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# The Effect of Planned Behaviour Theory on Agropreneurship Intention: The Moderating Role of Gender

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## ABSTRACT

*Agriculture is the second largest contributor to Sabah's Gross Domestic Product (GDP), with an average contribution of 24% annually. It is also proven in many third world countries that investment in agriculture plays a crucial role in poverty reduction, providing more job opportunities, and ensuring food security. Sabah recorded the highest rate of unemployed youth in 2018 and remained as the state with the highest score of hardcore poor people in Malaysia; thus, Sabah will be economically benefited from agricultural growth. However, the number of youth participation in the agriculture sector is still low at a rate of approximately 15%. Agricultural entrepreneurship or also known as agropreneurship among youth, needs to be broadened to promote greater opportunities in the agriculture sector. Therefore, using the Theory of Planned Behaviour (TPB), this research examines agropreneurship intention and the moderating effect of gender among youth in Sabah, Malaysia. A total of 382 youth participated in the survey. Partial Least Squares-Structural Equation Modeling 3.0 was used to analyse the collection of data. The results found that attitude of the youths towards agropreneurship and perceived behavioural control have a positive effect on agropreneurship intention. Meanwhile, subjective norms*

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*did not have a significant effect on agropreneurship intention, and gender has no moderating effect. In line with the first Sabah Agriculture Blueprint 2021–2030, this study intends to contribute to the formulating of policies and relevant programmes, especially in accelerating agropreneurship participation. It also contributes to Sabah's aspiration of becoming a hub for the agriculture sector in this region.*

**Keywords***: agropreneur, agropreneurship intention, agricultural entrepreneurship, entrepreneurial intention, gender, Theory of Planned Behaviour*

## INTRODUCTION

Food security is a major worldwide concern and will continue to be a global issue for the next 50 years and beyond (Rosegrant, 2003). Food security refers to the state of having reliable access to sufficiency and nutritious in food. The biggest challenge for ensuring global food security is to sustain agricultural growth in order to increase productivity and food supplies (Singh, Chintagunta, Agarwal, Kureel & Kumar, 2020). Thus, to ensure that food security is established, there is a need to design programmes and policies for agricultural growth unceasingly. Among the critical initiative is to encourage youth participation in agropreneurship (Yusoff, Ahmad, & Halim, 2016b). Agropreneur or agricultural entrepreneurs continuously develop more new products and strive to increase not only the production aspect but also the food quality, innovations in the business process, distribution, and marketing (Pindado & Sánchez, 2017; Dias, Rodrigues, & Ferreira, 2019).

Apart from food security, agriculture remains a significant part of Malaysia's economy. In 2018, the agricultural sector contributed 7.3% (RM99.5 billion) to the Gross Domestic Product (GDP) (Malaysian Department of Statistics, 2020). Evidently, the agriculture sector provides job opportunities, increase food security, improve the food self-sufficiency level (SSL), and reduce the reliance on food imports. It is also widely known that in developing countries, investment in agriculture is more effective in reducing poverty than in the non-agricultural sector (Christiaensen, Demery, & Khul, 2011). The agriculture entrepreneurship is well suited for Sabah state since Sabah recorded the highest number of unemployed youth as well as the highest number of extremely poor people in Malaysia.

Given the importance and contribution of the agriculture sector, Malaysia's government has placed great emphasis on the development of modern agriculture in this country by promoting more agricultural entrepreneurship or agropreneurship in this field. In addition to providing various monetary and non-monetary assistance for the agriculture sector, the government is also actively promoting the sector through the slogan 'agriculture is businesses' to attract more youth participation in agropreneurship. This slogan aims to create awareness and encourage more people to view agriculture as an entrepreneurship activity that generates income rather than just for self-consumption (Yusoff, Ahmad, & Halim, 2016a). Recently, Sabah launched the first blueprint for the agriculture sector. The ten-year blueprint or known as Sabah Agriculture Blueprint 2021–2030, aims to boost the agriculture sector to ensure food security and attract public participation, especially among youth (eBook Sabah Agriculture Blueprint 2021–2030).

