Attitude and Subjective Norms on Entrepreneurial Intention

The effect of attitude and subjective norms on entrepreneurial intention was assessed based on the following research hypotheses.

H1:   Attitude positively affects entrepreneurial intention

H2:   Subjective norms positively affect entrepreneurial intention

Table 4.9 presents the output from the bootstrapping analysis to test two research hypotheses, H1 and H2. The result shows that the relationship between attitude and entrepreneurial intention is positive and significant (β = 0.342, t = 3.549, CI = 0.197-0.507, $p < 0.05$). Hence, the first research hypothesis, H1 is supported. It is concluded that attitude positively affects entrepreneurial intention. Besides that, the relationship between subjective norms and entrepreneurial intention is also positive and significant (β = 0.347, t = 3.184, CI = 0.173-0.530, $p < 0.05$). Hence, the second research hypothesis,

H2 is also supported. It is concluded that subjective norms positively affect entrepreneurial intention.

Table 4.9   Hypotheses Testing for H1 and H2

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H1: ATT → EI	0.342	0.096	3.549	0.000	0.197	0.507	Supported
H2: SN → EI	0.347	0.109	3.184	0.001	0.173	0.530	Supported

4.5.2   Moderating Effect of Perceived Behavioural Control on the Relationships of Attitude and Subjective Norms with Entrepreneurial Intention

The moderating effect of perceived behavioural control on the relationships of attitude and subjective norms with entrepreneurial intention was determined based on the following research hypotheses.

H3:   Perceived behavioural control moderates the effect of attitude on entrepreneurial intention, whereby when there is higher level of perceived behavioural control, there is greater effect of attitude on entrepreneurial intention

H4:   Perceived behavioural control moderates the effect of subjective norms on entrepreneurial intention, whereby when there is higher level of perceived behavioural control, there is greater effect of subjective norms on entrepreneurial intention

Table 4.10 presents the output from the bootstrapping analysis to test two research hypotheses, H3 and H4. The result shows that the moderation effect of perceived behavioural control on the relationship between attitude and entrepreneurial intention was negative and insignificant (β = -0.026, t = 0.264, CI = -0.213-0.112, p > 0.05). Hence, the third research hypothesis, H3 is not supported. It is concluded that perceived behavioural control did not moderate the relationship of attitude with entrepreneurial intention. Besides that, the moderation effect of perceived behavioural control on the relationship between subjective norms and entrepreneurial intention was positive but insignificant (β

= 0.013, t = 0.120, CI = -0.139-0.223, p > 0.05). Hence, the fourth research hypothesis, H4 is also not supported. It is concluded that the perceived behavioural control did not moderate the relationship between subjective norms and entrepreneurial intention.

Table 4.10   Hypotheses Testing for H3 and H4

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H3: PBC*ATT → EI	-0.026	0.099	0.264	0.396	-0.213	0.112	Not Supported
H4: PBC*SN → EI	0.013	0.112	0.120	0.452	-0.139	0.223	Not Supported

4.5.3   Effect of Actual Behavioural Control on Perceived Behavioural Control

The effect of actual behavioural control on perceived behavioural control was determined based on the following research hypothesis.

H5:   Actual behavioural control positively affects perceived behavioural control

Table 4.11 presents the output from the bootstrapping analysis to test the research hypothesis, H5. The result shows that the relationship between actual behavioural control and perceived behavioural control was positive and significant ($\beta = 0.658$, t = 13.068, CI = 0.570-0.737, p < 0.05). Hence, the fifth research hypothesis is supported. It is concluded that actual behavioural control has a positive and significant effect on perceived behavioural control.

Table 4.11   Hypotheses Testing for H5

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H5: ABC → PBC	0.658	0.050	13.068	0.000	0.570	0.737	Supported

4.5.4   Moderating Effect of Perceived Behavioural Control and Actual Behavioural Control on the Relationship between Entrepreneurial Intention with Entrepreneurial Behaviour

The moderating effects of perceived behavioural control and actual behavioural control on the relationship between entrepreneurial intention and entrepreneurial behaviour were assessed based on the following research hypotheses.

H6:   Perceived behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behavior, in which the higher the perceived behavioural control, the greater the effect of entrepreneurial intention on entrepreneurial behavior

H7:   Actual behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behavior, in which the higher the actual behavioural control, the greater the effect of entrepreneurial intention on entrepreneurial behavior.

Table 4.12 presents the output from the bootstrapping analysis to test two research hypotheses, H6 and H7. The result shows that the relationship between entrepreneurial intention and entrepreneurial behaviour was not moderated by perceived behavioural control (β = -0.036, t = 0.471, CI = -0.136-0.116, p > 0.05). Hence, the sixth research hypothesis, H6 is not supported. It is concluded that perceived behavioural control did not moderate the effect of entrepreneurial intention on entrepreneurial behavior. Besides that, the relationship between entrepreneurial intention and entrepreneurial behaviour was also not moderated by actual behavioural control (β = -0.024, t = 0.336, CI = -0.160-0.075, p > 0.05). Hence, the seventh research hypothesis, H7 is also not supported. It is concluded that actual behavioural control did not moderate the effect of entrepreneurial intention on entrepreneurial behavior.

Table 4.12   Hypotheses Testing for H6 and H7

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H6: PBC*EI → EB	-0.036	0.077	0.471	0.319	-0.136	0.116	Not Supported
H7: ABC*EI → EB	-0.024	0.072	0.336	0.368	-0.160	0.075	Not Supported

4.5.5 Effect of Self-Reliance and Self-Sufficiency on Entrepreneurial Intention

The effect of self-reliance and self-sufficiency on entrepreneurial intention was determined based on the following research hypotheses.

H8: Self-reliance negatively affects entrepreneurial intention.

H9: Self-sufficiency positively affects entrepreneurial intention

Table 4.13 presents the output from the bootstrapping analysis to test the research hypotheses, H8 and H9. The result shows that the relationship between self-reliance and entrepreneurial intention was positive and significant (β = 0.287, t = 3.658, CI = 0.143-0.399, p < 0.05). Hence, the eighth research hypothesis, H8 is supported. It is concluded that self-reliance has a positive and significant effect on entrepreneurial intention. Besides that, the relationship between self-sufficiency and entrepreneurial intention was negative and insignificant (β = -0.082, t = 1.366, CI = -0.185-0.013, p > 0.05). Hence, the ninth research hypothesis, H9 is not supported. It is concluded that self-sufficiency has a negative and insignificant effect on entrepreneurial intention.

Table 4.13   Hypotheses Testing for H8 and H9

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H8: SR → EI	0.287	0.078	3.658	0.000	0.143	0.399	Supported
H9: SS → EI	-0.082	0.060	1.366	0.086	-0.185	0.013	Not Supported

4.5.6 Effect of Self-Reliance on Self-Sufficiency

The effect of self-reliance on self-sufficiency was determined based on the following research hypothesis.

H10: Self-reliant positively affects self-sufficiency

Table 4.14 presents the output from the bootstrapping analysis to test the research hypothesis, H10. The result shows that the relationship between self-reliance and self-sufficiency was positive and significant ($\beta = 0.300$, t = 4.241, CI = 0.206-0.401, p < 0.05). Hence, the tenth research hypothesis, H10 is supported. It is concluded that self-reliance has a positive and significant effect on self-sufficiency.

Table 4.14   Hypotheses Testing for H10

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H10: SR → SS	0.300	0.071	4.241	0.000	0.206	0.401	Supported

4.5.7   Mediating Effect of Self Sufficiency on the Relationship between Self-Reliance and Entrepreneurial Intention

The mediating effect of self- sufficiency on the relationship between self-reliance and entrepreneurial intention was determined based on the following research hypothesis.

H11:   Self-sufficiency mediates the effect of self-reliance on entrepreneurial intention

Table 4.15 presents the output from the bootstrapping analysis to test the research hypothesis, H11. The result shows that the relationship between self-reliance and entrepreneurial intention was not mediated by self-sufficiency ($\beta = -0.025$, t = 1.263, CI = -0.058-0.005, p > 0.05). Hence, the eleventh research hypothesis, H11 is not supported. It is concluded that self-sufficiency did not mediate the relationship of self-reliance with entrepreneurial intention.

Table 4.15   Hypotheses Testing for H11

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H11: SR → SS → EI	-0.025	0.019	1.263	0.103	-0.058	0.005	Not Supported

4.5.8 Effect of Entrepreneurial Intention on Entrepreneurial Behaviour

The effect of entrepreneurial intention on entrepreneurial behaviour was determined based on the following research hypothesis.

H12: Entrepreneurial intention positively affects entrepreneurial behavior

Table 4.16 presents the output from the bootstrapping analysis to test the research hypothesis, H12. The result shows that the relationship between entrepreneurial intention entrepreneurial behaviour was positive and significant (β = 0.527, t = 8.398, CI = 0.423-0.628, p < 0.05). Hence, the twelfth research hypothesis, H12 is supported. It is concluded that entrepreneurial intention positively affects entrepreneurial intention.

Table 4.16   Hypotheses Testing for H12

Hypotheses	Std. Beta	Std. Error	t-value	p-value	Confidence Interval (CI)		Decision
					5%	95%	
H11: EI → EB	0.527	0.063	8.398	0.000	0.423	0.628	Supported

4.5.9 Predictive Accuracy of the Research Model

The coefficient of determination (R^2) represents the combination of the exogenous latent components' influence on the endogenous latent variable. In other words, the coefficient indicates how much of the variance in endogenous construct that can be explained by all of the associated exogenous constructs. Hair et al. (2021) explained R^2 as the squared correlation between a specific endogenous variable's actual and expected values. A structural model that can forecast has a higher R^2 value. The R^2 value was obtained using the SmartPLS 4 algorithm function, and the t-values were determined using the bootstrapping technique.

Since there are multiple independent variables in this study, adjusted R^2 was used as recommended by Hair e al. (2021). Based on the graphical output presented in Figure

4.5, there are four endogenous constructs receiving effects from their respective exogenous constructs. Self-sufficiency is influenced by self-reliance with a predictive accuracy, R^2 of 0.085. This implies a low predictive accuracy and suggesting the need to add more variables to explain self-sufficiency.

Besides that, perceived behavioural control received influence from actual behavioural control with a predictive accuracy, R^2 of 0.430. Hair et al. (2017) stated that R^2 at 0.25, 0.50, and 0.75 indicate weak, medium and substantial effects respectively. Hence, the effect of actual behavioural control on perceived behavioural control itself is considered as medium.

Additionally, another endogenous construct that received influenced from exogenous constructs is entrepreneurial intention. The influence was sourced from attitude, subjective norms, self-reliance, self-sufficiency and indirect influence from perceived behavioural control. Overall, the predictive accuracy, R^2 is 0.553 which implies that the exogenous constructs were able to explain 55.3% of variance in entrepreneurial intention. The predictive accuracy of entrepreneurial intention is considered at a moderate level.

Further to that, entrepreneurial behaviour is influenced directly by entrepreneurial intention and indirectly by all other constructs (attitude, subjective norms, perceived behavioural control, actual behavioural control, self-reliance and self-sufficiency). The predictive accuracy, R^2 is 0.640 which implies that the combined effects of the exogenous constructs could explain 64.0% of variance in entrepreneurial behaviour. The predictive accuracy of entrepreneurial behaviour is considered as almost substantial.
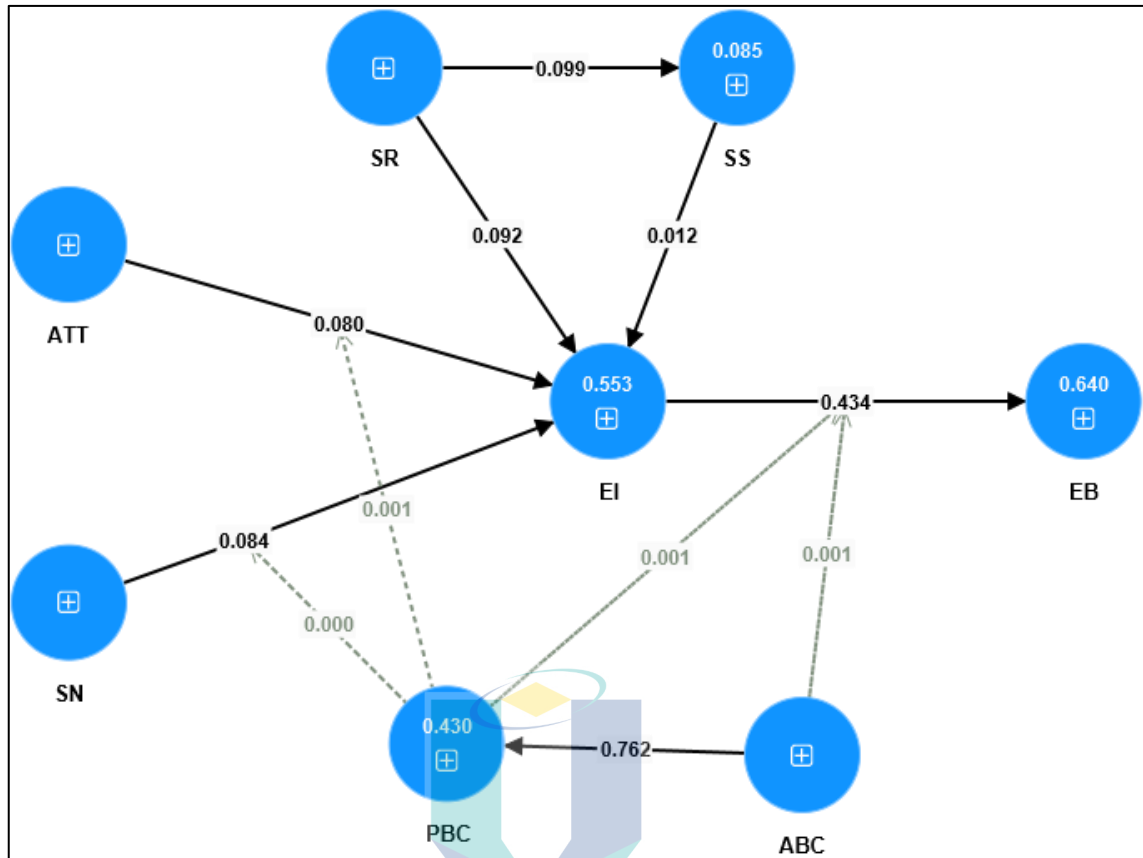
Figure 4.5 R^2 and f^2 values in the Research Model

The effect sizes (f^2) are also portrayed in the graphical output in Figure 4.5 as the numbers shown in between the lines. Effect size allows the determination of the contribution of an exogenous construct to the R^2 value of an endogenous latent variable (Hair et al., 2017). The effects sizes are determined as small, medium and large based on the f^2 values of 0.02, 0.15, and 0.35 respectively, following Cohen's (1988) methods for calculating effect size f^2. Table 4.17 tabulates the effect sizes of the exogenous constructs. It shows that self-reliance has a small effect size on self-sufficiency ($f^2 = 0.099$). However, the effect size of actual behavioural control on perceived behavioural control was substantial ($f^2 = 0.762$).

The effect sizes of attitude ($f^2 = 0.080$), subjective norms ($f^2 = 0.084$), perceived behavioural control ($f^2 = 0.023$) and self-reliance ($f^2 = 0.092$) on entrepreneurial intention were small while the effect size of self-sufficiency ($f^2 = 0.012$) was considered as

negligible. In comparison, self-reliance has the greatest effect size followed by subjective norms, attitude and perceived behavioural control.

Meanwhile, the effect size of entrepreneurial intention on entrepreneurial behaviour was large ($f^2 = 0.434$) while the effect of actual behavioural control was small ($f^2 = 0.088$) and the effect size of perceived behavioural control was negligible ($f^2 = 0.015$).

Table 4.17   Effect Sizes of the Exogenous Constructs

	SS	PBC	EI	EB
Attitude (ATT)			0.080	
Subjective Norms (SN)			0.084	
Perceived Behavioural Control (PBC)			0.023	0.015
Actual Behavioural Control (ABC)		0.762		0.088
Self-Reliance (SR)	0.099		0.092	
Self-Sufficiency (SS)			0.012	
Entrepreneurial Intention (EI)				0.434
Entrepreneurial Behaviour (EB)				

4.5.10 Predictive Power of the Research Model

The predictive power of the research model was determined using PLSpredict in SmartPLS 4.0. The ability of a statistical model to forecast is an essential component of any study. According to Shmueli et al. (2019), theories and the practical significance of research are evaluated based on the models that were utilized in the research to develop falsifiable predictions about new findings. Most often, the coefficient of determination (R^2) is used to examine the in-sample model fit of the composite scores of the dependent constructs through model estimations to predict the case values of the entire sample when determining predictive power (Hair et al., 2021). However, the R^2 score evaluates a model's explanatory capacity and does not reflect its out-of-sample predictive power (ability to predict the values of new cases excluded from the estimate process). Besides that, Hair et al., (2017) stated that blindfolding was used for predictive relevance. By assessing the prediction quality, or Q^2 based on the blindfolding method, a resampling technique, deletes and forecasts each indicator data point in the reflective measurement

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model of endogenous components. The path model's prediction error for this particular reflecting target construct is discovered when the original values and forecasts are compared. Due to this, Shmueli et al. (2016) created the PLSpredict algorithm to assess a model's out-of-sample predictive potential while minimizing prediction error using both widely used metrics (R^2 and Q^2). The method generates and assesses predictions using PLS path model estimations using training and holdout samples in PLS-SEM software (Hair et al., 2021). Shmueli et al. (2019) stated that there are three rules of thumb to determine the predictive power in PLSpredict. This requires a comparison of the PS-SEM model and linear model (LM) for the values of root mean square error (RMSE) and mean absolute error (MAE). The PLS-SEM model is said to have a better predictive power when the values for RMSE and MAE are lower than LM. When majority of the indicators showed lower PLS_RMSE and PLS_MAE values compared to LM_RMSE and PLS_MAE, the predictive power is medium. High predictive power is indicated when all the indicators have lower PLS_RMSE and PLS_MAE values compared to LM_RMSE and PLS_MAE.