Unfortunately, although the Malaysian government has shown considerable amount of intention to modernise the agriculture sector, the local youth is generally still uninterested in agropreneurship (Kamaruddin, Abdullah & Ayob, 2018; Yusoff *et al*., 2016a). The youth perceived agriculture with negative images, such as filthy, exhausting, and uncertain income (Abdullah & Sulaiman, 2013). According to the numbers, only 15% of youth participated in the agriculture sector (Abdul Kadir, 2014). Many of the individuals found to be involved in agropreneurship such as farming were aged 50 years and above (Ahmad, 2020). Therefore, future agropreneurs should be groomed and familiarised with the sector, especially among the youth (Yusoff, 2017). The growing global demand for agricultural products provides great potential to develop more youth agropreneur. Youth agropreneur is the key to explore and build the agro-food industry into becoming a competitive and sustainable industry.

Therefore, it is crucial to identify factors that influence youth intention to get involved in the agricultural sector. The main purposes of this research are to examine the relationship between each of the Theory of Planned Behavioral (TPB) dimensions (attitude, perceived behavioural control, and subjective norm) and agropreneurship intention among youth in Sabah, Malaysia, and the moderating effect of gender. TPB is one of the most influential factors affecting entrepreneurial orientation. However, TPB

is rarely used in predicting agropreneurial intention. This can be seen in some research that tend to overlook the agricultural sector for an extended period (Fitz-Koch, Nordqvist, Carter & Hunter, 2017). Through the findings, results indicate males are seen to dominate the agriculture sector which is imperative to investigate the moderating effect of gender on the relationship between TPB and agropreneurial intention. However, there is a possibility that with the current technology and advancement, female intention to participate in agropreneurship are said to be expedited.

## LITERATURE REVIEW AND HYPOTHESES

### Agropreneurship Intention

Agropreneurship aims to modernise and promote the establishment of enterprises in the agricultural industry. At the same time, it could be considered as an attempt to establish an organisation that combines the innovative aspect of agriculture. An agricultural entrepreneur or agropreneur is also known as a person who makes improvements that leads to higher agriculture production (Dias *et al*., 2019). Agropreneurship has become increasingly important in both agriculture and entrepreneurship, particularly in the definition of new and modern agriculture (Yusoff, Ahmad, & Halim, 2017), where innovation, satisfaction, and new consumer expectations are the primary concern in the agriculture sector (Nnodim & Aleru, 2020).

On the other hand, the ability of the intention to predict human behaviour is the key argument of entrepreneurial intention studies. Intention can be defined as a cognitive predictor of a person's readiness to execute a given behaviour (Shook & Bratianu, 2008). Entrepreneurial intention refers to 'the conscious state of mind that precedes action and directs attention toward entrepreneurial behaviours, such as starting a new business and becoming an entrepreneur' (Moriano, Gorgievski, Laguna, Stephan, & Zarafshani, 2012, p. 165). Accordingly, agropreneurial intention can be defined as a person's willingness to be self-employed by creating a new agricultural- based business venture to pursue capital (Yussof, *et al*., 2016b). Among the competing intention models used in numerous intention studies is the Theory of Planned Behavior (Ajzen, 1987).

## Theory of Planned Behavior

The Theory of Planned Behavior (TPB) is an extension of the Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). These models are based on the assumption that individuals make rational, reasoned decisions to participate in specific behaviours by evaluating the available information. The success of behaviour is determined by the person's intention to participate in the process, influenced by the ease with which it can be, their belief to overcome the barriers, and the perceptions of significant others (Ajzen, 2002).

Extensive research and meta-analytical reviews provide strong empirical support for TPB as a powerful model to explain and understand entrepreneurial intention (Vamvaka, Stoforos, Palaskas, & Botsaris, 2020). The ability of a TPB model to predict the entrepreneurial intention in previous research using the value of variance was about 35% in the U.S.A. (Krueger,Reilly, & Carsrud, 2000), 27% in South Africa (Gird & Bagraim, 2008), and 40% in Turkey (Ozaralli & Rivenburgh, 2016). According to Cohen (1988), the value of variance that exceeds 26% is substantial. In short, the TPB model provides a substantial explanation of entrepreneurial intention.

## The influence of attitude towards agropreneurship on agropreneurship intention

In this study, attitude towards agropreneurship is defined as the desire or not keen towards agropreneurship activities based on their individual's perception of agropreneurship (Chen & Lai, 2010; Krueger *et al*., 2000; Liñán & Chen, 2009). Ajzen and Fishbein (2000) defined attitude as the general feeling of an individual's favourableness towards anything that can evoke a response from an individual. Attitude towards a specific object will automatically occur if individuals hold a belief about an object. Zampetakis, Anagnosti and Rozakis (2013) carried out an analysis and found that the attitude towards agropreneurship influence the youth's agropreneurship intention in Greece and India. Another empirical evidence among youth in South Africa indicate a higher entrepreneurial attitude that led to greater consequences of agropreneurship intention (Saheed &

Kavoos, 2016). Similarly, a study conducted by Ambad and Damit (2016) among undergraduate students in Malaysia found that personal attitude is the most significant predictor of entrepreneurial intention compared to other TPB dimensions (Beta value=0.667). Additionally, a meta-analytic study by Schlaegel and Koenig (2014) showed a greater understanding of entrepreneurship by those with positive attitudes towards entrepreneurial practices. The youth's positive attitude towards agropreneurship, such as enthusiasm and determination, encourage them to be involved in agropreneurship (Yusoff, Ahamd & Halim, 2017). In short, the attitude towards agropreneurship is, therefore, expected to increase agropreneurship intention. Thus, the following the first hypothesis of this study is formulated:

Hypothesis 1: Attitude towards agropreneurship positively influences agropreneurship intention.

## The influence of perceived behavioural control (PBC) on agropreneurship intention

Perceived behavioural control is the individuals' ability to control the probable consequences and their belief in overcoming challenging encounters in the agropreneurship process (Ajzen, 1991; Ajzen, 2002; Kolvereid, 1996). Lately, PBC has been debated among scholars due to the ambiguity of the empirical findings concerning its effect on intention, partly because of the uncertainty over its conceptualisation and operationalisation (Vamvaka *et al*., 2020; Yap, Othman, & Wee, 2013). Originally, Ajzen (1985) developed PBC as a one-dimensional construct, almost similar to Bandura's (1977) social learning self-efficacy paradigm, which is the perception of an individual's ability to execute courses of action required to deal with prospective situations. The belief that the PBC and self-efficacy processes are mostly similar has inspired some researchers to replace PBC with the self-efficacy construct in their studies (Krueger *et al*., 2000; Moriano *et al*., 2012). However, the current study examined PBC using the initial unidimensional construct developed by Ajzen (1985).

It has been found that youth who recorded a high level of PBC, have better perception of business viability (Yusoff, Ahmad & Halim, 2019). In the aspect of agropreneurship behaviour, PBC is considered to help

establish an agro-based enterprise (Eid, Badewi, Selim & El-Gohary, 2019). Equivalently, individuals who are confident that the potential outcomes of agropreneurship would be more motivated to venture into agropreneurship. PBC in regard to agropreneurship intention among youth is highly probable, due to their inclination towards challenging and harsh conditions naturally found in the agricultural sector, which could instigate their interest in agropreneurship (Yusoff *et al*., 2017). Therefore, the second hypothesis is formulated:

Hypothesis 2: Perceived behavioural control positively influences agropreneurship intention.

## The influence of subjective norm (SN) on agropreneurship intention

Although it has been theorised that individuals with higher subjective norms will, in turn, have higher levels of entrepreneurial intentions, the findings are inconsistent (Luc, 2018). Subjective norms refer to the support from the key person or group of people on a particular decision. Subjective norms are determined by the perceived social pressure to comply with others' views (Ajzen, 1991). In this study, the subjective norms consist of support from family, close friends, and colleagues, as proposed by Kolvereid (1996).