As shown in Table 4.18, most of the indicators have lower LS_RMSE and PLS_MAE values compared to LM_RMSE and PLS_MAE, thus implying that the PLS-SEM model or the research model in this study has moderate predictive power. Out of 21 indicators, 15 of them have lower PLS-SEM_RMSE values compared to LM_RMSE. Besides that, 11 indicators have lower PLS-SEM_MAE values compared to LM_ MAE. This implies that 71.4% and 52.4% of the indicators have lower PLS-SEM_RMSE and PLS_MAE values compared to LM_RMSE and LM_MAE respectively.

Table 4.18   Manifested Variable Prediction Summary

	Q²predict	PLS-SEM_RMSE	PLS-SEM_MAE	LM_RMSE	LM_MAE
EB1	0.300	1.150	0.948	1.096	0.883
EB2	0.480	0.853	0.657	0.930	0.687
EB3	0.357	0.967	0.737	1.035	0.752
EB4	0.329	1.020	0.787	1.098	0.822
EB5	0.391	0.943	0.76	1.009	0.791
EB6	0.398	0.900	0.701	0.968	0.717
EI1	0.473	1.086	0.810	1.152	0.847
EI2	0.471	1.010	0.746	1.060	0.778
EI3	0.448	1.065	0.781	1.145	0.815
EI4	0.448	1.040	0.739	1.125	0.774
PBC1	0.249	1.239	0.999	1.301	1.035
PBC2	0.373	0.910	0.680	0.918	0.659
PBC3	0.386	0.903	0.714	0.885	0.704
PBC4	0.281	1.094	0.876	1.138	0.894
SS1	0.110	1.338	1.115	1.318	1.050
SS2	0.045	1.439	1.242	1.374	1.132
SS3	0.013	1.387	1.217	1.277	1.042
SS4	0.068	1.487	1.273	1.379	1.097
SS5	0.032	1.424	1.240	1.440	1.220
SS6	0.013	1.486	1.313	1.540	1.276
SS7	-0.028	1.417	1.240	1.437	1.231

Besides that, the latent variable prediction summary in Table 4.19 indicated that all endogenous constructs: self-sufficiency, perceived behavioural control, entrepreneurial intention and entrepreneurial behaviour have predictive relevance as shown by the positive values of Q^2predict.
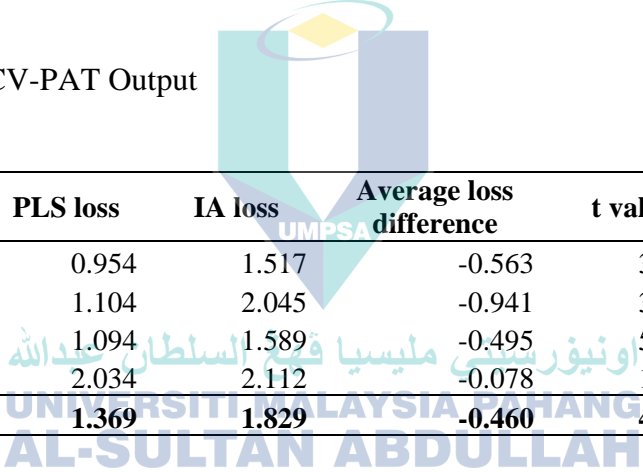
Table 4.19   Latent Variable Prediction Summary

	Q²predict	RMSE	MAE
EB	0.513	0.711	0.535
EI	0.505	0.717	0.514
PBC	0.427	0.765	0.583
SS	0.076	0.967	0.784

Last of all, the cross-validated predictive ability test (CV-PAT) is also presented in Table 4.20 to compare the PLS-SEM model against the linear model. It shows that there

is a negative loss difference between PLS loss and IA loss with all constructs showing significant p value except for self-sufficiency. According to Sharma et al. (2022), a lower PLS-SEM's average loss than the average loss of the benchmarks as indicated by the negative difference in the average loss values, significance at $p < 0.05$, this means that the predictive capabilities of the model is better than the prediction benchmarks. Thus, this concludes that the predictive capabilities of the model to explain perceived behavioural control, entrepreneurial intention and entrepreneurial behaviour surpasses the prediction benchmarks. However, this was not the case for self-sufficiency as the average lost difference did show a negative value but the p value indicated insignificance. Hence, there might be other variables that can be added to explain self-sufficiency. Overall, the research model was shown to have moderate predictive performance but better than the prediction benchmarks.

Table 4.20   CV-PAT Output

	PLS loss	IA loss	Average loss difference	t value	p value
EB	0.954	1.517	-0.563	3.881	0.000
EI	1.104	2.045	-0.941	3.850	0.000
PBC	1.094	1.589	-0.495	5.073	0.000
SS	2.034	2.112	-0.078	1.575	0.117
Overall	**1.369**	**1.829**	**-0.460**	**4.550**	**0.000**

4.6   Summary of Chapter

This chapter has presented the findings from data analysis to answer the research questions. All the 12 hypotheses have been tested and validated. Table 4.21 summarizes the research findings based on the research questions and research hypotheses.

Table 4.19: Summary of Research Findings

Research Questions	Research Hypotheses		Research Findings
To what extent is the effect of attitude and subjective norms on entrepreneurial intention?	H1:	Attitude positively affects entrepreneurial intention	H1 and H2 are supported. Attitude (β = 0.342, t = 3.549, CI = 0.197-0.507, p < 0.05) and subjective norms (β = 0.347, t = 3.184, CI = 0.173-0.530, p < 0.05) are significant predictors of entrepreneurial intention
	H2:	Subjective norms positively affect entrepreneurial intention	
Does perceived behavioural control moderate the relationships of attitude and subjective norms with entrepreneurial intention?	H3:	Perceived behavioural control moderates the effect of attitude on entrepreneurial intention, whereby when there is higher level of perceived behavioural control, there is greater effect of attitude on entrepreneurial intention	H3 and H4 are not supported. Perceived behavioural control did not moderate the relationships of attitude (β = -0.026, t = 0.264, CI = -0.213-0.112, p > 0.05) and subjective norms (β = 0.013, t = 0.120, CI = -0.139-0.223, p > 0.05) with entrepreneurial intention.
	H4:	Perceived behavioural control moderates the effect of subjective norms on entrepreneurial intention, in which the higher the perceived behavioural control, the greater the effect of subjective norms on entrepreneurial intention	
To what extent is the effect of actual behavioural control on perceived behavioural control?	H5:	Actual behavioural control positively affects perceived behavioural control	H5 is supported. Actual behavioural control (β = 0.658, t = 13.068, CI = 0.570-0.737, p < 0.05) is a significant predictor of perceive behavioural control.
Does perceived behavioural control moderate the relationship of entrepreneurial intention with entrepreneurial behaviour?	H6:	Perceived behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behavior, in which the higher the perceived behavioural control, the greater the effect of entrepreneurial intention on entrepreneurial behavior	H6 is not supported. Perceived behavioural control did not moderate the relationship of entrepreneurial intention with entrepreneurial behaviour (β = -0.036, t = 0.471, CI = -0.136-0.116, p > 0.05).

Research Questions	Research Hypotheses	Research Findings
Does actual behavioural control moderate the relationship of entrepreneurial intention with entrepreneurial behaviour?	H7: Actual behavioural control moderates the effect of entrepreneurial intention on entrepreneurial behavior, in which the higher the actual behavioural control, the greater the effect of entrepreneurial intention on entrepreneurial behavior.	H7 is not supported. Actual behavioural control did not moderate the relationship of entrepreneurial intention with entrepreneurial behaviour ($\beta = -0.024$, t = 0.336, CI = -0.160-0.075, $p > 0.05$).
To what extent is the effect of self-reliance and self-sufficiency on entrepreneurship intention?	H8: Self-reliance negatively affects entrepreneurial intention. H9: Self-sufficiency positively affects entrepreneurial intention	H8 is supported but H9 is not supported. Self-reliance is a significant predictor of entrepreneurial intention ($\beta = 0.287$, t = 3.658, CI = 0.143-0.399, $p < 0.05$). However, self-sufficiency is not a significant predictor of entrepreneurial intention ($\beta = -0.082$, t = 1.366, CI = -0.185-0.013, $p > 0.05$).
To what extent is the effect of self-reliance on self-sufficiency?	H10: Self-reliant positively affects self-sufficiency	H10 is supported. Self-reliance is a significant predictor of self-sufficiency ($\beta = 0.300$, t = 4.241, CI = 0.206-0.401, $p < 0.05$).
Does self-sufficiency mediate the relationship of self-reliance with entrepreneurial intention?	H11: Self-sufficiency mediates the effect of self-reliance on entrepreneurial intention	H11 is not supported. Self-sufficiency did not mediate the relationship of self-reliance with entrepreneurial intention ($\beta = -0.025$, t = 1.263, CI = -0.058-0.005, $p > 0.05$).
To what extent is the effect of entrepreneurial intention on entrepreneurial behaviour?	H12: Entrepreneurial intention positively affects entrepreneurial behavior	H12 is supported. Entrepreneurial intention is a significant predictor of entrepreneurial behaviour ($\beta = 0.527$, t = 8.398, CI = 0.423-0.628, $p < 0.05$).

Besides testing the research hypotheses, this study also determines the predictive performance of the research model. Table 4.22 presents the summary of findings on the predictive capabilities of the research model.

Table 4.22:   Summary of Research Model Predictive Performance

Performance Criteria	Research Findings
Effect Sizes	• Self-reliance has a small effect size on self-sufficiency • Actual behavioural control has a large effect size on perceived behavioural control • Self-sufficiency, subjective norms, attitude and perceived behavioural control have small effect sizes in descending order on entrepreneurial intention while self-sufficiency has negligible effect size on entrepreneurial intention. • Entrepreneurial intention has large effect size while actual behavioural control has small effect size and perceived behavioural control has negligible effect size on entrepreneurial behaviour.
Predictive Accuracy	• The predictive accuracy of self-sufficiency is small with R^2 only 0.085. • The predictive accuracy of perceived behavioural control is quite moderate with R^2 of 0.430. • The predictive accuracy of entrepreneurial intention is moderate with R^2 of 0.553. • The predictive accuracy of entrepreneurial behaviour is substantial with R^2 of 0.640.
Predictive relevance	• Based on Q^2predict value of more than zero, self-sufficiency, perceived behavioural control, entrepreneurial intention and entrepreneurial behaviour have predictive relevance.
Predictive Power	• The manifest variable summary implied that the research model has moderate predictive power. • CV-PAT showed that the PLS-SEM models for predicting perceived behavioural control, entrepreneurial intention and entrepreneurial behaviour are better than the benchmark predictions. However, the prediction model for self-sufficiency was not satisfactory.

CHAPTER 5

DISCUSSION, RECOMMENDATION AND CONCLUSION

5.1   Introduction

This chapter provides a more elaborate and comprehensive discussion of the research findings along with the theoretical and practical implications arising from this study. Besides that, the limitations of this study are highlighted and recommendation of future research endeavors are given. Lastly, this chapter gives an overall conclusion about this study.

5.2   Discussion of the Research Findings

The discussion of the research findings is presented in alignment to the research questions and research objectives that were stated in the first chapter. The in-depth discussion highlights the significance of the findings to understand the entrepreneurial behaviour of the *Orang Asli* entrepreneurs in Peninsular Malaysia.

5.2.1   Effect of Attitude and Subjective Norms on Entrepreneurial Intention

The discussion of findings in this sub-section is guided by the following research question.

RQ1:   To what extent is the effect of attitude and subjective norms on entrepreneurial intention?

Attitude and subjective norms are two main predictors from the TPB model to explain entrepreneurial intention. In this study, it was shown that attitude and subjective norms significantly influence entrepreneurial intention whereby it is shown based on the effect sizes that subjective norm was slightly a better predictor of entrepreneurial intention than attitude.

Makassar (2020) explained that attitude describes the favourable or unfavourable behaviour of the individual towards entrepreneurship. Such finding further strengthens the results gathered from past studies to show that attitude is a significant predictor of entrepreneurial intention (Amofah & Saladrigues, 2022; Vamvaka et al., 2020). This also acknowledges the importance of attitude as a cognitive behaviour to drive one's intention to become an entrepreneur (Ajzen, 2019; Duong, 2022; Mahfud et al., 2020; Majeed et al., 2021). As stated in Cheng and Helen (2021), the existence of tourism sites within the vicinities of the area where the *Orang Asli* lives, they are drawn into starting business and taking the numerous opportunities to improve their income. Most of the entrepreneurs who participated in this study are engaged in providing services. This is one area of business that could be tapped on easily by the *Orang Asli* entrepreneurs. Besides that, the government has provided many supports in terms of financial aids and training to the *Orang Asli* communities (JAKOA, 2022). Thus, their positive attitude towards entrepreneurship was anticipated.

Meanwhile, subjective norms were also shown as a significant predictor of entrepreneurial intention among the *Orang Asli* people. Subjective norms are described as societal pressures that prompt the individual to participate in or refrain from participating in entrepreneurship (Cui & Bell, 2022). This study confirms that close family, close friends, and people who are essential in their lives impact the *Orang Asli* individuals to start a business (Celik et al., 2021). Moreover, the significant effect of subjective norms to predict the entrepreneurial intention among *Orang Asli* also justify the use of the TPB framework in explaining the importance of significant people in their lives. The importance of subjective norms especially their family members is not surprising as the demographic profile of the respondents in this study indicated that almost half of the them are in family-owned business. Hence, subjective norms continue to be a solid predictor of how society thinks about entrepreneurship (Bagis, 2022; Morales-Perez et al., 2022), including the *Orang Asli* as well.

The *Orang Asli* people are a minority group in Peninsular Malaysia with their own languages, knowledge systems, and beliefs. *Orang Asli* community practices exclusive customs and retain social, cultural, economic, and political characteristics that distinguish them from the dominant communities in which they live due to their uniqueness (Mohd

Naim et al., 2017). The *Orang Asli* people firmly believe in and uphold their forefathers' customs. As a result, they have traditionally respected and relied on their tribes for survival. Bound by ancestral belief, *Orang Asli* believes that the individuals who are essential to them could influence any decision they make, including their career path (Rosdi et all., 2018). As a result, when strategizing programs for the *Orang Asli* community to engage in entrepreneurship, it is critical to reconsider their tribes, culture, customs, and beliefs because according to this study, their intention will increase if only they are socially approved by their reference groups such as families, friends, and other important people in their lives.

5.2.2 Moderating Effect of Perceived Behavioural Control on the Relationships of Attitude and Subjective Norms with Entrepreneurial Intention

The discussion of findings in this sub-section is guided by the following research question.

RQ2: Does perceived behavioural control moderate the relationships of attitude and subjective norms with entrepreneurial intention?

Perceived behavioural control is another antecedent from the TPB model to explain entrepreneurial intention (Vamvaka et al., 2020). In this study, the indirect effect of perceived behavioural control as a moderator to strengthen the relationship of attitude and subjective norms with entrepreneurial intention was examined. However, it was found that perceived behavioural control was not a significant moderator for both relationships. Martinez and Lewis (2016) have explained that a person's capacity to represent current behaviour and predict future behaviour increases directly to their perceived behavioural control. Some studies have shown that perceived behavioural control alone does not indicate users' behavioural intentions or views (Barua, 2013; Hagger et al., 2022). Past studies did show that there is a significant positive interaction between attitude and PBC in the intention prediction: the more perceived control over behaviour, the stronger the relationship between attitude and intention (Ajzen, 2019; La Barbera & Ajzen, 2020).

As this study showed that perceived behavioural control was not a significant moderator, this has shed a new perspective on the relationship between attitude and perceived behavioural control as moderator variables in *Orang Asli*'s entrepreneurial intentions. The *Orang Asli* people believe that perceived behaviour control doesn't enhance their attitude to become entrepreneurs which could be the influence of their distinct perspectives on development, which sometimes contradict their traditional values, vision, needs, and priorities. Therefore, this can result in their own way of using their capabilities, resources, and other fundamental requirements for carrying out and shaping a specific action without leaning on entrepreneurship (Ithnin, 2017). Thus, the perceived behavioural control among *Orang Asli* does not influence their decision about entrepreneurial activity or to engage in entrepreneurial activities in the future.

5.2.3 Effect of Actual Behavioural Control on Perceived Behavioural Control

The discussion of findings in this sub-section is guided by the following research question.

RQ3: To what extent is the effect of actual behavioural control on perceived behavioural control?

Actual behavioural control is an antecedent that was added to the TPB model based on the argument that actual behavioural control can have an influence on perceived behavioural control. In this study, the significant effect of actual behavioural control was supported and based on the large effect size, it implies that actual behavioural control strongly influences perceived behavioural control.

The interactive TPB model indicates that perceived behavioural control and actual behavioural control are positively correlated; as a result, if an individual's perceived behavioural control is accurate, real behavioural control is likely to be high (Ajzen, 2019; Agmeka et al., 2019). Hence, this study has proven that actual behavioural control is an important measure to induce a favourable perceived behavioural control among the entrepreneurs. It implies that *Orang Asli* people agree that their perception to engage in entrepreneurship is influenced by their actual behavioural control. This is important to

support *Orang Asli* as they began to engage in business as a new approach to influence the fate and economy of their communities. Thus, *Orang Asli* people are more open to follow and engage in training or courses provided by the government or related organizations in entrepreneurial programs (Amiruddin et al., 2020). Various parties have long described *Orang Asli* as a society that is overly reliant on government support, has low self-esteem, is timid, lacks self-confidence, does not value a productive work ethic, and lacks perseverance in the face of external difficulties and competition (Shah et al., 2018). However, with the flow of modernity and the need to continue to improve and compete with the local population, *Orang Asli* people are more willing to develop themselves through government and non-government programs and initiatives, bringing them in line with other dominant communities in Malaysia (Rosdi et al., 2018). Through these programs and activities, the *Orang Asli* community's attitude and way of thinking have begun to transform, and these changes have helped this group of minorities to embrace modernization so that they can improve their socioeconomic situation.

5.2.4 Moderating Effect of Perceived Behavioural Control on the Relationship of Entrepreneurial Intention with Entrepreneurial Behaviour

The discussion of findings in this sub-section is guided by the following research question.