In previous studies, the effect of subjective norms on intention formation proved to be generally weaker than the influence of attitudes (Ham, Jeger, & Ivković, 2015). Furthermore, Krueger, Reilly, and Carsrud (2000) found that subjective norms are not correlated with individuals' intention to set up their businesses. Interestingly, if the person possesses a high internal locus of control and has a strong orientation towards taking action, subjective norms are less predictive of intentions (Ajzen, 1987; Bagozzi, Baumgartner & Yi, 1992).

However, numerous research works found that subjective norms have a significant influence on entrepreneurial intention. The study conducted by Soon, Rahman, and Nadia (2016) found that subjective norms have the strongest effect on entrepreneurial intention among youth in public universities in Malaysia. Similarly, the meta-analytic test conducted by

Schlaegel and Koenig (2014) found that subjective norms positively influenced the entrepreneurial career choice. A recent study conducted among 523 students from different universities in China Zhejiang province revealed that subjective norms positively influence entrepreneurial intention (Shi, Yuan, Bell & Wang, 2020). Furthermore, subjective norms are essential for explaining agropreneurship intention, especially among youth in Malaysia (Awang, Amran, Nor, Ibrahim, & Razali, 2016; Saraih, 2019). Therefore, the third hypothesis is suggested:

Hypothesis 3: Subjective norm positively influencing agropreneurship intention.

## The Moderating Role of Gender on Theory of Planned Behaviour and Agropreneurship Intention

Gender remains an area in which specific business education initiatives may be created to reduce gender influence in the development of new businesses. Besides that, Haus, Steinmetz, Isidor and Kabst, (2013) found that women are far less likely than men to turn their thoughts into action. The results of research by Indarti and Rostiani (2008) and Ooi and Ahmad (2012) revealed that the link between gender and entrepreneurial purpose is substantial. Another research by Brenner, Pringle, and Greenhaus (1991) suggested that women favour opportunities that could improve their potential skills and abilities, which encourage them to seek appropriate jobs that fit their needs. In contrast, men prefer higher income, uncertainties, and scrutiny (Verheul, Thurik, Grilo & Van der Zwan, 2012). Thus, the socio-cultural element that influences entrepreneurship may have different effects on both genders (Karimi *et al*., 2013). Majority of registered entrepreneurs in Malaysia are males, whereas women only owned 20.6% of the business establishment. Moreover, women entrepreneurs account for only 9.8% of the total ASEAN population (SMECorp, 2019). In general, the agriculture sector is a male-dominated job (Shisler & Sbicca, 2019). Therefore, based on the above findings, attitude towards agropreneurship, PBC, and subjective norms are projected to indirectly influence youth's intention to become agropreneurs through the moderating role of gender. Thus, the following hypotheses are constructed:

Hypothesis 4a: Gender moderates the relationship between attitude towards agropreneurship and agropreneurship intention. The impact of attitude towards agropreneurship on agropreneurship intention is higher among male youth and lower among female youth.

Hypothesis 4b: Gender moderates the relationship between perceived behavioural control and agropreneurship intention. The impact of perceived behavioural control on agropreneurship intention is higher among male youth and lower among female youth.

Hypothesis 4c: Gender moderates the relationship between subjective norms and agropreneurship intention. The impact of subjective norms on agropreneurship intention is higher among male youth and lower among female youth.

## Conceptual framework

The framework of this study is shown in Figure 1. The independent variables are the three dimensions of TPB, namely, attitude, perceived behavioural control, and subjective norms, while gender is used as a moderator.

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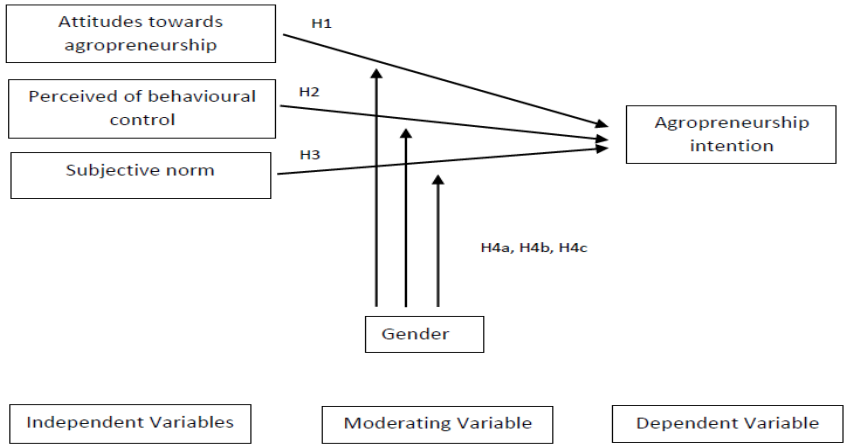


**Figure 1: Conceptual Framework**

## METHODOLOGY

### Respondent Profile

Respondents of this study are youth aged ranging from 18 to 30 years old from Sabah. This definition is based on the new amendment made to the Youth Societies and Youth Development Act (Amendment) Bill 2019. Respondents were selected based on the eligibility criteria established for the selection of the samples. A total of 400 questionnaires were distributed to youth in Sabah. After removing questionnaires with incomplete answers and irrelevant, the remaining samples consisted of 382 respondents (191 males and 191 females). Most of the respondents were aged between 18 to 20 (202), demonstrating a valid per cent of 52.9%. Out of 382 respondents, 108 respondents were between 21 and 23 years old (28.3%). Respondents with the age of 24–26 were 16.8% (64); meanwhile, there were only 8 (2.09%) respondents aged 27–30. With regards to the respondents' educational level, the data showed that the majority of the respondents were Diploma's holders or 52.9% (202), which exceeded those with SPM/ STPM/Sijil SKM qualification or 27.7% (106) of the total respondents.

Bachelor's degree holder respondents represented approximately less than half of the SPM/STPM/*Sijil SKM* respondents or 17.3% (66). Additionally, 6 (1.6%) and 2 (0.5%) respondents were Master's holder and a doctorate's holder, respectively.

### Sampling Technique and Data Collection Method

Convenience sampling was used as the sampling technique in this study. Convenience sampling refers to the collection of information from sample who are accessibly available to provide it. Convenience sampling is perhaps the best way to quickly and efficiently obtain information (Sekaran & Bougie, 2016). The self-administered questionnaire was used to collect data in-person, while electronic questionnaires were sent to the population of youth in several colleges and universities in Sabah. The data collection was conducted in March 2020, and the information obtained was analysed using the statistical Smart PLS 3.2.9 software.

### Measurement

Measurements used in this study were adapted and modified from previous research. Firstly, attitude towards agropreneurship employed six items adapted and modified from Liñán and Chen (2009). The second measurement; perceived behavioural control (PBC) was also measured using six adapted and modified items from Kolvereid (1996). Thirdly, the independent variable, subjective norm (SN), was measured using four items, as suggested by Autio, Keeley, Klofsten, Parker and Hay (2001). The six items used for the dependent variable were developed by Thompson (2009), which have been adapted and modified. A 5-point Likert scale was used to reflect the respondents' answers.

## DATA ANALYSIS AND RESULT

### Reliability and Validity of Measurement

In PLS-SEM, the first stage is to perform the measurement assessment to ensure that all variables' validity and reliability are satisfactory prior to

hypotheses testing. In this stage, the following assessments were performed:

i. Internal consistency – Cronbach's Alpha, Composite reliability, ρA-Dijkstra – Henseler's rho,
ii. Convergent validity – Factors loading and Average Variance Extracted-AVE), and,
iii. Discriminant Validity – Fornell and Larcker Criterion, Cross Loadings and Heterotrait-Monotrait Ratio of Correlations (HTMT)

As shown in Table 1, only 1 item from PBC was removed due to low loading (less than 0.7), as suggested by Chin (1998). After the item was removed, all internal consistency and convergent validity were satisfactory. Each construct achieved the composite reliability coefficients above the recommended cut-off of 0.7 (see Table 1). Therefore, the items within each variable show high internal consistency and high reconstruction of the findings, as suggested by Fornell and Larcker (1981).