RQ4: Does perceived behavioural control moderate the relationship of entrepreneurial intention with entrepreneurial behaviour?

The moderating effect of perceived behavioural control was insignificant on the relationship between entrepreneurial intention and entrepreneurial behaviour. Although Doanh and Bernat (2019) anticipated that as the perceived value of behavioural control grows, so would the link between entrepreneurial intention and entrepreneurial behaviour but this study has shown otherwise. This result contradicts with the notion in the interactive TPB model which implies that perceived behavioural control is a moderating variable for entrepreneurial intention and behaviour (Ajzen, 2019).

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Most *Orang Asli* who remained in the forest and continue to live traditional lives are significantly influenced by their environment and ancestral ceremonies. Furthermore, their livelihood is inextricably linked to natural resources (Shah et al., 2018), and their richness in knowledge and wisdom regarding natural management had served them in living in simplicity. In particular, because *Orang Asli* used to rely solely on natural resources and spiritual beliefs for survival, their perception of the ease or difficulty of performing any behaviour is low, as they believe that everything can be done easily with their natural skills and the help of spirits in forests, mountains, and rivers. Indeed, when it is about entrepreneurial activity, the *Orang Asli*'s natural features, rather than perceived behavioural control would impact on their intention to become entrepreneurs.

5.2.5 Moderating Effect of Actual Behavioural Control on the Relationship of Entrepreneurial Intention with Entrepreneurial Behaviour

The discussion of findings in this sub-section is guided by the following research question.

RQ5: Does actual behavioural control moderate the relationship of entrepreneurial intention with entrepreneurial behaviour?

The moderating effect of actual behavioural control was insignificant on the relationship between entrepreneurial intention and entrepreneurial behaviour. As a moderating variable, actual behavioural control is hypothesized to moderate the relationship between entrepreneurial intention and behaviour among *Orang Asli* populations. Following previous studies by Metallo et al. (2021), successful behavioural performance depends on good intentions and a sufficient level of behavioural control. As a result, the link between entrepreneurial intention and entrepreneurial behaviour is anticipated to strengthen as the value of actual behavioural control increases (Ajzen, 2019).

Comparing the results of the findings reveals a contradiction with the expectations as actual behavioural control has no significant moderating effect on entrepreneurial intention toward entrepreneurial behaviour among Peninsular Malaysia's *Orang Asli*

population. This concludes that actual behavioural control of *Orang Asli* does not affect their intention to engage in entrepreneurial activities because they have been traditionally involved with entrepreneurship based on their attempts to make a livelihood by selling forest products such as rattan, woods, and dammar for decades (Mohd Salleh, 2017). *Orang Asli* communities are the primary source of jungle, river, and swamp commodities for Malay traders, who bartered the goods to Chinese traders, making *Orang Asli* naturally entrepreneurial (Masron et al., 2013; Roddin et al., 2017). However, their entrepreneurship journey is plagued by middlemen or those who becomes the intermediary between the *Orang Asli* and external business market. Hence, this could cause them to have less control of their behaviour for business as it is greatly influenced by middlemen.

5.2.6 Effect of Self-Reliance and Self-Sufficiency on Entrepreneurship Intention

The discussion of findings in this sub-section is guided by the following research question.

RQ6: To what extent is the effect of self-reliance and self-sufficiency on entrepreneurship intention?

Findings of this study showed that self-reliance is a significant predictor of entrepreneurial intention but not self-sufficiency. In fact, based on effect sizes, self-reliance has a larger effect on entrepreneurial intention compared to attitude and subjective norms. According to the findings, self-reliance has a positive effect on the entrepreneurial behaviour of *Orang Asli*. The *Orang Asli* population traditionally survives off the land through hunting, fishing, and forest harvesting (Amiruddin et al., 2020; Nor Emmy Shuhada et al., 2020). Due to their close connection with nature, the *Orang Asli*'s self-reliance concerning forest harvest is regarded as robust, and this trait aids them in their desire to engage in entrepreneurial activities (Cheng & Helen, 2021).

Despite the reputation of the *Orang Asli* community as a primitive society, it is evident that the *Orang Asli*'s proficiency in their customs and beliefs is due to their use of the conventional wisdom handed down from earlier generations. Due to their lifestyle's

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compatibility with the environment, they can recognize ideal land for farming, beneficial forest products, and effective conservation, which enables them to appreciate nature's contribution to their way of life (Yusop et al., 2013). Therefore, this trait helps *Orang Asli* achieve their objective of engaging in entrepreneurial activities.

Besides that, the relationship between self-sufficiency and intention towards entrepreneurship among Peninsular Malaysia's *Orang Asli* population showed an insignificant finding. According to Pfitzner-eden (2016), self-sufficiency is the personal degree of belief of persons to the extent that they are able to arrange and carry out activities to achieve specific results. Empirical research has demonstrated that high self-sufficiency is necessary for most human activities. Because self-sufficiency has a positive influence on human functions, similar outcomes are anticipated in the context of entrepreneurship (Ozgur et al., 2017). Self-sufficiency is designated as one of the most prominent characteristics of the *Orang Asli* of Peninsular Malaysia, who strongly hold the spirituality and influence of nature. Therefore, *Orang Asli* people readily feel satisfied and sufficient with the natural resources to sustain their existence. The insignificance of this finding implies that the more self-sufficient they think they are, they would continue with their own way of livelihood and being not interested in modern entrepreneurship.

Orang Asli people are slowly becoming aware of the need for their society to develop to alleviate destitution, create full access to education and health services, and enhance the quality of life (Lee et al., 2018). However, as long as the *Orang Asli* community felt they are self-sufficient, then they would continue to be left out from the numerous incentives and assistance that the government is giving to the community. To set themselves free from poverty, *Orang Asli* must become more assertive and participate in government and community-related programs and initiatives as one of the strategies that can potentially reduce the characteristics of self-sufficiency that hinder their ability to engage in entrepreneurial activities.

Sobaih and Elshaer (2022) supports this argument, stating that endurance or the ability to continue business for a long time, is one of the traits or qualities that an entrepreneur should have in uncertain conditions. Thus, entrepreneurs have not overrated

their self-sufficient specifically in entrepreneurship, as entrepreneurs are consistently found to be more innovative and always risk tolerance to growth (Yuanyuan et al., 2022).

5.2.7 Effect of Self-Reliance on Self-Sufficiency

The discussion of findings in this sub-section is guided by the following research question.

RQ7: To what extent is the effect of self-reliance on self-sufficiency?

Findings of this study showed that self-reliance is a significant predictor of self-sufficiency. However, based on effect size, self-reliance has a small effect on self-sufficiency. Its influence alone on self-sufficiency yielded a weak predictive accuracy and contributed to weaker performance compared to benchmark prediction.

Recently, research on entrepreneurial intention has been taking place to examine the variables that can moderate or have a direct or indirect effect (mediate) on personal characteristics related to entrepreneurial intention (Duong, 2022). In the same vein, factors such as self-reliance were identified and included in this study which demonstrated a significant predictor of self-sufficiency. The *Orang Asli* people are traditionally self-reliant (Jamak et al., 2000). In the context of *Orang Asli*, self-reliance can be defined as a reluctance to being dominated by others (Fongchingong et al., 2003). According to Othman et al. (2011), *Orang Asli*s' self-reliance is what leads them to forsake subsistence agriculture products in favor of producing revenue from forest harvests and not being unduly dependent on outside support, whether from the government or other parties (self-sufficiency).

As a result, the results show that being self-reliant considerably impacts self-sufficiency. In other words, the *Orang Asli* have acknowledged that their self-sufficiency results from self-reliance. These findings rely on previous research by Bauernschuster et al. (2012), who stated that self-reliance is thought to have a significant association with entrepreneurial intention since if an entrepreneur lacks this quality, the entrepreneur would also have a bad outcome. Furthermore, Michaelis et al. (2020) concurred with the

findings and concluded that successful entrepreneurs demonstrate self-reliance, which helps them achieve their goal of self-sufficiency. In order to survive, *Orang Asli* have traditionally been hunter-gatherers, fishers, and arboriculture growers. *Orang Asli*s' rudimentary economic activities continue to exist today. The *Orang Asli*'s minimal life demands and high self-reliance keep them content with their lives, leading to their self-sufficiency.

5.2.8 Mediation of Self-Sufficiency on the Relationship of Self-Reliance with Entrepreneurial Intention

The discussion of findings in this sub-section is guided by the following research question.

RQ8:   Does self-sufficiency mediate the relationship of self-reliance with entrepreneurial intention?

Findings of this study showed that self-sufficiency did not mediate the relationship of self-reliance with entrepreneurial intention.

Through self-sufficiency as a mediating variable, self-reliance was found to have a non-significant indirect effect on entrepreneurial intention. The *Orang Asli* did not see self-reliance as an important aspect in their indirect interaction with entrepreneurial intention via self-sufficiency as a mediator. Ozgur et al., (2017) discovered that a high level of self-sufficiency increases a person's motivation to act. Othman, Amiruddin, & Mansor (2011) concurred that *Orang Asli* have long been known for their strong self-reliance, contributing to their self-sufficiency. The data, however, contradicted the postulated hypothesis in the previous chapter.

Taking into account the success factor of engaging in entrepreneurial activities as a new approach for changing the fate of the *Orang Asli* community, which is commonly referred to as an isolated, impoverished, and backward society, the *Orang Asli*

confirm that self-sufficiency does not influence self-reliance in engaging in any entrepreneurial behaviour, despite previous scholars' findings. Every day, each *Orang Asli* person undergoes a transformation process facilitated by government or non-government programs and initiatives. Each of these advancements has positively impacted the community's development, particularly in responding to each individual's ability and as a source of additional income (Roddin et al., 2015, 2017). As a result, the *Orang Asli* believe that self-sufficiency is not one of the most effective ways to maximize the chances of becoming successful entrepreneurs.

5.2.9   Effect of Entrepreneurial Intention on Entrepreneurial Behaviour

The discussion of findings in this sub-section is guided by the following research question.

RQ9:   To what extent is the effect of entrepreneurial intention on entrepreneurial behaviour?

Findings of this study showed that entrepreneurial intention has a significant effect on entrepreneurial behaviour with a large effect size. The entrepreneurial purpose is vital to encourage individuals to engage in entrepreneurial activities and can predict their entrepreneurship behaviour. Every entrepreneurial activity begins with forming an entrepreneurial intention, and thus, serves as a good predictor of future entrepreneurial behaviour (Kong et al., 2020).

This finding indicates that entrepreneurial intention is linked to entrepreneurial behaviour among *Orang Asli* entrepreneurs in Peninsular Malaysia. Entrepreneurial intention refers to the act or intentional attitude toward a start-up or attempting to begin a new business or pursuing new opportunities (Ravi & Nor Aishah, 2016). Thus, entrepreneurial intention is widely employed as a proxy to predict action (Schmidt et al., 2022, whilst entrepreneurial behaviour is the talent, skill, and knowledge of how a firm works. It also demonstrates how much a person knows about becoming an entrepreneur and how they may apply that information to create a new firm (Al-Mamary & Alraja, 2022; Frese & Gielnik, 2023; Li et al., 2020)

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Azjen's theory of planned behaviour (TPB) is a robust and solid theory in many domains of human behaviour (Akter & Iqbal, 2022; Al-Jubari et al., 2019) that it is widely used in the entrepreneurial sphere. The outcome of this study identifies with the capability of the TPB framework to explain how entrepreneurial intention works on entrepreneurial behaviour among the *Orang Asli*. Despite their unique, strong customs and beliefs, the *Orang Asli* will eventually create and begin operating their business venture, even though all 18 tribes are still influenced by nature-based superstitions such as hills, rivers, stones, and caves (Rosdi et al., 2018). Slowly but surely, the *Orang Asli* community are becoming more conscious of the impact of modernization and the inevitable need to become entrepreneurial so that they can grab the opportunities to improve their livelihood. Initiatives and programs offered by the government and any agencies related to *Orang Asli*'s socioeconomic development have indirectly changed the *Orang Asli*'s perspective toward modernization, as *Orang Asli* have begun to venture into any entrepreneurial activity. The involvement of *Orang Asli* in the field of entrepreneurship not only helps to improve their socioeconomic status but also allows this group of minority people to share a unique way of life with the local community while still maintaining the uniqueness of their ancestors' culture and way of life (Neneh, 2019).

The substantial predictive accuracy and moderate predictive power of the entrepreneurial intention and behaviour model that was assessed in this study showed that this could be used as a predictive model to understand what the government can do to encourage more *Orang Asli* to become entrepreneurs. This study also showed that perceived behavioural control and actual behavioural control have no indirect effect to improve attitude, subjective norms and entrepreneurial intention towards entrepreneurial behaviour. The strong contribution of self-reliance and the negative and insignificant contribution of self-sufficiency also enriched the insights on factors that can uniquely apply to indigenous entrepreneurship context. Although the *Orang Asli* community perceived themselves to be highly self-sufficient because food is basically around them and they believe that the forest continues to provide for them, it is timely for a wake-up call that modernization has caught up. They need to become more entrepreneurial within the context of their culture and environment. The insignificance of perceived and actual behavioural control lead to the assumption that the *Orang Asli* have strong belief in the capability of the forest and natural environment to provide for them. The insignificance

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of perceived and actual behavioural control also implied that the *Orang Asli* are not confident with their ability for entrepreneurship. Thus, having a deeper understanding about this issue can provide more effective solutions to improve their entrepreneurial capabilities and thus, strengthening their attitude and others who they deem as significant to become entrepreneurs together.

5.3   Implications of the Study

This section provides a discussion on the theoretical and practical implications of findings in this study.

5.3.1   Theoretical Implications

From a financial standpoint, understanding the function and influence of entrepreneurship on economic development is critical. As a result, entrepreneurship research has long sought to identify what distinguishes entrepreneurs from the general population (Bi et al., 2021). Theoretically, this study investigates the integration of TPB with the theory of self-identity based on the roles of self-reliance and self-sufficiency to understand entrepreneurship the context of the *Orang Asli*, specifically in Peninsular Malaysia. Prior studies had focused on the potential integration between TPB and self-identify theory to understand one's behaviour. Ajzen's TPB is undoubtedly one of the most prominent models for analyzing behavioural determinants across multiple social science disciplines (Morales-Perez et al., 2022). The execution of this theory in this study proved to be a good predictive model to understand entrepreneurial intention and behaviour among the *Orang Asli* community. This model has been proven as being extremely useful because of its simplicity in describing the background of behavioural intention (Lihua, 2022; Neneh, 2019; Wang et al., 2021). However, other studies have discovered that the TPB's prediction of behavioural intention is limited and new variables to add explanatory value in certain contexts were proposed (Duong, 2022).

Much research has been conducted better to understand the causes and consequences of entrepreneurial behaviour, focusing on psychological and sociological variables (Sobaih & Elshaer, 2022). Driven by the understanding of indigenous

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entrepreneurship and its slight deviation from contemporary entrepreneurship principles, the limitation of TPB was overcome with the addition of self-reliance and self-sufficiency. Since the major trait of *Orang Asli* is self-reliance, its use in this study was proven to be a valid argument and justified its addition to enrich the TPB framework.

Theoretically, the self-identity supports the general flow of influence from self-reliance to self-sufficiency, in which case, was also proven in this study. Hence, findings of this study were able to relate the importance of self-reliance to drive self-sufficiency. However, self-sufficiency itself has an insignificant effect on entrepreneurial intention. This finding leads to the assumption that the *Orang Asli* still hold a strong belief that the forest and natural environment continue to sustain their livelihood. However, the stark reality showing the poverty level among the *Orang Asli* is evidence that having a false sense of self-identity could be detrimental to their own survival in the future. Hence, these findings supported the need to enrich the TPB model with more non-cognitive variables that are relatable to the *Orang Asli* community.

5.3.2   Practical Implications

This study has unearthed several insightful knowledge that can be used to increase and improve entrepreneurial intention and behaviour among *Orang Asli*. Firstly, the enriched model of TPB infused with self-reliance and self-sufficiency provided a good model to start with to understand the impact of attitude, subjective norms, perceived behavioural control, actual behavioural control, self-reliance and self-sufficiency on entrepreneurial intention and behaviour. Based on the effect sizes of the significant predictors in this model, it can be concluded that the drive for entrepreneurship among the *Orang Asli* people are basically their self-reliance and subjective norms. According to JAKOA (2022), the number of *Orang Asli* involved in entrepreneurship had the lowest ranking compared to other races in Malaysia, with 327 from 2016 until 2020, compared with 2011 to 2015, with 534 entrepreneurs. The number of *Orang Asli* entrepreneurs can be increased exponentially by providing more entrepreneurial opportunities that are fueled with the knowledge about the importance of self-reliance and subjective norms. In other words, the government should consider providing incentives that are based on community-based entrepreneurship projects with group participation. Besides that, there

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is a need to identify who are the role models in the *Orang Asli* community as they can become the significant people to influence others to become entrepreneurs. This is in tandem with the significance of subjective norms that was evident from the research findings of this study.

Besides that, the government should encourage the *Orang Asli* to enhance their self-reliance as this could be translated into resilience for entrepreneurial challenges. Giving assistance and aids without a clear goal might not work with the community of *Orang Asli* because they have been accustomed to reliance on their natural environment. Hence, instead of pushing them towards modern entrepreneurship, the government and other stakeholders should encourage them to use their knowledge of the forest and traditional skills to explore entrepreneurial opportunities. Although it is important to improve the value system among the *Orang Asli* by embedding digital entrepreneurship so that they are in tandem with modern entrepreneurship, the main entrepreneurial activities should still be linked to their traditional knowledge. Hence, the government could collaborate with third parties connecting *Orang Asli* entrepreneurs and agencies with online shopping portals such as Shopee and Lazada to market their traditional products or produce from the forest. To implement this strategy, the government, especially JAKOA, should develop an entrepreneurship branding program for *Orang Asli* entrepreneurs to help them understand online business. Role models from among their people who have successfully embrace digital entrepreneurship can be used to influence them towards the behaviour. Investing in a digital platform could potentially help the *Orang Asli* companies to navigate a more expansive market for their products and services.