**Table 1: Internal Consistency and Convergent Validity**

| Variables and Items | Loading | Composite Reliability | AVE |
|---|---|---|---|
| **Agropreneurship Intention (AI)** | | **0.952** | **0.768** |
| I intend to start my own agropreneurship business in the future. | 0.864 | | |
| I am constantly looking for agropreneurship opportunities. | 0.860 | | |
| I start saving to have my own agropreneurship business. | 0.867 | | |
| I read books on procedures for initiating agropreneurship business. | 0.847 | | |
| I make plans to start my own agropreneurship business. | 0.919 | | |
| I dedicate time to learn how to create an agropreneurship business. | 0.898 | | |

| **Attitude** | | **0.921** | **0.660** |
|---|---|---|---|
| In my opinion, being an agropreneur has more advantages than disadvantages for me. | 0.724 | | |
| I like to make a career as an agropreneur. | 0.837 | | |
| If I had the opportunity, I would start my own agropreneurship business. | 0.854 | | |
| If I had the resources, I would start my own agropreneurship business. | 0.775 | | |
| In my opinion, being an agropreneur gives me great satisfaction. | 0.847 | | |
| Among several options, I would rather choose to become an agropreneur as a career. | 0.831 | | |
| **PBC** | | **0.854** | **0.543** |
| If I wanted, I could easily become an agropreneur. | 0.759 | | |
| In my opinion, by becoming an agropreneur, I would have sufficient control over my business. | 0.794 | | |
| There are very few circumstances outside my control that may prevent me from becoming an agropreneur. | 0.575 | | |
| If I become self-employed in the agriculture sector, the chances of success would be very high. | 0.809 | | |
| If I pursue a career as a self-employed in the agriculture sector, the chances of failure would be very low. | 0.722 | | |
| **SN** | | **0.926** | **0.758** |

| | | | |
|---|---|---|---|
| If I become an agropreneur, my family would consider it to be a good career. | 0.836 | | |
| If I become an agropreneur, my close friends would consider it to be excellent. | 0.897 | | |
| If I become an agropreneur, my colleagues would consider it to be marvellous. | 0.891 | | |
| If I become an agropreneur, other people close to me would consider it to be wonderful. | 0.858 | | |

## DISCRIMINANT VALIDITY

The discriminant validity of Fornell and Larcker Criterion, Cross Loadings, and Heterotrait-Monotrait Ratio of Correlations (HTMT) was performed, which demonstrated adequate Fornell and Larcker's criterion. In addition, the cross-loading indicates that discriminant validity is achieved, as the constructs are distinctly different from each other. The result in Table 2 shows that HTMT values fulfil the recommendations by Henseler *et al.* (2015), which are not more than 0.90. Hence, demonstrating evidence of discriminant validity that indicates the degree to which one construct differs from the other.

**Table 2: HTMT**

| | Agropreneurship Intention | Attitude | PBC | SN |
|---|---|---|---|---|
| 1. Agropreneurship Intention | | | | |
| 2. Attitude | 0.733 | | | |
| 3. PBC | 0.697 | 0.756 | | |
| 4. SN | 0.550 | 0.733 | 0.697 | |

HTMT<0.90

## Results of Hypotheses Testing

The second stage in Smart-PLS is the assessment of the structural model or hypotheses testing. The hypotheses in this study were tested using the bootstrap re-sample technique with an iteration of 5000 sub-sample. As shown in Table 3, the attitude towards agropreneurship (H1: $\beta = 0.488$, $p = 0.000$), and the perceived behavioural control (H2: $\beta = 0.282$, $p = 0.000$) were positively related to agropreneurship intention. Meanwhile, subjective norm (H3: $\beta = 0.024$, $p = 0.355$) has an insignificant relationship with youth's agropreneurship intention. Besides that, Table 4 also exhibits the moderating effect of gender. Contrary to the expectation, all hypotheses were not significant. Therefore, H4a, H4b, and H4c were not supported.

Next, the effect size of the independent variables was assessed to determine their effect on agropreneurship intention. As suggested by Cohen (1988), the effect size ($f^2$) values above 0.02, 0.15, and 0.35 represent small, medium, and large effects. Thus, as shown in Table 3, the $f^2$ values of attitude ($f^2 = 0.231$, PBC, $f^2 = 0.088$) and subjective norm ($f^2 = 0.001$) suggested that attitude has a medium effect size, and both PBC and subjective norm have small effect size on agropreneurship intention. The $R^2$ value is 0.511, which indicates that 51.1% of the variance in agropreneurship intention can be explained by the attitude towards agropreneurship, perceived behavioural control, and subjective norm. According to Cohen (1988), $R^2$ value exceeds 0.26, indicating its substantial level of predictive accuracy. Lastly, the predictive relevance ($Q^2$) of the model was assessed using the blindfolding procedure. $Q^2$ values for the endogenous are found to be greater than zero($Q^2=0.387$), indicating that the model possesses a predictive quality (Hair *et al*., 2017).

**Table 3: Hypotheses and result for Direct Effect**

| | Relationship | Path coefficient | Standard Deviation (STDEV) | *T* value | LLCI (5%) | ULCI (95%) | Supported | $f^2$ | $R^2$ | $Q^2$ |
|---|---|---|---|---|---|---|---|---|---|---|
| H1 | Attitude -> AI | 0.488*** | 0.056 | 8.802 | 0.353 | 0.541 | Yes | 0.231 | 0.551 | 0.387 |
| H2 | PBC -> AI | 0.282*** | 0.054 | 5.188 | 0.122 | 0.305 | Yes | 0.088 | | |
| H3 | SN -> AI | 0.024 | 0.06 | 0.373 | -0.104 | 0.084 | No | 0.001 | | |

**Table 4: Hypotheses and Result (Moderating Effect)**

| | Relationship | Path coefficient | Standard Deviation (STDEV) | *T* value | LLCI (5%) | ULCI (95%) | Supported |
|---|---|---|---|---|---|---|---|
| H4a | Att*Gender -> AI | 0.002 | 0.06 | 0.04 | -0.097 | 0.106 | No |
| H4b | PBC*Gender -> AI | 0.009 | 0.052 | 0.125 | -0.081 | 0.091 | No |
| H4c | SN*Gender -> AI | 0.023 | 0.06 | 0.416 | -0.073 | 0.125 | No |

## DISCUSSION

The main objectives of this study are to examine the effect of TPB on agropreneurship intention among youth in Sabah, Malaysia, and to determine the moderating effect of gender in the relationship between the two. Several important implications that apply to academicians and policymakers can be drawn from the findings. Firstly, the results show that attitude towards agropreneurship has the strongest relationship and effect on agropreneurship intention. This finding is similar to Ambad and Damit (2016), who found that if youth perceived entrepreneurship as favourable and desirable, it would increase their intention to become an agropreneur. Likewise, this study's finding corroborates the research in other countries, such as in Greece (Zampetakis *et al.*, 2013) India (Devi, 2015), and in South Africa (Saheed & Kavoos, 2016). In short, the youth attitude towards agropreneurship plays a crucial role in determining their agropreneurship intention. When the youth assessment of starting a business is positive, they are likely to show higher levels of agropreneurship intention.

Secondly, it is found that PBC has a positive effect on agropreneurship intention. If the youth has a higher perception of ease of performing agropreneurship behaviour, they would be more inclined to choose agropreneurship. As mentioned by Yusoff *et al*. (2017), PBC in regard to agropreneurship intention among youth is highly probable due to their inclination towards challenging and tough circumstances that are naturally found in the agricultural sector, which could instigate their interest in agropreneurship. Furthermore, youth knowledge on the current technological

development in the agricultural sector is critical in determining their decision to get involved in agropreneurship. Notably, agriculture nowadays is no longer seen as a tough and difficult job as it used to be years ago. Previously, the agriculture sector relies heavily on workforces and animals with low agriculture produce. However, nowadays, with biotechnology and genetic engineering, the production of agriculture has increased, and the modified seed by scientists has transformed the crop yields tremendously.