Along with developing an entrepreneurial ecosystem, the government can establish platforms to assist the *Orang Asli* who are interested in entrepreneurship in starting a business by introducing business hubs in the urban and rural areas. The hub serves as a focal point for *Orang Asli* enterprises and entrepreneurs to explore ideas, get business advice and training, network with other corporations, and take advantage of government opportunities and programs. This is aligned to their tendencies for subjective norms.

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5.4   Limitations of the Study and Suggestions of Future Research

There are several possible limitations to this research. First, previous studies have shown that TPB is one of the most commonly used theories in the social and behavioural sciences to investigate people's intentional behaviour, particularly in entrepreneurship. As a result, the TPB only considers physiological (ATT, PBC and ABC) and sociological (SN) factors to determine entrepreneurial behaviour among the *Orang Asli*. The researcher used TPB as an underlying theory since studies about the *Orang Asli* in entrepreneurship using TPB are still rare because the primary emphasis of this study is entrepreneurial behaviour among the *Orang Asli* (Amiruddin et al., 2020). In the case of the *Orang Asli*, it is necessary to consider additional elements that affect behavioural purpose and motivation, such as fear, danger, mood, or prior experience. Notably, since a very long time ago, various parties have characterized the *Orang Asli* as an excessively dependent community, one with low self-esteem and modesty, low confidence and a lack of appreciation for a productive work culture, and low self-resilience in the face of external challenges and competition (Mohd Naim et al., 2017). Because of this, this society was always backward and isolated, which caused poverty. Therefore, it is crucial to consider the motivation factor for future research in the *Orang Asli*'s entrepreneurial decision-making process because the *Orang Asli*'s attitude and mindset are the biggest challenges faced by the government or any related parties in the efforts to develop the *Orang Asli* community.

Future research could investigate the motivations and barriers to behaviour change. The information does provide powerful insights that could drive behaviour change. A key self-management element is behaviour change, and compliance directly affects physical activity (Tjahjadi et al., 2023). Subsequently, motivation impacts behavioural change (García-Rodríguez et al., 2017). Underlying the theories, deeper knowledge about behaviour change, such as from the Rare's Center for Behavior and the Environment (RCBE) framework, comprises six behavioural levers and may be used as a guideline to find the causal factors of entrepreneurial behaviour among the *Orang Asli*. According to the RCBE framework, six behavioural levers reflect people's full range of behavioural motivation, namely 1) information, 2) rules and regulations, 3) material incentives, 4) emotional appeals, 5) social influences and lastly, 6) choice architecture

(Center for Behavior & The Environment, 2023). Such research with supporting theories such as the Transtheoretical Model (TTM) by Prochaska and DiClemente (the 1970s) and Social Cognitive Theory by Bandura in 1986 could contribute to identifying specific strategies and patterns of use that relate to entrepreneurial behaviour among the *Orang Asli* society.

Behaviour change motivation could be moderator variables that can be examined to determine whether it weakens or strengthens the *Orang Asli*'s entrepreneurial behaviour, such as how frequent and how much information they can get when they decide to become an entrepreneur. This suggestion can be considered as treatment to change intention to behaviour. This intervention can be included in the model of this study, which could be another remaining 36.3 percent from the total variance in the entrepreneurial behaviour that is not included (see R^2 value). Besides, in this study, the researcher could consist of choice architecture for the *Orang Asli* as one of the predictive constructs. The choice architecture here means that the government or third parties provide prompt information and guideline with many steps or options if the *Orang Asli* fail the first time until they can have their own business and make it salient. Since the moderator variables in this study only refer to the proximal antecedents from the entrepreneurial intention (perceived behavioural control and actual behavioural control), it might affect and limit the *Orang Asli*'s choice to become successful entrepreneurs. Although adding new variables should yield new insights and perspectives, they should only be proposed and tested after thorough investigation and deliberation in the interest of simplicity and clear understanding (La Barbera & Ajzen, 2021).

Subsequently, this study was focused only on the *Orang Asli* in Peninsular Malaysia because their poverty rate was statistically reported highest among others in Malaysia. Hence, it is recommended that future studies should include the indigenous people from Sabah and Sarawak, also known as *Orang Asal*, because Sabah and Sarawak are the states that record the highest rate of extreme poverty after Kelantan, Kedah and Perak (FMT Reporters, 2022), compared to other states.

From a methodological standpoint, even though the researcher was able to achieve more than 41 percent of the minimum total sample size (103), which refers to a total of 216 respondents, the limitation is that the researcher is only able to gather data from the most dominant tribes in Peninsular Malaysia. Demographic profile data indicates that from 18 tribes, ten tribes were involved in this study. It refers to Jah Hut, Jahai, Jakun, Lanoh, Orang Kuala, Semai, Semelai, Semoq Beri, Temiar, Temuan and Others (Islam or interracial). This study does not include Kensiu, Kintaq, Mendriq, Bateq, Che Wong, Mah Meri, Orang Seletar and Orang Kanaq. One of the reasons is these eight tribes are among the tribes that still live in rural areas not in the settlement by the government and still practice a nomadic way of life to find a suitable place to find food and survive (JAKOA, 2022). Thus, for future research, to obtain findings more representative of the *Orang Asli* in Peninsular Malaysia, the recommendation for future studies is to find all types of ethnicities or tribes of the *Orang Asli* in Peninsular Malaysia regardless of their locations.

A cross-sectional survey design was also employed to evaluate the results of this research. Contrarily, cross-sectional analysis, which is static in principle, is a study style that can evaluate several variables concurrently but does not reveal how time affects the variables measured. Therefore, the investigation of cause-and-effect interactions is often less valid using this method (Caruana et al., 2015). Since behaviour changes over time, future studies should incorporate and consider longitudinal studies (Creswell & Poth, 2018). These studies allow for inquiries about the predictive correlations between factors over time. In longitudinal studies, specific individuals are followed over an extended period, frequently years or decades (Caruana et al., 2015). A longitudinal study is a way to consider future research because it may discover and associate events with predicting actions precisely.

As a result, future research could use a mixed-method approach to look into the entrepreneurial behaviours of the *Orang Asli* society. While reducing their flaws and limitations, mixed-method research blends qualitative and quantitative research (Creswell & Vicki, 2018). In a mixed-method study, the researcher collects quantitative and qualitative data, analyzes each kind individually, and then compares the results to see if they concur or disagree. Through focus groups or interviews, the researcher could examine in future studies the influences of various elements on an entrepreneur's decision

to engage in entrepreneurship. The researcher then creates a cross-sectional survey in a quantitative manner to reconfirm or disconfirm; alternatively, these methodologies could be used. The fundamental tenet of this methodology is that, when combined, qualitative and quantitative data should produce the same outcomes (Creswell & Creswell, 2018; Saunders et al., 2023) because they both supply various sorts of information – often in-depth qualitative opinions of participants and quantitative scores on instruments. The data collected can contain crucial and original data for the next research.

5.5   Conclusion

This research provides a comprehensive view of the *Orang Asli*'s entrepreneurial behaviour in Peninsular Malaysia. Although entrepreneurial behaviours have been widely researched in multifaced fields, the study among *Orang Asli* still needs to be explored. This research examined the causal factors of entrepreneurial behaviour among the *Orang Asli* beyond the ordinary scope of Peninsular Malaysia. Consequently, entrepreneurial intention has also been discussed, as previous researchers agreed that entrepreneurial intention has a link associated with entrepreneurial behaviour. This study identified and integrated several potential determinant factors that engaged the *Orang Asli* in entrepreneurial behaviour. Four research objectives from the research questions were developed, with a twelfth hypothesis generated. A face-to-face survey was conducted to collect feedback from the *Orang Asli*. Even though the *Orang Asli* are considered a minority society, their contribution is necessary to reduce the poverty rate in Malaysia and subsequently improve their standard of living through entrepreneurship activity.

The proximal antecedents in entrepreneurial intention (attitude, subjective norms, perceived behavioural control and actual behavioural control) have been assessed to determine the *Orang Asli*'s intention and entrepreneurial behaviour. From the proximal antecedents of entrepreneurial intention, it was found that four of the hypotheses were supported statistically. Statistically, the report shows that entrepreneurial intention is one of the main contributors to this study, with 64% of total variances. Furthermore, to ensure this study does benefit theoretically and practically, this research was conducted and assessed whether the *Orang Asli*'s major characteristics (self-reliance and self-sufficiency) influence the behaviour of entrepreneurship. The results indicate that only
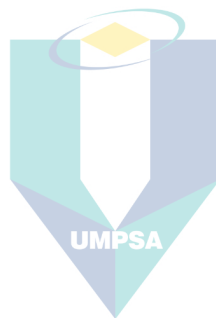
self-reliance positively interacts with the *Orang Asli*'s intention to become successful entrepreneurs. At the same time, self-sufficiency does not positively affect the *Orang Asli* to perform entrepreneurial behaviour. Consequently, considering and applying the TPB and self-identity theory in this study could explain why *Orang Asli*'s participation in entrepreneurship remains at a low level statistically. Thus, it led to the novelty of this research.

Even though have several potential limitations, the results provide an initial indicator of entrepreneurship behaviour among the *Orang Asli* in Peninsular Malaysia. The *Orang Asli* people are a society that strongly holds to their customs and ancestors' beliefs. To strategize programs and initiatives specifically for this group of minority modernization, the government or related parties should consider this factor so that the outcome will be optimum and to enhance the entrepreneurial behaviour of the *Orang Asli*, the following strategies should be considered:

1) Collaboration with dedicated third parties in creating and developing needed skills unfamiliar to the *Orang Asli*.

2) Direct support for *Orang Asli*, such as education, training, and mentoring by organizations dedicated to *Orang Asli* businesses.

3) Creating entrepreneurial ecosystems that cater to *Orang Asli* and society's institutional, cultural, and economic demands.

4) By providing business centers or hubs in urban and rural areas, the government can build platforms to support *Orang Asli* interested in entrepreneurship in launching their businesses.

In conclusion, this research provides a useful starting point in investigating entrepreneurial behaviour among *Orang Asli*. Besides adding new insight and knowledge to the literature on entrepreneurial intention and behaviour, the findings were predicted to help the government and non-government agencies interested in indigenous study planning and strategizing programs and initiatives more effectively. Entrepreneurship is one of the contributing factors in improving socioeconomic including the minority

society. Therefore, understanding entrepreneurial behaviour among the *Orang Asli* could be a valuable research field to venture into for the future development of this group of society.

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Appendix A: Operational Definition of Constructs

Operational Definition of Attitude

Operational Definition	Items in Measurement Scale	Sources
Attitude in this study refers to feeling or thinking which has three features: (1) mental state; (2) values of reference and (3) tendency to perform particular behaviour.	1. A career as an entrepreneur is attractive for me.	Ozaralli & Rivenburgh (2016); Doanh & Bernat (2019) ;
	2. Being an entrepreneur would entail great satisfactions for me.	
	3. Among various options, I would rather be an entrepreneur.	
	4. I am always keen to take advantage of new business opportunities.	
	5. I would rather be my own boss than has a secure job.	

Operational Definition of Subjective Norms

Operational Definition	Items in Measurement Scale	Sources
In this study, subjective norms refer to either (1) family members; (2) friends and (3) others in the tribe who is important to the individual influenced his or her decision.	1. If I decided to create a firm, my closest family would approve of that decision.	Doanh & Bernat (2019); Leong (2008)
	2. If I decided to create a firm, my closest friends would approve of that decision.	
	3. If I decided to create a firm, people who are important to me would approve of that decision.	
	4. I believe that my closest family thinks that I should pursue a career as an entrepreneur.	
	5. I believe that my closest friends think that I should pursue a career as an entrepreneur.	

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Operational Definition of Perceived Behavioural Control

Operational Definition	Items in Measurement Scale	Sources
The researcher will look at; (1) previous experiences related to entrepreneurial activity; (2) the level of confidence in their ability to perform the behavior; (3) the perception of an individual concerning the ease or difficulty of carrying out the task of starting or running a business; (4) the existing level of skills and resources to perform a behavior that represents actual behavioural control.	1. To start a firm and keep it working would be easy for me. 2. I am prepared to start a viable firm. 3. I can control the creation process of a new firm. 4. I know the necessary practical details to start a firm	Doanh & Bernat (2019)

Operational Definition of Actual Behavioural Control

Operational Definition	Items in Measurement Scale	Sources
To measure the Indigenous people actual behavioural control, the following measures were examined: (1) the level of existing skills of the Indigenous people; (2) the Indigenous people's access to monetary and non-monetary resources; (3) the additional skills needed to perform entrepreneurial behaviour; and (4) the skills needed to ensure the business operates successfully.	1. I have a positive self-thinking to run my own business. 2. I have innovative skills that will help me in facing uncertainties in business. 3. I have self-confidence to cross all hurdles in doing business. 4. I have enough capital to run my business. 5. I have the capability of need for achievement.	Agmeka et al., (2019); Vamvaka et al., (2020)

Operational Definition of Self-Reliance

Operational Definition	Items in Measurement Scale	Sources
To measure the Indigenous people actual behavioural control, the following measures were examined: (1) the level of existing skills of the Indigenous people; (2) the Indigenous people's access to monetary and non-monetary resources; (3) the additional skills needed to perform entrepreneurial behaviour; and (4) the skills needed to ensure the business operates successfully.	1. I am remained open mindedness when considering new ideas and differing thoughts from my own 2. I am competent and adequate enough to achieve what I have desire. 3. I am optimizing my skills and resources to create new idea and improve my business. 4. I am able to identify and apply correct steps to problem-solving in my business. 5. I am able to create solutions with limited resources. 6. I have the ability to make decision quickly to avoid delays in business growth. 7. I will continue my business without other professional guide and assistance	Bauernschuster et al., (2012); Ness et al., (2020)

Operational Definition of Self-Sufficiency

Operational Definition	Items in Measurement Scale	Sources
Measured in terms of the level of self-sufficiency in several domains: (1) finances; (2) the level of existing skills and knowledge; (3) community participation in survival activities; (4) activities of daily life; (5) the resources a person has and (6) whether a person, for their survival, needs assistance from other parties such as their own tribe, the government and NGOs.	1. My current income is sufficient to fulfill my needs. 2. I do not need any additional skills to earn more money. 3. I do not need any help from other tribes to meet basic needs. 4. I am happy with what I have now financially and physically. 5. Guidance from my tribe is sufficient for me. 6. Simple living is enough for my survivals. 7. Relying on traditional way in food gathering is sufficient for my survivals	Ali et al., (2012); Marzuki et al., (2014); Tosun et al., (2019)

Operational Definition of Entrepreneurial Intention

Operational Definition	Items in Measurement Scale	Sources
Measured using several factors: (1) the needs of the Indigenous people to become entrepreneurs; (2) the values that the Indigenous people have and get once they become entrepreneurs; (3) wants; (4) habits, and (5) beliefs, which refers to the views held by an Indigenous people individual's friends, family and tribes concerning whether he or she is capable of being a successful entrepreneur.	1. I try my best to start and run my own firm. 2. I am determined to create a firm in the future. 3. I have a very seriously thought of starting a firm. 4. I have the firm intention to start a firm someday.	Doanh & Bernat (2019)

Operational Definition of Entrepreneurial Behaviour

Operational Definition	Items in Measurement Scale	Sources
Three aspects of entrepreneurial behaviour were focused on: (1) opportunity recognition, that is, whether the Indigenous people can take advantage of opportunities to improve themselves and their business; (2) risk management, which refers to a calculated tolerance of risk in a business in which a person is involved, and (3) initiative, which refers to actions taken that are based on identified opportunities.	1. I actively addressed problems that happen in my business. 2. I am ready to make anything to be an entrepreneur. 3. I willingly took risk in my business. 4. I am able to resolve conflicts and crises. 5. I can utilize all resources to run my business. 6. I developed clear goal setting for my business.	Liñán et al., (2015); Neto et al., (2020)

Appendix B: Research Questionnaire in English

FACULTY OF INDUSTRIAL MANAGEMENT
Fakulti Pengurusan Industri

DETERMINANTS OF ENTREPRENEURIAL BEHAVIOUR AMONG *ORANG ASLI* IN PENINSULAR MALAYSIA: AN EXTENDED THEORY OF PLANNED BEHAVIOUR FRAMEWORK

Dear Respondent,

General Information:

I am Nor Emmy Shuhada binti Derani, a Doctoral Candidate in Faculty of Industrial Management at University Malaysia Pahang. I am writing to request your participation in my PhD research entitled as above.

This questionnaire is designed to determine factors contribute to entrepreneurial behavior among the Indigenous people. In this study, the researcher used the Theory of Planned Behavior to explain entrepreneurial intention which is believed ultimately leads to an individual entrepreneurial behavior action. Besides, two major characteristics of the indigenous people which refer to self-reliance and self-sufficiency also adapted and conducted to determine whether it associated with the entrepreneurial behavior. The researcher believed that the outcome of this research will be immense benefit to the socio-economic of the indigenous people in Peninsular Malaysia.

General Instruction:

The questionnaire consists of four sections. Please read the items carefully before answering. You are expected to choose the answer that represents your opinion. Please be informed that all information given will be strictly confidential and will be used only for the purpose of this research. Please tick or circle the appropriate answer or complete the answer in the space provided.

Thank you in advance for your participation in this research.

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DETERMINANTS OF ENTREPRENEURIAL BEHAVIOUR AMONG *ORANG ASLI* IN PENINSULAR MALAYSIA: AN EXTENDED THEORY OF PLANNED BEHAVIOUR FRAMEWORK

SECTION 1: RESPONDENT'S PROFILE

> **Direction/Instruction:**
> For each of the following statements, there is no right or wrong answer. Please tick the statements or questions almost or nearest describe your condition right now.

(1) Gender

☐ Male   ☐ Female

(2) Age

☐ 12 – 18   ☐ 19 – 25   ☐ 26 – 35
☐ 36 – 45   ☐ 46 – 55   ☐ Above 55

(3) Ethnicity

☐ Semang @ Negrito

☐ Senoi

☐ Proto-Malays

☐ Others (Please specify: _____)

(4) Subgroups/Tribes

☐ Kensiu   ☐ Temiar   ☐ Semai   ☐ Semoq Beri
☐ Kintaq   ☐ Mah Meri   ☐ Temuan   ☐ Orang Kanaq
☐ Lanoh   ☐ Semelai   ☐ Orang Kuala   ☐ Cheq Wong
☐ Jahai   ☐ Bateq   ☐ Orang Seletan ☐ Others (Please specify:
☐ Jakun   ☐ Jah Hut   ☐ Mendriq   _____)

(5) Business Ownership

☐ Owned

☐ Family-owned Business

(6) Categories of Entrepreneur

☐ Micro

☐ Small

☐ Medium

(7) Nature of Business
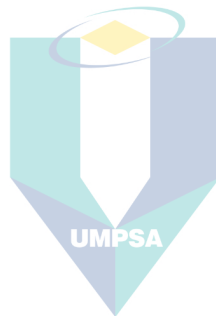
☐ Agriculture ☐ Services

☐ Agro-based Industry ☐ Construction

☐ Retail ☐ Others (Please specify: _____)

☐ Manufacturing

(8) Years of Business Establishment

☐ Less than one (1) year

☐ Two (2) – Five (5) years

☐ Six (6) years and above

(9) Academic Qualification

☐ Primary school

☐ Secondary school

☐ College/university

    ☐ Diploma

    ☐ Bachelor Degree

    ☐ Masters

    ☐ PhD/Doctorate Level

☐ Non-formal education (learning from experience, home, environment, work)

☐ Others (Please specify: _____)

<table>
<tr><td colspan="6">SECTION 2:
ATTITUDE, SUBJECTIVE NORMS, PERCEIVED BEHAVIOURAL CONTROL, ACTUAL BEHAVIOURAL CONTROL, SELF-RELIANCE AND SELF-SUFFICIENCY</td></tr>
</table>

Instruction: Think about yourself *before you become an entrepreneur* and answer these questions below about your attitude, subjective norms, perceived behavioural control, actual behaviour control, self-reliant and self-sufficiency *at that time.*

The objective of this section is to understand the determinants of entrepreneurial behaviour among the Indigenous people in Peninsular Malaysia based on two situations; *(a) individual who do not take action and (b) individual who do not intend to act but who do take action*. Based on the scale, from *1 (strongly disagree)* to *5 (strongly agree),* please circle or tick the appropriate number which best reflects your perception.

1	2	3	4	5
Strongly Disagree	←		→	**Strongly Agree**

Attitude
An attitude refers to a set of emotions, beliefs, and behaviours towards a particular objects, person, thing or event.

1. A career as an entrepreneur is attractive for me.	1	2	3	4	5
2. Being an entrepreneur would entail great satisfactions for me.	1	2	3	4	5
3. Among various options, I would rather be an entrepreneur.	1	2	3	4	5
4. I am always keen to take advantage of new business opportunities.	1	2	3	4	5
5. I would rather be my own boss than has a secure job.	1	2	3	4	5

Subjective Norms Subjective norm can be defined as one's impression that a behaviour is acceptable or unacceptable to others such as parents, peers, society.					
1. If I decide to create a firm, my closest family would approve of that decision.	1	2	3	4	5
2. If I decided to create a firm, my closest friends would approve of that decision.	1	2	3	4	5
3. If I decided to create a firm, people who are important to me would approve of that decision.	1	2	3	4	5
4. I believe that my closest family thinks that I should pursue a career as an entrepreneur.	1	2	3	4	5
5. I believe that my closest friends think that I should pursue a career as an entrepreneur.	1	2	3	4	5
Perceived Behavioural Control Perceived behavioural control is defined as the perception of the difficulty of doing or performing a behaviour.					
1. To start a firm and keep it working would be easy for me.	1	2	3	4	5
2. I am prepared to start a viable firm.	1	2	3	4	5
3. I can control the creation process of a new firm.	1	2	3	4	5
4. I know the necessary practical details to start a firm.	1	2	3	4	5
Actual Behavioural Control Refers to the degree to which a person has the skills, resources, and other necessarily needed to perform the behaviour in questions.					
1. I have a positive self-thinking to run my own business.	1	2	3	4	5
2. I have innovative skills that will help me in facing uncertainties in business.	1	2	3	4	5
3. I have self-confidence to cross all hurdles in doing business.	1	2	3	4	5
4. I have enough capital to run my business.	1	2	3	4	5
5. I have the capability of need for achievement.	1	2	3	4	5

Self-Reliance Refers to the degree to which a person has the skills, resources, and other necessarily needed to perform the behaviour in questions.					
1. I remained open minded when considering new ideas and differing thoughts from my own.	1	2	3	4	5
2. I am competent and adequate enough to achieve what I have desire.	1	2	3	4	5
3. I am optimizing my skills and resources to create new idea and improve my business.	1	2	3	4	5
4. I am able to identify and apply correct steps to problem-solving in my business.	1	2	3	4	5
5. I am able to create solutions with limited resources.	1	2	3	4	5
6. I have the ability to make decision quickly to avoid delays in business growth.	1	2	3	4	5
7. I will continue my business without other professional guide and assistance.	1	2	3	4	5
Self-Sufficiency Self-sufficiency describes the degree to which individuals are able to provide for themselves without assistance from other parties.					
1. My current income is sufficient to fulfil my needs.	1	2	3	4	5
2. I do not need any additional skills to earn more money.	1	2	3	4	5
3. I do not need any help from other tribes to meet basic needs.	1	2	3	4	5
4. I am happy with what I have now financially and physically.	1	2	3	4	5
5. Guidance from my tribe is sufficient for me.	1	2	3	4	5
6. Simple living is enough for my survivals.	1	2	3	4	5
7. Relying on traditional way in food gathering is sufficient for my survivals.	1	2	3	4	5

	SECTION 3: ENTREPRENEURIAL BEHAVIOUR					

Instruction: Think about yourself *before you become an entrepreneur* and answer these questions below about your entrepreneurial behaviour *at that time.*

The objective of this section is to understand the determinants of entrepreneurial behaviour among the Indigenous people in Peninsular Malaysia based on two situations; *(a) individual who do not take action and (b) individual who do not intend to act but who do take action.*

Based on the scale, from *1 (strongly disagree)* to *6 (strongly agree),* please indicate your opinion for each statement below that best reflects your perception.

1 Strongly Disagree	2	3	4	5	6 Strongly Agree

Entrepreneurial Behaviour
Entrepreneurial behaviour as an action that fit during the process of entrepreneurship.

1.	I actively addressed problems that happen in my business.	1	2	3	4	5	6
2.	I am ready to make anything to be an entrepreneur.	1	2	3	4	5	6
3.	I willingly took risk in my business	1	2	3	4	5	6
4.	I am able to resolve conflicts and crises.	1	2	3	4	5	6
5.	I can utilize all resources to run my business.	1	2	3	4	5	6
6.	I developed clear goal setting for my business.	1	2	3	4	5	6

SECTION 4:
ENTREPRENEURIAL INTENTION

Instruction: Think about yourself *before you become an entrepreneur* and answer these *Instruction*: Think about yourself *before you become an entrepreneur* and answer these questions below about your entrepreneurial intention *at that time.*

The objective of this section is to understand the determinants of entrepreneurial behaviour among the Indigenous people in Peninsular Malaysia based on two situations; *(a) individual who do not take action and (b) individual who do not intend to act but who do take action.*

Based on the scale, from *1 (strongly disagree)* to *6 (strongly agree),* please indicate your opinion for each statement below that best reflects your perception.
.

1 Strongly Disagree	2	3	4	5	6	7 Strongly Agree

Entrepreneurial Intention
Refers to the intention of an individual to start or venture a new business.

1. I try my best to start and run my own firm.	1	2	3	4	5	6	7
2. I am determined to create a firm in the future.	1	2	3	4	5	6	7
3. I have a very seriously thought of starting a firm.	1	2	3	4	5	6	7
4. I have the firm intention to start a firm someday.	1	2	3	4	5	6	7

PENENTU TINGKAH LAKU KEUSAHAWANAN DALAM KALANGAN *ORANG ASLI* DI SEMENANJUNG MALAYSIA: KERANGKA KEMBANGAN TEORI TINGKAH LAKU TERANCANG

Kepada Responden,

Maklumat Umum:

Saya ialah Calon Doktor Falsafah di Fakulti Pengurusan Perindustrian, Universiti Malaysia Pahang. Borang soal selidik ini dikemukakan untuk mendapatkan maklum balas anda dalam kajian PhD saya yang bertajuk seperti di atas.

Soal selidik ini disediakan untuk menentukan faktor-faktor yang menyumbang kepada tingkah laku keusahawanan dalam kalangan *Orang Asli*. Dalam kajian ini, pengkaji menggunakan Theory of Planned Behaviour untuk menjelaskan niat keusahawanan yang dipercayai membawa kepada tindakan tingkah laku keusahawanan seseorang individu. Selain itu, dua ciri utama *Orang Asli* yang merujuk kepada pintar akal atau bijak dalam kemandiri diri dan mampu diri juga dijalankan untuk menentukan sama ada ia berkait dengan tingkah laku keusahawanan. Pengkaji percaya bahawa hasil kajian ini akan memberi manfaat yang besar kepada sosio-ekonomi *Orang Asli* di Semenanjung Malaysia.

Arahan Am:
Soal selidik ini terdiri daripada empat bahagian. Sila baca semua item dengan teliti sebelum menjawab. Anda perlu memilih jawapan yang mewakili pendapat anda. Sila ambil maklum bahawa semua maklumat yang diberikan adalah sulit dan hanya akan digunakan bagi tujuan penyelidikan ini. Sila tandakan atau bulatkan jawapan yang sesuai atau lengkapkan jawapan dalam ruang yang disediakan.

Penyertaan anda dalam penyelidikan ini saya dahului dengan ucapan terima kasih.

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PENENTU TINGKAH LAKU KEUSAHAWANAN DALAM KALANGAN *ORANG ASLI* DI SEMENANJUNG MALAYSIA: KERANGKA KEMBANGAN TEORI TINGKAH LAKU TERANCANG

BAHAGIAN 1: PROFIL RESPONDEN

Arahan:
Bagi setiap pernyataan berikut, tiada jawapan yang betul atau salah. Sila tandakan pernyataan atau soalan yang paling hampir atau terdekat yang menjelaskan keadaan anda sekarang.

(1) Jantina

☐ Lelaki ☐ Perempuan

(2) Umur

☐ 12 – 18 ☐ 19 – 25 ☐ 26 – 35
☐ 36 – 45 ☐ 46 – 55 ☐ Above 55

(3) Etnik

☐ Semang @ Negrito

☐ Senoi

☐ Proto-Malays

☐ Lain-Lain (Sila nyatakan: _____)

(4) Subkumpulan/Suku Kaum

☐ Kensiu ☐ Temiar ☐ Semai ☐ Semoq Beri
☐ Kintaq ☐ Mah Meri ☐ Temuan ☐ Orang Kanaq
☐ Lanoh ☐ Semelai ☐ Orang Kuala ☐ Cheq Wong
☐ Jahai ☐ Bateq ☐ Orang Seletan ☐ Lain-lain (Sila nyatakan:
☐ Jakun ☐ Jah Hut ☐ Mendriq _____)

(5) Pemilikan Perniagaan

☐ Milk sendiri

☐ Perniagaan milik keluarga

(6) Kategori Usahawan

☐ Mikro

☐ Kecil

☐ Sederhana

(7) Jenis Perniagaan

☐ Pertanian   ☐ Perkhidmatan

☐ Industri Asas Tani   ☐ Pembinaan

☐ Peruncitan   ☐ Lain-lain (Sila nyatakan: _____)

☐ Pembuatan

(8) Tempoh Tahun Penubuhan Perniagaan

☐ Kurang dari (1) tahun

☐ Dua (2) – Lima (5) tahun

☐ Enam (6) tahun dan ke atas

(9) Kelayakan Akademik

☐ Sekolah Rendah

☐ Sekolah Menengah

☐ Kolej/Universiti

     ☐ Diploma

     ☐ Ijazah Sarjana Muda

     ☐ Ijazah Sarjana

     ☐ PhD/Kedoktoran

☐ Pendidikan tidak formal (belajar dari pengakaman, rumah, persekitaran dan pekerjaan)

☐ Lain-lain (Sila nyatakan: _____)

BAHAGIAN 2: SIKAP, NORMA SUBJEKTIF, TANGGAPAN KAWALAN TINGKAH LAKU, KAWALAN TINGKAL LAKU SEBENAR, KEMANDIRIAN DIRI DAN KEMAMPUAN KENDIRI

Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang sikap anda, norma subjektif, tanggapan kawalan tingkah laku, kawalan tingkal laku sebenar, bijak dalam kemandirian diri dan mampu diri sebenar *pada masa itu.*

Objektif bahagian ini adalah untuk memahami penentu tingkah laku keusahawanan dikalangan *Orang Asli* di Semenanjung Malaysia berdasarkan dua situasi; *(a) individu yang tidak mengambil tindakan dan (b) individu yang tidak berniat untuk bertindak tetapi yang mengambil tindakan.*

Berdasarkan skala dari *1 (sangat tidak bersetuju)* hingga *5 (sangat bersetuju)*, sila nyatakan pendapat anda untuk setiap pernyataan di bawah yang paling sesuai dengan persepsi anda.

1	2	3	4	5
Sangat Tidak Bersetuju	←	→		Sangat Bersetuju

Sikap
Sikap merujuk kepada sekumpulan emosi, kepercayaan dan tingkah laku terhadap objek, orang, benda atau peristiwa tertentu.

1.	Kerjaya sebagai seorang usahawan menarik perhatian saya.	1	2	3	4	5
2.	Menjadi usahawan akan memberikan kepuasan yang paling tinggi kepada diri saya.	1	2	3	4	5
3.	Antara pelbagai pilihan, saya lebih berminat menjadi seorang usahawan.	1	2	3	4	5
4.	Saya selalu memanfaatkan peluang perniagaan yang baharu.	1	2	3	4	5
5.	Saya lebih suka menjadi majikan kepada diri sendiri daripada mempunyai pekerjaan yang lebih terjamin.	1	2	3	4	5

Norma Subjektif Norma subjektif bermaksud tanggapan seseorang bahawa sesuatu tingkah laku dapat diterima atau tidak oleh orang lain seperti ibu bapa, rakan sebaya serta masyarakat.					
1. Sekiranya saya memutuskan untuk menubuhkan syarikat, keluarga terdekat saya akan bersetuju dengan keputusan sedemikian.	1	2	3	4	5
2. Sekiranya saya memutuskan untuk menubuhkan syarikat, rakan-rakan terdekat saya akan bersetuju dengan keputusan sedemikian.	1	2	3	4	5
3. Sekiranya saya memutuskan untuk menubuhkan syarikat, orang yang penting bagi saya akan bersetuju dengan keputusan sedemikian.	1	2	3	4	5
4. Saya percaya bahawa keluarga terdekat saya berpendapat bahawa saya harus meneruskan kerjaya sebagai usahawan.	1	2	3	4	5
5. Saya percaya bahawa rakan-rakan terdekat saya berpendapat bahawa saya harus meneruskan kerjaya sebagai usahawan.	1	2	3	4	5
Tanggapan Kawalan Tingkah Laku Tanggapan kawalan tingkah laku ditakrifkan sebagai tanggapan terhadap kesukaran melakukan atau melaksanakan sesuatu tingkah laku.					
1. Menubuhkan dan mengusahakan syarikat adalah suatu perkara yang mudah bagi saya.	1	2	3	4	5
2. Saya bersedia untuk menubuhkan syarikat yang berdaya maju.	1	2	3	4	5
3. Saya dapat mengawal proses penubuhan syarikat baharu.	1	2	3	4	5
4. Saya mengetahui butiran praktikal yang diperlukan untuk menubuhkan syarikat.	1	2	3	4	5

Kawalan Tingkah Laku Sebenar					
Merujuk kepada sejauh mana seseorang mempunyai kemahiran, sumber, dan keperluan lain yang diperlukan bagi melaksanakan sesuatu tingkah laku.					
1. Saya mempunyai pemikiran diri yang positif untuk menjalankan perniagaan saya sendiri.	1	2	3	4	5
2. Saya mempunyai kemahiran inovatif yang akan membantu saya dalam menghadapi ketidakpastian dalam perniagaan.	1	2	3	4	5
3. Saya mempunyai keyakinan diri untuk mengatasi semua rintangan dalam menjalankan perniagaan.	1	2	3	4	5
4. Saya mempunyai modal yang cukup untuk menjalankan perniagaan saya.	1	2	3	4	5
5. Saya mempunyai kemampuan yang diperlukan untuk memperoleh sesuatu pencapaian.	1	2	3	4	5

Kemandirian Diri					
Kemandirian adalah kemampuan sosial dan ekonomi individu, isi rumah atau komuniti demi memenuhi keperluan penting secara lestari dan bermaruah.					
1. Saya sentiasa berfikiran terbuka ketika mempertimbangkan idea-idea baharu yang berbeza daripada pemikiran saya sendiri.	1	2	3	4	5
2. Saya cekap dan cukup bersedia untuk mencapai apa-apa yang saya ingini.	1	2	3	4	5
3. Saya memanfaatkan sepenuhnya kemahiran dan sumber yang saya miliki untuk mencipta idea baharu dan meningkatkan perniagaan saya.	1	2	3	4	5
4. Saya dapat mengenal pasti dan melaksanakan langkah-langkah yang betul untuk menyelesaikan masalah dalam perniagaan saya.	1	2	3	4	5
5. Saya dapat mencari jalan penyelesaian dengan sumber yang terhad.	1	2	3	4	5
6. Saya memiliki kemampuan yang cukup untuk membuat keputusan dengan cepat bagi mengelakkan kelewatan dalam kemajuan perniagaan.	1	2	3	4	5
7. Saya akan meneruskan perniagaan tanpa panduan dan bantuan profesional yang lain.	1	2	3	4	5

Kemampuan Diri					
Mampu diri menerangkan sejauh mana individu dapat menanggung keperluan diri mereka sendiri tanpa bantuan daripada pihak lain.					
1. Pendapatan semasa saya mencukupi untuk memenuhi keperluan saya.	1	2	3	4	5
2. Saya tidak memerlukan apa-apa kemahiran tambahan untuk mendapatkan lebih banyak wang.	1	2	3	4	5
3. Saya tidak memerlukan sebarang pertolongan daripada suku kaum lain untuk memenuhi keperluan asas saya.	1	2	3	4	5
4. Saya gembira dengan segala yang saya miliki sekarang dari segi kewangan mahupun fizikal.	1	2	3	4	5
5. Tunjuk ajar daripada suku kaum saya sudah memadai buat saya.	1	2	3	4	5
6. Kehidupan yang sederhana adalah cukup untuk kelangsungan hidup saya.	1	2	3	4	5
7. Bergantung pada cara tradisional untuk mencari makanan sudah memadai untuk kelangsungan hidup saya.	1	2	3	4	5

BAHAGIAN 3: TINGKAH LAKU KEUSAHAWANAN

*Arahan***:** Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang tingkah laku keusahawanan anda *pada masa itu.*

Objektif bahagian ini adalah untuk memahami penentu tingkah laku keusahawanan dikalangan *Orang Asli* di Semenanjung Malaysia berdasarkan dua situasi; *(a) individu yang tidak mengambil tindakan dan (b) individu yang tidak berniat untuk bertindak tetapi yang mengambil tindakan.*

Berdasarkan skala dari *1 (sangat tidak bersetuju)* hingga *6 (sangat bersetuju),* sila nyatakan pendapat anda untuk setiap pernyataan di bawah yang paling sesuai dengan persepsi anda.