Meanwhile, subjective norms did not influence the youths' agropreneurship intention. This finding implies that youths have a personal stance when it comes to career choice. They do not rely on other people's opinions or social pressure. In other words, the support and approval from the family, peers, and certain individuals do not affect youth agropreneurship intention. As suggested by Ham, Jeger, and Ivković (2015), subjective norms have weak predictive of entrepreneurial intention. Additionally, Kruger *et al.* (2000), Ajzen (1987), and Bagozzi *et al*. (1992) found that subjective norms had no significant effect on entrepreneurial intention, especially when the individuals had strong internal locus of control and higher orientation towards taking action.

In terms of the moderating effect, although the agriculture sector and entrepreneurs are mostly dominated by males, however, findings indicate that gender do not contribute towards strengthening or weakening the relationship between TPB dimensions and agropreneurship intention. In other words, gender do not influence the relationship between TPB dimensions and agropreneurship intention.

## IMPLICATIONS

This study presents some important theoretical implications and provides useful, practical suggestions for researchers and policymakers. Theoretically, the attitude towards agropreneurship was found to be the strongest predictor of agropreneurial intention. This study also contributes to the Theory of Planned Behaviour, especially in the agropreneurship field. Although TPB is widely used in determining entrepreneurial intention, there are limited studies that used TPB as a predictor of agropreneurship intention, particularly in Sabah, Malaysia. Consistent with the previous research that

found TPB to have substantial predictive accuracy, the R squared of the TPB model in this study was 55.1%; it is higher than other previous studies such as meta-analytic reviews, 28% (Schlaegel & Koenig, 2014), 35.0 % in the U.S.A. (Krueger *et al*., 2003), 27% in South Africa (Gird & Bagraim, 2008), and 40% in Turkey (Ozaralli & Rivenburgh, 2016). Thus, this study can be replicated in a different setting, especially in agropreneurship research, where further focus and research are deemed necessary.

This research plays an essential role in assisting the government and policymakers' formulation of policies and preparation of programmes. The research also contributes to the state aspiration to become a hub for the agriculture sector for Sabah. The government, agencies, learning institutions, and related parties should do more promotions in the agriculture sector among Sabahan youths. Besides that, the government should put more effort to modernise and increase agricultural production to attract youth involvement in this sector. With the advanced and sophisticated technology and strong government support, the agriculture sector is no longer associated with negative images, such as filthy, exhausting, and uncertain income (Abdullah & Sulaiman, 2013). These days, the agriculture sector uses drones, temperature and moisture sensors, and GPS technology, among others, to monitor crops. These technologies significantly reduce dependency on human resources and increase yields using fewer resources. Youths should therefore be exposed to the various agricultural advancement, which might be able to change their attitude and perception towards agropreneurship and its promising future.

## CONCLUSION, LIMITATIONS, AND FUTURE STUDIES

This study has successfully achieved its research objective of examining the effect of the Theory of Planned Behaviour on agropreneurship intention among youth. The agriculture sector should be given more attention by the government to increase food security and ensure sufficient nutritious food availability in Malaysia. Currently, Malaysia is importing most of its food supply from India, Indonesia, Thailand, China, and New Zealand. Therefore, youth involvement in agropreneurship will not only potentially solve the nation's food security issues but also reduce the unemployment and poverty rate, especially in Sabah. Notably, Sabah is considered among the

poorest state in Malaysia. The low participation of youth in agropreneurship will result in creating more unemployment crisis and reducing the food production due to decreasing in agricultural activities (Swarts & Aliber, 2013).

In terms of limitation, this study used only the TPB dimensions as predictors for the agropreneurship intention. Thus, future studies should integrate more theories, such as Shapero's Entrepreneurial Event theory, John Holland's Theory of Career Choice (RIASEC), Social Cognitive Theory (SCT), and others. The integration of these theories would contribute to a more robust and holistic understanding of agropreneurship intention.

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