1	2	3	4	5	6
Sangat Tidak Bersetuju					Sangat Bersetuju
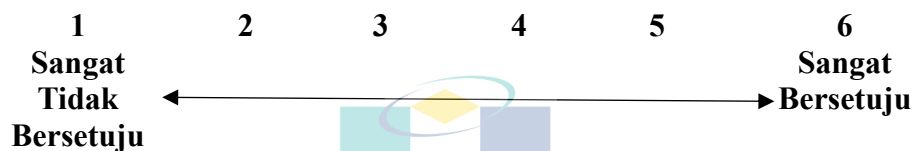
Tingkah Laku Keusahawanan
Tingkah laku keusahawanan ialah tindakan yang sesuai semasa proses keusahawanan.
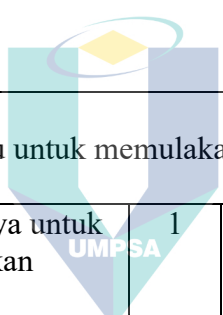
1. Saya menangani masalah yang berlaku dalam perniagaan saya secara aktif.	1	2	3	4	5	6
2. Saya bersedia melakukan apa-apa sahaja untuk menjadi seorang usahawan.	1	2	3	4	5	6
3. Saya dengan rela mengambil risiko dalam menjalankan perniagaan saya.	1	2	3	4	5	6
4. Saya dapat menyelesaikan konflik dan krisis perniagaan saya.	1	2	3	4	5	6
5. Saya dapat menggunakan semua sumber yang ada untuk menjalankan perniagaan saya.	1	2	3	4	5	6
6. Saya membangunkan penetapan matlamat yang jelas untuk perniagaan saya.	1	2	3	4	5	6

BAHAGIAN 4: NIAT KEUSAHAWANAN

Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang niat keusahawanan anda *pada masa itu.*

Objektif bahagian ini adalah untuk memahami hubungan antara niat keusahawanan dan tingkah laku keusahawanan dikalangan *Orang Asli* di Semenanjung Malaysia berdasarkan dua situasi; *(a) individu yang tidak mengambil tindakan dan (b) individu yang tidak berniat untuk bertindak tetapi yang mengambil tindakan.*

Berdasarkan skala dari *1 (sangat tidak bersetuju)* hingga *7 (sangat bersetuju),* sila nyatakan pendapat anda untuk setiap pernyataan di bawah yang paling sesuai dengan persepsi anda.

1	2	3	4	5	6	7
Sangat Tidak Bersetuju						Sangat Bersetuju

Niat Keusahawanan
Merujuk kepada hasrat individu untuk memulakan atau menceburkan diri dalam perniagaan baharu.

		1	2	3	4	5	6	7
1.	Saya berusaha sedaya upaya untuk memulakan dan menjalankan perniagaan saya sendiri.	1	2	3	4	5	6	7
2.	Saya berazam untuk mewujudkan perniagaan pada masa hadapan.	1	2	3	4	5	6	7
3.	Saya mempunyai usaha yang sangat serius untuk memulakan sebuah perniagaan.	1	2	3	4	5	6	7
4.	Saya mempunyai niat yang kukuh untuk memulakan perniagaan suatu hari nanti.	1	2	3	4	5	6	7

Komen (Pilihan):

Terima kasih kerana melengkapkan soal selidik ini.

Sekiranya anda mempunyai pertanyaan mengenai soal selidik atau penyertaan dalam kajian ini, anda boleh menghubungi saya melalui talian 0132593536 atau e-mel nesd4phd@gmail.com

Appendix D: Survey Validation Rubric for Expert Panel

Name of reviewer:	
Title (*if any*):	
Position:	
Organization & Department:	
Industrial/Academic experience (years):	
Date of review:	

Researcher Name: Nor Emmy Shuhada binti Derani
Institute   :   Universiti Malaysia Pahang (UMP)
Research Title   :   Determinants of Entrepreneurial Behaviour Among *Orang Asli* in Peninsular Malaysia: An extended Theory Of Planned Behaviour framework

INTRODUCTION

This content validation rubric is employed according to the standard provided by The American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (2014) for content validity purpose. The survey questionnaire contains set of measurement items of **EIGHT** main variables, namely (1) attitude, (2) subjective norms, (3) perceived behavioral control, (4) actual behavioural control, (5) self-reliant, (6) self-sufficiency, (7) entrepreneurial behaviour and (8) entrepreneurial intention. To specify, there is also one section of general information about the respondents and demographic profiles included in the survey. There are different level interval scales for each section in the survey to avoid common method bias on the measurement scales. For instance, 5-point interval scale for (1), 6-point interval scale for (ii), and 7-point interval scales for (iii) are proposed. Hence, using different interval scale may help to increase construct validity and reliability of instrument by reducing social desirability bias of answering same scale points. Additionally, to avoid misunderstanding in term of language, the survey will be translated both in Bahasa and English language for respondent understanding as the survey is distributed for the

Indigenous people in Peninsular Malaysia. Besides, this survey used back translation method mainly for the purpose to confirm the translation that the researcher is accurate.
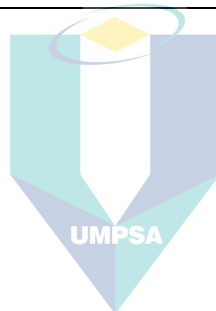
Instruction:

Please rate the level of **importance** and **clarity** of items in measuring the aligned overarching constructs on a scale of 1 to 3 as follows:

Not necessary to measure construct	Acceptable	Essential to measure construct
1	2	3

Scale of Clarity:

Not clear	Acceptable	Very clear
1	2	3

Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your attitude, subjective norms, perceived behavioural control, actual behaviour control, self-reliant and self-sufficiency *at that time.*

Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang sikap anda, norma subjektif, tanggapan kawalan tingkah laku, kawalan tingkah laku sebenar, bijak dalam kemandirian diri dan mampu diri sebenar *pada masa itu.*

Section	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
2	The objective of this section is to understand the determinants of entrepreneurial behaviour among the Indigenous people in Peninsular Malaysia based on two situations; (a) individual who do not take action and (b) individual who do not intend to act but who do take action. Based on the scale, from **1 (strongly disagree)** to **5 (strongly agree),** please indicate your opinion for each statement below that best reflects your perception. *Objektif bahagian ini adalah untuk memahami penentu tingkah laku keusahawanan dikalangan Indigenous people di Semenanjung Malaysia berdasarkan dua situasi; (a) individu yang tidak mengambil tindakan dan (b) individu yang tidak berniat untuk bertindak tetapi yang mengambil tindakan. Berdasarkan skala dari* **1 (sangat tidak bersetuju)** *hingga* **5 (sangat bersetuju),** *sila nyatakan pendapat anda untuk setiap pernyataan di bawah yang paling sesuai dengan persepsi anda.*							

Construct: Attitude
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your attitude *at that time.*

Pembolehubah: Sikap
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang sikap anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
1	A career as an entrepreneur is attractive for me. *Kerjaya sebagai seorang usahawan menarik perhatian saya.*							
2	Being an entrepreneur would entail great satisfactions for me. *Menjadi usahawan akan memberikan kepuasan yang paling tinggi kepada diri saya.*							
3	Among various options, I would rather be an entrepreneur. *Antara pelbagai pilihan, saya lebih berminat menjadi seorang usahawan.*							
4	I am always keen to take advantage of new business opportunities. *Saya selalu memanfaatkan peluang perniagaan yang baharu.*							
5	I would rather be my own boss than has a secure job. *Saya lebih suka menjadi majikan kepada diri sendiri daripada mempunyai pekerjaan yang lebih terjamin.*							

Additional comment:

Construct: Subjective Norms
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your subjective norms *at that time.*

Pembolehubah: Norma Subjektif
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang norma subjektif anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
1	If I decided to create a firm, my closest family would approve of that decision. *Sekiranya saya memutuskan untuk menubuhkan syarikat, keluarga terdekat saya akan bersetuju dengan keputusan sedemikian.*							
2	If I decided to create a firm, my closest friends would approve of that decision. *Sekiranya saya memutuskan untuk menubuhkan syarikat, rakan-rakan terdekat saya akan bersetuju dengan keputusan sedemikian.*							
3	If I decided to create a firm, people who are important to me would approve of that decision. *Sekiranya saya memutuskan untuk menubuhkan syarikat, orang yang penting bagi saya akan bersetuju dengan keputusan sedemikian.*							

Additional comment:

Construct: Subjective Norms
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your subjective norms *at that time.*

Pembolehubah: Norma Subjektif
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang norma subjektif anda *pada masa itu.*

	Item (s)	**Importance**			**Clarity**			**Comment**
		1	2	3	1	2	3	
4	I believe that my closest family thinks that I should pursue a career as an entrepreneur. *Saya percaya bahawa keluarga terdekat saya berpendapat bahawa saya harus meneruskan kerjaya sebagai usahawan.*							
5	I believe that my closest friends think that I should pursue a career as an entrepreneur. *Saya percaya bahawa rakan-rakan terdekat saya berpendapat bahawa saya harus meneruskan kerjaya sebagai usahawan.*							

Additional comment:

Construct: Perceived Behavioral Control
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your perceived behavioral control *at that time.*

Pembolehubah: Tanggapan Kawalan Tingkah Laku
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang tanggapan kawalan tingkah laku anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
1	To start a firm and keep it working would be easy for me. *Menubuhkan dan mengusahakan syarikat adalah suatu perkara yang mudah bagi saya.*							
2	I am prepared to start a viable firm. *Saya bersedia untuk menubuhkan syarikat yang berdaya maju.*							
3	I can control the creation process of a new firm. *Saya dapat mengawal proses penubuhan syarikat baharu.*							
4	I know the necessary practical details to start a firm. *Saya mengetahui butiran praktikal yang diperlukan untuk menubuhkan syarikat.*							

Additional comment:

Construct: Actual Behavioral Control
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your actual behavioral control *at that time.*

Pembolehubah: Kawalan Tingkah Laku Sebenar
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang kawalan tingkah laku sebenar anda *pada masa itu.*

	Item (s)	**Importance**			**Clarity**			**Comment**
		1	2	3	1	2	3	
1	I have a positive self-thinking to run my own business. *Saya mempunyai pemikiran diri yang positif untuk menjalankan perniagaan saya sendiri.*							
2	I have innovative skills that will help me in facing uncertainties in business. *Saya mempunyai kemahiran inovatif yang akan membantu saya dalam menghadapi ketidakpastian dalam perniagaan.*							
3	I have self-confidence to cross all hurdles in doing business. *Saya mempunyai keyakinan diri untuk mengatasi semua rintangan dalam menjalankan perniagaan.*							
4	I have enough capital to run my business. *Saya mempunyai modal yang cukup untuk menjalankan perniagaan saya.*							
5	I have the capability of need for achievement. *Saya mempunyai kemampuan yang diperlukan untuk memperoleh sesuatu pencapaian.*							

Additional comment:

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Construct: Self-Reliance
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your self-reliance *at that time.*

Pembolehubah: Bijak dalam Kemandirian Diri
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang kemandirian diri anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
1	I am remained open mindedness when considering new ideas and differing thoughts from my own. *Saya sentiasa berfikiran terbuka ketika mempertimbangkan idea-idea baharu yang berbeza daripada pemikiran saya sendiri.*							
2	I am competent and adequate enough to achieve what I have desire. *Saya cekap dan cukup bersedia untuk mencapai apa-apa yang saya ingini.*							
3	I am optimizing my skills and resources to create new idea and improve my business. *Saya memanfaatkan sepenuhnya kemahiran dan sumber yang saya miliki untuk mencipta idea baharu dan meningkatkan perniagaan saya.*							
4	I am able to identify and apply correct steps to problem-solving in my business. *Saya dapat mengenal pasti dan melaksanakan langkah-langkah yang betul untuk menyelesaikan masalah dalam perniagaan saya.*							

Additional comment:

Construct: Self-Reliance
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your self-reliance *at that time.*

Pembolehubah: Bijak dalam Kemandirian Diri
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang kemandirian diri anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
5	I am able to create solutions with limited resources. *Saya dapat mencari jalan penyelesaian dengan sumber yang terhad.*							
6	I have the ability to make decision quickly to avoid delays in business growth. *Saya memiliki kemampuan yang cukup untuk membuat keputusan dengan cepat bagi mengelakkan kelewatan dalam kemajuan perniagaan.*							
7	I will continue my business without other professional guide and assistance. *Saya akan meneruskan perniagaan tanpa panduan dan bantuan profesional yang lain.*							

Additional comment:

Construct: Self-Sufficiency
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your self-sufficiency *at that time.*

Pembolehubah: Mampu Diri
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang kemampuan diri anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
1	My current income is sufficient to fulfill my needs. *Pendapatan semasa saya mencukupi untuk memenuhi keperluan saya.*							
2	I do not need any additional skills to earn more money. *Saya tidak memerlukan apa-apa kemahiran tambahan untuk mendapatkan lebih banyak wang.*							
3	I do not need any help from other tribes to meet basic needs. *Saya tidak memerlukan sebarang pertolongan daripada suku kaum lain untuk memenuhi keperluan asas saya.*							
4	I am happy with what I have now financially and physically. *Saya gembira dengan segala yang saya miliki sekarang dari segi kewangan mahupun fizikal.*							

Additional comment:

Construct: Self-Sufficiency
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your self-sufficiency *at that time.*

Pembolehubah: Mampu Diri
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang kemampuan diri anda *pada masa itu.*

	Item (s)	**Importance**			**Clarity**			**Comment**
		1	2	3	1	2	3	
5	Guidance from my tribe is sufficient for me. *Tunjuk ajar daripada suku kaum saya sudah memadai buat saya.*							
6	Simple living is enough for my survivals. *Kehidupan yang sederhana adalah cukup untuk kelangsungan hidup saya.*							
7	Relying on traditional way in food gathering is sufficient for my survivals. *Bergantung pada cara tradisional untuk mencari makanan sudah memadai untuk kelangsungan hidup saya.*							

Additional comment:

Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your entrepreneurial behaviour *at that time.*

Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang tingkah laku keusahawanan anda *pada masa itu.*

Section	Item(s)	Clarity			Comment
		1	2	3	
3	The objective of this section is to understand the determinants of entrepreneurial behaviour among the Indigenous people in Peninsular Malaysia based on two situations; **(a) individual who do not take action and (b) individual who do not intend to act but who do take action.** Based on the scale, from **1 (strongly disagree)** to **6 (strongly agree),** please indicate your opinion for each statement below that best reflects your perception. *Objektif bahagian ini adalah untuk memahami penentu tingkah laku keusahawanan dikalangan Indigenous people di Semenanjung Malaysia berdasarkan dua situasi; **(a) individu yang tidak mengambil tindakan dan (b) individu yang tidak berniat untuk bertindak tetapi yang mengambil tindakan.** Berdasarkan skala dari **1 (sangat tidak bersetuju)** hingga **6 (sangat bersetuju),** sila nyatakan pendapat anda untuk setiap pernyataan di bawah yang paling sesuai dengan persepsi anda.*				

Additional comment:

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Construct: Entrepreneurial Behaviour
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your entrepreneurial behaviour *at that time.*

Pembolehubah: Tingkah Laku Keusahawanan
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang tingkah laku keusahawanan anda *pada masa itu.*

	Item (s)	Importance			Clarity			Comment
		1	2	3	1	2	3	
1	I actively addressed problems that happen in my business. *Saya menangani masalah yang berlaku dalam perniagaan saya secara aktif.*							
2	I am ready to make anything to be an entrepreneur. *Saya bersedia melakukan apa-apa sahaja untuk menjadi seorang usahawan.*							
3	I willingly took risk in my business. *Saya dengan rela mengambil risiko dalam menjalankan perniagaan saya.*							

Additional comment:

Construct: Entrepreneurial Behaviour
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your entrepreneurial behaviour *at that time.*

Pembolehubah: Tingkah Laku Keusahawanan
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang tingkah laku keusahawanan anda *pada masa itu.*

	Item (s)	**Importance**			**Clarity**			**Comment**
		1	2	3	1	2	3	
4	I am able to resolve conflicts and crises. *Saya dapat menyelesaikan konflik dan krisis perniagaan saya.*							
5	I can utilize all resources to run my business. *Saya dapat menggunakan semua sumber yang ada untuk menjalankan perniagaan saya.*							
6	I developed clear goal setting for my business. *Saya membangunkan penetapan matlamat yang jelas untuk perniagaan saya.*							

Additional comment:

Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your entrepreneurial intention *at that time.*

Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang niat keusahawanan anda *pada masa itu.*

Section	Item(s)	Clarity			Comment
		1	2	3	
4	The objective of this section is to understand the links between entrepreneurial intention and entrepreneurial behaviour among the Indigenous people in Peninsular Malaysia based on two situations; **(a) individual who do not take action and (b) individual who do not intend to act but who do take action.** Based on the scale, from **1 (strongly disagree)** to **7 (strongly agree),** please indicate your opinion for each statement below that best reflects your perception. *Objektif bahagian ini adalah untuk memahami hubungan antara niat keusahawanan dan tingkah laku keusahawanan dikalangan Indigenous people di Semenanjung Malaysia berdasarkan dua situasi; (a) individu yang tidak mengambil tindakan dan (b) individu yang tidak berniat untuk bertindak tetapi yang mengambil tindakan. Berdasarkan skala dari 1 (sangat tidak bersetuju) hingga 7 (sangat bersetuju), sila nyatakan pendapat anda untuk setiap pernyataan di bawah yang paling sesuai dengan persepsi anda.*				

Additional comment:

Construct: Entrepreneurial Intention
Instruction: Think about yourself *before you become an entrepreneur* and answer the question below about your entrepreneurial intention *at that time.*

Pembolehubah: Niat Keusahawanan
Arahan: Fikirkan tentang diri anda *sebelum anda menjadi seorang usahawan* dan jawab soalan di bawah ini tentang niat keusahawanan anda *pada masa itu.*

		Importance			**Clarity**			**Comment**
	Item (s)	1	2	3	1	2	3	
1	I try my best to start and run my own firm. *Saya berusaha sedaya upaya untuk memulakan dan menjalankan perniagaan saya sendiri*							
2	I am determined to create a firm in the future. *Saya berazam untuk mewujudkan perniagaan pada masa hadapan.*							
3	I have a very seriously thought of starting a firm. *Saya berfikir secara serius untuk memulakan perniagaan.*							
4	I have the firm intention to start a firm someday. *Saya mempunyai niat yang kukuh untuk memulakan perniagaan suatu hari nanti.*							

Additional comment:

Appendix E: Approval Letter for Conducting Research in *Orang Asli* Resettlement

JABATAN KEMAJUAN ORANG ASLI MALAYSIA
(JABATAN PERDANA MENTERI)
TINGKAT 3, 5, 20 & 20M, WEST BLOCK,
WISMA GOLDEN EAGLE REALTY,
142-C, JALAN AMPANG,
50450 KUALA LUMPUR

JAKOA

Ruj. Kami : JAKOA/PP.30.032Jld 46 (64)
Tarikh   : 19 November 2019

Nor Emmy Shuhada Binti Derani
No.43, Lorong 7, Taman Seri Inderapura
25320 Kuantan
Pahang Darul Makmur.

Puan,

KEBENARAN MENJALANKAN KAJIAN/PENYELIDIKAN DI PERKAMPUNGAN ORANG ASLI

Dengan hormatnya saya diarah merujuk kepada perkara tersebut di atas.

2.   Jabatan ini telah meneliti permohonan puan dan sukacita dimaklumkan bahawa permohonan untuk menjalankan kajian yang bertajuk *"Factors That Contribute To The Entrepreneurship Sustainability Among The Orang Asli Communities In Malaysia"* telah diluluskan. Pihak puan dibenar untuk menjalankan penyelidikan tersebut mengikut ketetapan seperti berikut:-

Tajuk	:	Factors That Contribute To The Entrepreneurship Sustainability Among The Orang Asli Communities In Malaysia
Tempat	:	Perkampungan Orang Asli Negeri Johor, Pahang & Negeri Sembilan
Tarikh	:	20 November 2019 – 20 November 2020

3.   Pihak puan adalah diminta supaya dapat mematuhi syarat-syarat seperti mana terkandung dalam borang permohonan seperti dilampiran **Appendix 1**. Jabatan ini boleh menarik balik kelulusan menjalankan kajian sekiranya pihak puan melanggar syarat-syarat yang ditetapkan. Di samping itu, puan juga diminta mengemukakan salinan *hard copy* dan **1** salinan *soft copy* kajian/penyelidikan yang telah dilakukan kepada JAKOA Ibu Pejabat (u.p Bahagian Perancangan dan Penyelidikan).

4.   Disarankan agar pihak puan berhubung terus dengan Pegawai Jabatan Kemajuan Orang Asli yang berkenaan untuk mendapatkan maklumat lanjut mengenai lokasi kajian dan sebagainya. Kerjasama pihak puan berhubung perkara di atas amat dihargai dan diucapkan ribuan terima kasih.
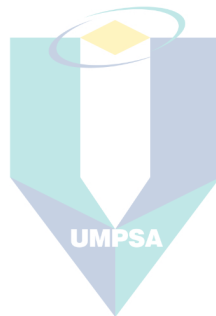
214

Sekian, terima kasih.

" BERKHIDMAT UNTUK NEGARA "

Saya yang menjalankan amanah,

(FAIRUS BINTI YAHAYA)
Bahagian Perancangan dan Penyelidikan
b.p Ketua Pengarah
Jabatan Kemajuan Orang Asli Malaysia

s.k

- Pengarah JAKOA Negeri Johor (07-2243901)

- Pengarah JAKOA Negeri Pahang (09-5156425)

- Pengarah JAKOA Negeri Sembilan & Melaka (06-7638815)

Appendix F: Conditional Approval to Conduct Research in *Orang Asli* Resettlement

JABATAN KEMAJUAN ORANG ASLI
KEMENTERIAN PEMBANGUNAN LUAR BANDAR
TINGKAT 3, 5, 20 & 20M, WEST BLOCK,
WISMA GOLDEN EAGLE REALTY,
142-C, JALAN AMPANG,
50450 KUALA LUMPUR

JAKOA

Ruj. Kami : JAKOA.PP.30.052 JLD21 (45)
Tarikh   : Januari 2022

Nor Emmy Shuhada binti Derani
No.43, Lorong 7
Taman Seri Inderapura
25320 Kuantan
PAHANG

Puan,

KELULUSAN BERSYARAT BAGI MENJALANKAN PENYELIDIKAN / KAJIAN DI PERKAMPUNGAN ORANG ASLI

Dengan hormatnya saya merujuk kepada perkara tersebut di atas.

2.   Jabatan ini telah meneliti permohonan puan dan sukacita dimaklumkan bahawa permohonan untuk menjalankan penyelidikan/kajian telah diluluskan. Butiran kelulusan adalah seperti berikut:

Tajuk	:	Determinants of Entrepreneurial Behaviour Among The Orang Asli in Peninsular Malaysia
Tempat	:	Perkampungan Orang Asli di Semenanjung Malaysia
Tarikh	:	1 Februari 2022 – 1 Februari 2023

3.   Pihak puan perlu mematuhi syarat-syarat yang ditetapkan di lampiran **Appendix 1** pada Borang Permohonan Penyelidikan/Kajian dan Peraturan-Peraturan yang telah ditetapkan oleh Kerajaan dalam tempoh kelulusan penyelidikan/kajian. Selain itu, terdapat syarat-syarat tambahan yang perlu dipatuhi seperti di **Lampiran A**.

4.   Jabatan ini boleh menarik balik kelulusan menjalankan penyelidikan/kajian sekiranya pihak puan melanggar syarat-syarat yang telah ditetapkan. Kerjasama

pihak puan adalah dimohon untuk mengambil maklum dan mematuhi sebarang perubahan kepada SOP yang diumumkan oleh Kerajaan dari semasa ke semasa.

5.   Puan diminta untuk mengemukakan salinan *hard copy* kepada JAKOA Ibu Pejabat (u.p Bahagian Perancangan dan Penyelidikan) dan 1 soft copy penyelidikan/kajian kepada unitkajian@jakoa.gov.my untuk Bahagian ini membentangkan hasil dapatan kajian/penyelidikan kepada Pengurusan Tertinggi JAKOA.

Sekian, terima kasih.

"WAWASAN KEMAKMURAN BERSAMA 2030"

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

(HAJAH SAPIAH BINTI DATO' MOHD NOR)
Ketua Pengarah
Jabatan Kemajuan Orang Asli Malaysia

s.k

- *Pengarah JAKOA Negeri Sembilan dan Melaka (Tel: 06-763 8615)*
- *Pengarah JAKOA Negeri Pahang (Tel: 09-515 6425)*
- *Pengarah JAKOA Negeri Selangor dan Wilayah Persekutuan (Tel: 03-5519 0375)*
- *Pengarah JAKOA Negeri Perak dan Kedah (Tel: 05-254 0009)*
- *Pengarah JAKOA Negeri Johor (Tel: 07-224 3901)*
- *Pengarah JAKOA Negeri Kelantan dan Terengganu (Tel: 09-744 3486)*

2

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1. Hendaklah merujuk dengan JAKOA Negeri/JAKOA Daerah berkaitan terlebih dahulu sebelum menjalankan sebarang program/aktiviti bagi memastikan urusan berjalan dengan lancar dan selamat serta mengelakkan perkara-perkara sensitif berkaitan masyarakat Orang Asli.

2. Responden/peserta hendaklah diberi penerangan yang jelas tentang program/aktiviti yang akan dijalankan dan kenapa mereka terlibat dalam program/aktiviti tersebut;

3. Responden/peserta bersetuju dan penyertaan adalah secara sukarela dan tidak melibatkan implikasi kewangan kepada responden/peserta.

4. Pematuhan sepenuhnya ke atas Prosedur Operasi Standard (SOP) am yang berkuat kuasa serta SOP-SOP berkaitan yang dikeluarkan oleh Kerajaan dari semasa ke semasa;

5. Semua petugas dan urus setia yang terlibat telah pun menerima vaksinasi lengkap dengan mengemukakan Sijil Digital Vaksinasi COVID-19 dan Kad Pengenalan sebagai pembuktian;

6. Petugas dan urus setia perlu menjalani ujian saringan COVID-19 dalam tempoh tiga (3) hari sebelum pelaksanaan program/turun kelapangan menggunakan kit yang diluluskan oleh Kementerian Kesihatan Malaysia. Individu yang didapati positif ujian tersebut **TIDAK DIBENARKAN SAMA SEKALI** menyertai program/ turun ke lapangan;

7. Kapasiti penggunaan dewan adalah 50% daripada kapasiti biasa dan mempunyai sistem vantilasi/pengudaraan berdasarkan garis panduan pengudaraan dan kualiti udara dalaman yang dikeluarkan oleh Jabatan Keselamatan dan Kesihatan Pekerjaan (JKKP);

8. Mematuhi protokol kesihatan yang ditetapkan oleh Kementerian Kesihatan Malaysia (KKM) dan pelaksanaan norma baharu seperti pemeriksaan suhu badan, mengimbas MySejahtera, penjarakan fizikal, penggunaan/penyediaan pensanitasi tangan dan pemakaian pelitup muka **SEPANJANG MASA PROGRAM BERLANGSUNG**; dan

9. Kehadiran calon, penemuduga dan urus setia yang bergejala, sedang dalam Perintah Kawalan Pergerakan Diperketatkan (PKPD), *Person Under Surveillance* (PUS) dan sedang dalam Perintah Kuarantin adalah **TIDAK DIBENARKAN SAMA SEKALI**.

Appendix G: Approval Letter to Conduct Research in *Orang Asli* Resettlement (Extended)

JABATAN KEMAJUAN ORANG ASLI
KEMENTERIAN PEMBANGUNAN LUAR BANDAR
TINGKAT 3, 5, 20 & 20M, WEST BLOCK.
WISMA GOLDEN EAGLE REALTY,
142-C, JALAN AMPANG,
50450 KUALA LUMPUR

JAKOA

Ruj. Kami : JAKOA.PP.30.052 JLD 21 (43)
Tarikh : 28 Januari 2022

Nor Emmy Shuhada binti Derani
No.43, Lorong 7
Taman Seri Inderapura
25320 Kuantan
PAHANG

Puan,

KELULUSAN BERSYARAT BAGI LANJUTAN MENJALANKAN PENYELIDIKAN/KAJIAN DI PERKAMPUNGAN ORANG ASLI

Dengan hormatnya saya merujuk kepada perkara tersebut di atas dan rujukan kami: JAKOA.PP.30.032 Jld 46 (64) pada 19 November 2019 dan kelulusan penyelidikan/kajian yang telah dikeluarkan pada 20 November 2019.

2. Jabatan ini telah meneliti permohonan puan dan sukacita dimaklumkan bahawa permohonan lanjutan untuk menjalankan penyelidikan/kajian telah diluluskan. Butiran kelulusan adalah seperti berikut:

Tajuk	:	Factors That Contribute To The Entrepreneurship Sustainability Among The Orang Asli Communities In Malaysia
Tempat	:	Perkampungan Orang Asli di Semenanjung Malaysia
Tarikh	:	1 Februari 2022 – 1 Februari 2023

3. Pihak puan perlu mematuhi syarat-syarat yang ditetapkan di lampiran **Appendix 1** pada Borang Permohonan Penyelidikan/Kajian dan Peraturan-Peraturan yang telah ditetapkan oleh Kerajaan dalam tempoh kelulusan penyelidikan/kajian. Selain itu, terdapat syarat-syarat tambahan yang perlu dipatuhi seperti di **Lampiran A**.

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4. Jabatan ini boleh menarik balik kelulusan lanjutan menjalankan penyelidikan/kajian sekiranya pihak puan melanggar syarat-syarat yang telah ditetapkan. Kerjasama pihak puan adalah dimohon untuk mengambil maklum dan mematuhi sebarang perubahan kepada SOP yang diumumkan oleh Kerajaan dari semasa ke semasa.

5. Puan diminta untuk mengemukakan salinan *hard copy* kepada JAKOA Ibu Pejabat (u.p Bahagian Perancangan dan Penyelidikan) dan 1 soft copy penyelidikan/kajian kepada unitkajian@jakoa.gov.my untuk Bahagian ini membentangkan hasil dapatan kajian/penyelidikan kepada Pengurusan Tertinggi JAKOA.

Sekian, terima kasih.

"WAWASAN KEMAKMURAN BERSAMA 2030"

"BERKHIDMAT UNTUK NEGARA"

Saya yang menjalankan amanah,

(HAJAH SAPIAH BINTI DATO' MOHD NOR)
Ketua Pengarah
Jabatan Kemajuan Orang Asli Malaysia

s.k
- Pengarah JAKOA Negeri Sembilan dan Melaka (Tel: 06-763 8815)
- Pengarah JAKOA Negeri Pahang (Tel: 09-515 6425)
- Pengarah JAKOA Negeri Selangor dan Wilayah Persekutuan (Tel: 03-5519 0375)
- Pengarah JAKOA Negeri Perak dan Kedah (Tel: 05-254 0009)
- Pengarah JAKOA Negeri Johor (Tel: 07-224 3901)
- Pengarah JAKOA Negeri Kelantan dan Terengganu (Tel: 09-744 3488)

2

1. Hendaklah merujuk dengan JAKOA Negeri/JAKOA Daerah berkaitan terlebih dahulu sebelum menjalankan sebarang program/aktiviti bagi memastikan urusan berjalan dengan lancar dan selamat serta mengelakkan perkara-perkara sensitif berkaitan masyarakat Orang Asli.

2. Responden/peserta hendaklah diberi penerangan yang jelas tentang program/aktiviti yang akan dijalankan dan kenapa mereka terlibat dalam program/aktiviti tersebut;

3. Responden/peserta bersetuju dan penyertaan adalah secara sukarela dan tidak melibatkan implikasi kewangan kepada responden/peserta.

4. Pematuhan sepenuhnya ke atas Prosedur Operasi Standard (SOP) am yang berkuat kuasa serta SOP-SOP berkaitan yang dikeluarkan oleh Kerajaan dari semasa ke semasa;

5. Semua petugas dan urus setia yang terlibat telah pun menerima vaksinasi lengkap dengan mengemukakan Sijil Digital Vaksinasi COVID-19 dan Kad Pengenalan sebagai pembuktian;

6. Petugas dan urus setia perlu menjalani ujian saringan COVID-19 dalam tempoh tiga (3) hari sebelum pelaksanaan program/turun ke lapangan menggunakan kit yang diluluskan oleh Kementerian Kesihatan Malaysia. Individu yang didapati positif ujian tersebut **TIDAK DIBENARKAN SAMA SEKALI** menyertai program/ turun ke lapangan;

7. Kapasiti penggunaan dewan adalah 50% daripada kapasiti biasa dan mempunyai sistem ventilasi/pengudaraan berdasarkan garis panduan pengudaraan dan kualiti udara dalaman yang dikeluarkan oleh Jabatan Keselamatan dan Kesihatan Pekerjaan (JKKP);

8. Mematuhi protokol kesihatan yang ditetapkan oleh Kementerian Kesihatan Malaysia (KKM) dan pelaksanaan norma baharu seperti pemeriksaan suhu badan, mengimbas MySejahtera, penjarakan fizikal, penggunaan/penyediaan pensanitasi tangan dan pemakaian pelitup muka **SEPANJANG MASA PROGRAM BERLANGSUNG**; dan

9. Kehadiran calon, penemuduga dan urus setia yang bergejala, sedang dalam Perintah Kawalan Pergerakan Diperketatkan (PKPD), *Person Under Surveillance* (PUS) dan sedang dalam Perintah Kuarantin adalah **TIDAK DIBENARKAN SAMA SEKALI**.

Appendix H: Approval Letter to Participate in Karnival Usahawan *Orang Asli* (KUOA) 2022

JABATAN KEMAJUAN ORANG ASLI
NEGERI PERAK DAN KEDAH
BANGUNAN KERAJAAN PERSEKUTUAN,
JALAN PANGLIMA BUKIT GANTANG WAHAB,
30000 IPOH,
PERAK DARUL RIDZUAN

JAKOA
JABATAN KEMAJUAN ORANG ASLI
TEL : 05-2540009.
　　　05-2530614
FAKS : 05-2559402

Ruj. Tuan　:
Ruj.Kami　: JAKOA.PK.B1/1/71 jld 8 (12)
Tarikh　　: 16 Jun 2022

Nor Emmy Shuhada Binti Derani
No. 43, Lorong 7
Taman Seri Inderapura
25150 Kuantan
PAHANG

Puan,

PERMOHONAN UNTUK MENYERTAI KARNIVAL USAHAWAN ORANG ASLI (KUOA) PERINGKAT KEBANGSAAN TAHUN 2022.

Dengan hormatnya perkara di atas dirujuk.

2.　Untuk makluman, pejabat ini telah menerima dan meneliti surat permohonan dari Puan Nor Emmy Shuhada Binti Derani untuk turut serta dalam Karnival Usahawan Orang Asli (KUOA) anjuran Jabatan Kemajuan Orang Asli (JAKOA) bertempat di Bulatan Sultan Azlan Shah, Meru, Ipoh, Perak pada 24 - 26 Jun 2022.

3.　Sehubungan dengan itu, pejabat ini menyokong dan tiada halangan bagi memberikan kebenaran kepada Puan Nor Emmy Shuhada Binti Derani untuk turut serta dalam Karnival Usahawan Orang Asli (KUOA) Peringkat Kebangsaan tahun 2022.

4.　Untuk makluman puan, penganjur tidak dapat menyediakan sebarang dana bagi tujuan kajian tersebut dan segala kos untuk perlaksanaan kajian ini adalah di bawah tanggungjawab pihak puan.

5.　Segala perhatian dan kerjasama pihak puan di dalam perkara ini adalah amat dihargai.

Sekian terima kasih.

"WAWASAN KEMAKMURAN BERSAMA 2030"
"BERKHIDMAT UNTUK NEGARA"
"*LUAR BANDAR SEJAHTERA*"

Saya yang menjalankan amanah,

(KHAIRUL ANNUAR BIN CHE ZAKARIA)
b.p Pengarah
Jabatan Kemajuan Orang Asli
Negeri Perak dan Kedah

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Appendix I: List of Publications

No	Title	Year	Journal/Newspaper
1	Indigenous Entrepreneurship Sustainability in Malaysia	2020	Global Business and Management Research: An International Journal
2	Bibliometric Review on Indigenous Entrepreneurship: Past Findings, Present and Ways Forward	2023	Journal of Advanced in Research in Business and Management Studies
3	The Role of TPB, Self-Reliance and Self-Sufficiency on Indigenous Entrepreneurial Behavior	2023	(Accepted) European Proceedings of Social and Behavioural Sciences (EpSBS)
4	From Intention to Behavior: The Role of the Theory of Planned Behavior (TPB) towards Creating the *Orang Asli* Entrepreneur in Pahang and Perak	2023	(Accepted) European Proceedings of Finance and Economics (EpFE)
5	'Usahawan *Orang Asli* hanya ada 327 orang'	Friday, 30 June 2023	Kosmo! (Newspaper)

اونيۏرسيتي مليسيا ڤهڠ السلطان عبدالله

UNIVERSITI MALAYSIA PAHANG
AL-SULTAN ABDULLAH

Indigenous Entrepreneurship Sustainability in Malaysia

Nor Emmy Shuhada binti Derani
Universiti Tenaga Nasional
Email: Emmy@uniten.edu.my

Mazita Mokhtar*
Universiti Malaysia Pahang

Wan Noordiana Wan Hanafi
Universiti Tenaga Nasional

Abstract
The government of Malaysia endorsed the Eleventh Malaysia Plan aimed to be developed county in the numerous crucial dimensions including economics, political, social, spiritual, psychological and also cultural. The government of Malaysia underpin efforts to help cultivate all level of people including the Orang Asli communities. One of the initiatives by the government is through entrepreneurship where entrepreneurship increase job creation as well as economic growth. Nevertheless, the business or product produce by the Orang Asli entrepreneurs in Malaysia are often non-permanent, constant and sustained despite various initiatives commenced by the government. Therefore, this study aims to propose conceptual framework using the theory of planned behavior to capture a reasonable way for the Orang Asli to sustain their business. Moreover, this study aims to determine whether the value placed in the theory of planned behavior affects the level of entrepreneurial intention among the Orang Asli. Therefore, the insight into the factors of sustainable entrepreneurship can be an essential step towards designing a practical and durable policy mechanism for the implementation of the theory of planned behavior when developing entrepreneurial initiatives or programs to the Orang Asli communities. Results from this paper will be conducted using survey method, adapted questionnaire as the main instrument. A total of 150 indigenous from the Pahang, Perak and Selangor state will be selected as respondents. To analyze the results descriptive analysis will use including reliability and validity test using Cronbach Alpha and the relationships between independent variables and dependent variables will be tested using Pearson Correlation.

Purpose: To determine the insight into the elements of sustainable entrepreneurship intentions and actions among the Orang Asli in Malaysia.

Keywords: entrepreneurship, Orang Asli, sustainable, sustainable entrepreneurship, theory of planned behaviour.

Introduction
The Eleventh Malaysia Plan, 2016-2020 aims that by the year of 2020, Malaysia will be developed country along various dimensions including economics, political, social, spiritual, psychological and also cultural. Besides, the Eleventh Plan endorsed the government is looking serious in giving commitment especially in wellbeing, growth and prosperity of the people in Malaysia. Malaysia looks seriously on economic development to ensure that this country remains competitive with developing countries globally. To ensure the Eleventh Malaysia Plan successfully achieved, the government reinforce efforts to help develop all level of people

including the Orang Asli communities in Malaysia (BERNAMA, 2017).

The living standards of the Orang Asli communities particularly in East Coast Region have immensely improved and upgraded which is aligned with the Federal Government's intensive effort to ensure that the Orang Asli communities are not relegated or side-lined in the nation's transformation programme that government has been planned over the years. Due to that, the government has provided various training and program starting in the Seventh Malaysia Plan until the Eleventh Malaysia Plan to improve and develop socio-economy among Orang Asli communities this is including by providing education and skill empowerment programme and also job creation through sustainable tourism growth.

Entrepreneurship is important for economic growth (Doran, McCarthy & O'Connor, 2018). Government of India for example has introduced and support innovation through entrepreneurship as one of the effort to increase job creation among its nation due to job creation is a foremost challenge facing by India (Global Entrepreneurship Summit, 2017). Canada also agreed with this where Canada declared indigenous entrepreneurs can fuel Canadian economic growth. This is because indigenous owned and operated their own businesses contribute and strengthen Canada's economy with valuable service and products they produce (Gladu & Power, 2017). Thus, entrepreneurs among communities of Orang Asli in Malaysia is a key to build a healthy economy on-reserve, job creator and improve standard of living where aboriginal entrepreneurs are key to building a healthy economy on-reserve, providing jobs, and slowing the outflow of money and young people who are leaving to look for economic opportunities.

Information revealed by JAKOA is that there are more than eight hundred of Orang Asli entrepreneurs in the whole country and the number is continually increasing. Various financial and non-financial assistance, trainings, courses and encouragements are continually provided especially by the Ministry of Rural and Regional Development and the Department of Orang Asli Development (JAKOA) in uplifting the Orang Asli entrepreneur. In fact, the government often expressed a desire to integrate Orang Asli into mainstream business and bringing them to national and international market economy rather than confined to self – sustained businesses (D. B. Simpong, Zahari, Hashim, Hadi, & Othman, 2018).

However, the business or product produce by the communities of Orang Asli in Malaysia are often non-permanent, stable and prolonged despite various initiatives undertaken by the government including gazette their area to safeguard the interests of the Orang Asli communities in the future (Hamdan, 2017). Besides, government also advised the Orang Asli communities not to be easily influenced by outsiders who are trying to take advantage and have a certain agenda that may be affect their lives. Beside the other factors such as low income, poor health, lower levels of education, high rates of criminality, unemployment, and inadequate housing all constitute formidable socio-economic barriers to Orang Asli entrepreneurship (Langton, 2013).

Entrepreneurship is a field which can play an important role to society and the country. Among them are creating job opportunities and reducing unemployment rate, improving living standards and reducing poverty as well as reducing social problems and crime in society. Thus, the aim of this study is to propose a framework indigenous entrepreneurship sustainability in Malaysia.

Literature Review
Who are the Orang Asli?
The Orang Asli is the indigenous minority peoples of Peninsular Malaysia. Word of the 'Orang Asli' is refers to original peoples or first peoples. The Orang Asli is consist of the 18 sub-ethnic groups generally classified for official purposes under Negrito, Senoi and Proto-Malay

(JAKOA, 2018). Figure 1 shows the distribution of Orang Asli sub-ethnic groups in Peninsular Malaysia. Socio-economic of the Orang Asli now has changed over the last 20 years where their economy is more modern now and not primitive as before. However, in the rapid development now less impact on them as expected due to the poor planning and lack of carefully rigged to take the real aspirations of readiness factors and these groups (Ali@Zainalabidin, 2006). Although changes to the advancement was happen, but the changes occur in a slow pace. There is still have the impact such as poverty, lack in education and migration among indigenous peoples.
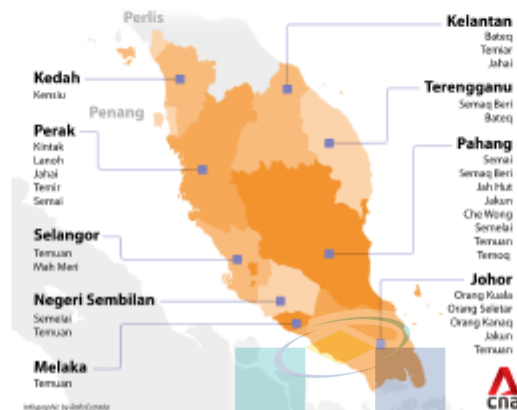

Figure 1: Orang Asli Sub-Ethnic Group
Source: Channel News Asia (2019)

Indigenous Entrepreneurship

Entrepreneurship is crucial in driving economic growth of a country while others stated in some forms, entrepreneurial activity becomes more important than other factors (Doran et.al, 2018). Entrepreneurship can be defined as measured typical quantitatively through the rate of self-employment or the number of new firms that created (Acs, 2006). Due to that, Malaysia also not exceptional in these initiatives in order to have the competitive advantage with other developed countries. One of the initiatives by the Malaysia government through the Eleventh Malaysia Plan is to reinforce efforts to help develop all level of people including the indigenous communities in Malaysia (East Coast Economic Region, 2018).

While business operation and entrepreneurship is a relatively old, well-established discipline, modern Indigenous business enterprises and entrepreneurship is a relatively new area by comparison (Mapunda, 2007). Indigenous entrepreneurship can be defined as enterprise related activities carried out by indigenous people (Peredo et al., 2004: 3) who have been referred to as indigenous entrepreneurs or grassroots innovators (Gupta et al., 2003; Srinivas & Sutz, 2008). Although indigenous entrepreneurs may be found in both developed and developing countries, they form a more significant proportion of the population in developing countries (Gupta et al., 2003).

The barriers to Orang Asli Entrepreneurship Intentions.

Despite massive and acceptable entrepreneurship theory by scholars nowadays, common agreement on the nature of the phenomenon among researchers regarding entrepreneurship intentions among the Orang Asli (Uygun & Kasimoglu, 2013). One of the barriers faced by the Orang Asli is the role of personal background. Personal backgrounds formed by factors such as role models, traits and experience, and contextual terms were addressed. Due to the traits approach, the common traits of entrepreneurs which lead them to start a business and succeed (DeCarlo & Lyons, 1980) could be determined and a relation between these traits and entrepreneurial behaviour could be established (Jenks, 1950). This study supported by Brockhaus & Horwitz, 1986; Cooper, 1986; Timmons, 1986; Scott & Twomey, 1988; Scherer, Adams, Carley, & Wiebe, 1989; Matthews & Moser, 1995; Robinson et al. 1991; Katz, 1992; Kolvereid, 1996), as cited by Uygun & Kasimoglu (2013) stated that role models play vital roles in entrepreneurship as a demographic variable were there is a presented evidence that company founders were affected by role models in their decisions to become an entrepreneur. Besides the role of personal background, systematic discrimination, including historically repressive government legislation and deep-seeded societal bias, has led to the Orang Asli communities being largely disadvantaged in their business circles (Isabella, 2020). Many issues and challenges the Orang Asli still face with. People still have the negative attitude and perceptions towards the Orang Asli and their businesses. The Orang Asli communities need to endure stereotypes and an underlying misconception to run their business (Isabella, 2020).

Sustainable Entrepreneurship

In comparison with regular entrepreneurs, sustainable entrepreneurs are considered to face specific challenges when establishing their businesses. These challenges may arise because of the discrepancy between the creation of private value and the creation of social value (Pacheco, Dean, & Payne, 2010; Pinkse & Groot, 2015). Sustainable Entrepreneurship encompasses Social Entrepreneurships core objectives, creating social impact, solving societal problems and enhancing social wealth (Bell & Stellingwerf, 2012). Sustainable entrepreneurship are the balance of people planet and profit.

Figure 2: Sustainable Entrepreneurship is the blending of People, Planet & Profit.

Theory of planned behavior (TPB)

The TPB assumes that the immediate antecedent of a specific voluntary deliberative behavior is a person's intention to engage in the behavior, while intention follows from the person's attitudes, subjective norm, and perceived behavioral control (PBC) which are the proximal antecedents of a behavioral intention (refer Figure 3 below). The TPB has been successfully used to predict and explain a wide range of behaviours. TPB hypothesizes that the immediate

determinant of behaviour is the individual's intention to perform, or not to perform that behaviour. Intentions are, in turn, influenced by three factors, which is (1) Attitude, (2) Subjective norms and (3) perceived behavioral control.
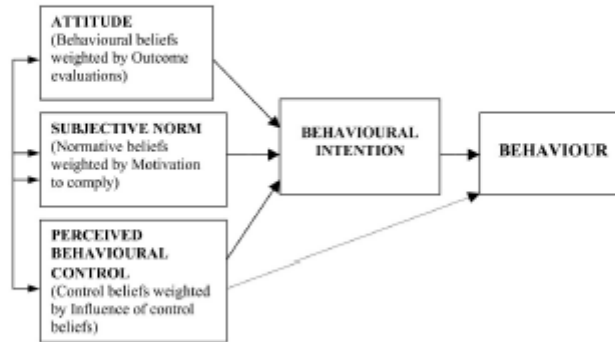

Figure 3: Theory of Planned Behaviour

According to Koe and Majid (2014), generally intention refers to the mental state in which an individual directs attention and action towards a particular goal or objective to achieve a specific aim. This study will be using the attributes for theory of planned behaviour from Sargani, Zhou, Raza, and Wei (2020), which suggest the following attribute for sustainable entrepreneurship intention:

a) *Sustainable attitude*: sustainability attitudes are the personal values and beliefs that affect one's entrepreneurial intention (Sargani et al., 2020)
b) *Sustainability norms*: deal with the likely approval or disapproval of a target action by friends, family members, coworkers, teachers, family elders, and so forth. Because entrepreneurship involves the sequential encounter and institution of information through action and interaction (McMullen & Dimov, 2013)
c) *Sustainability behaviours*: Forces or influences from societal values stimulate an entrepreneur's sustainable behaviour (Sargani et al., 2020)
d) *Opportunity recognition*: refers to the process by which entrepreneurs seek out or create something that provides potential market value and benefits (Sargani et al., 2020)

Discussion and Conclusion
Orang Asli is a community that is easily threatened by current development flows. Development that has been implemented and planned by the state or federal as well as private parties usually reflects the maximum use of natural resources besides its main purpose is to generate more revenues for state and also to improve the standard of living among local communities by offering and creating more job opportunities (Seow, Mohamed, Jamiran, Abidin, Zulhilmi, Sam & Aminah, 2013). Although Orang Asli communities in Malaysia are promised with economic and social opportunities by the government such as land ownership, employment opportunities, education and status, this transformation program are still not comprehensive and sufficient (Seow et. al., 2013).
Based on the studies that has been done by scholars and parties, it found that there is an awareness from the Orang Asli communities themselves regarding the importance of the

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development especially when it comes to their aspects of convenience, basic needs and infrastructure such as roads and economy as well as has their own income for continue living (Seow et. al., 2013). Thus, there is an increasing number of entrepreneurs from Orang Asli communities in Malaysia who involved with their own entrepreneurship mainly selling forest products and produces (herbs, tripolis and wooden based products). Besides an increasing number of entrepreneurs, these communities also participate in the basic courses and entrepreneurship program that has been provided by the government in which government has provided provision of aid in the form of equipment, machinery and also entrepreneurship courses and training that aligned with government objective in creating a powerful Orang Asli entrepreneur especially in the field of small and medium enterprises (SMEs).

It could be concluded that it is important to have the right attitude, norms and among Orang Asli as it could help in increasing the Orang Asli entrepreneurship intention. This study will combine the theory of planned behavior, the theme of applying the theory of planned behaviour in the study is to capture a reasonable way for Orang Asli to continue to maintain sustainability in the future with the continuous improvement of the sustainable development level of entrepreneurial intention among Orang Asli. Thus, empirical study shall be conducted to examine how theory of planned behaviour could help in entrepreneurship intention among Orang Asli. Figure 4 below are the propose conceptual framework:
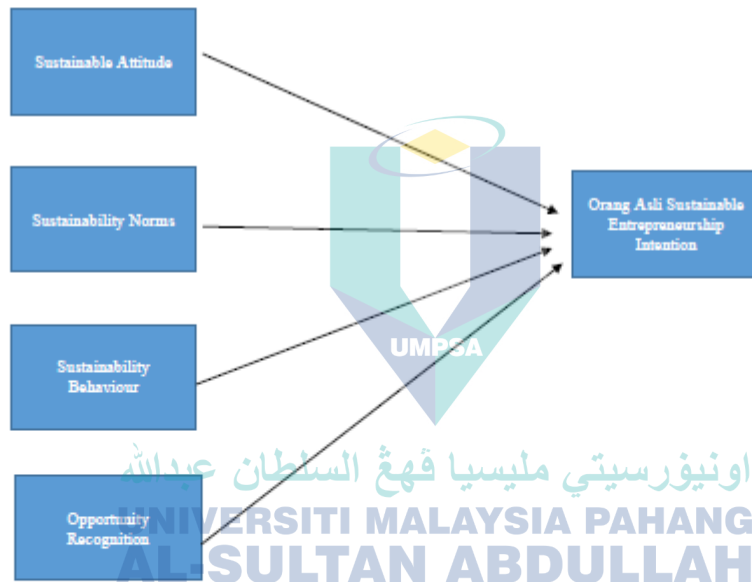
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