



# Article The Determinants of Becoming Sustainable Agropreneurs: Evidence from the Bottom 40 Groups in Malaysia

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**Abstract:** Training in the agricultural sector has been set as a continuing government agenda to educate people in rural areas. This study aims to identify several determinants that play a key role in developing sustainable agropreneurs in the Bottom 40 (B40) group in Perak, Malaysia. To this end, data were collected from 200 participants in the Agropreneur Community Training Program (ACTP). A quantitative research method was used for describing and analysing the collected data. The results showed that an internal factor, which was the agropreneurs' attitudes towards behaviour, displayed a significant positive relationship with the expansion of the farm. As for the external factors, the results showed that family support and social networking have a significant positive relationship with increasing income. Accordingly, more representative samples are required to verify the results of the postulated relationships between the internal and external factors of becoming a sustainable agropreneur in rural areas. The agricultural sector has become a pressing global concern, with issues such as natural disasters, wars, and climate change. Thus, the results of this study provide several theoretical and practical insights for government agencies, especially in developing countries, to execute more viable training programs for agropreneurs.

**Keywords:** sustainable agropreneurs; agropreneur training program; B40 group; Malaysia; attitude; behaviour; social networking; subjective norms; human motivation theory

# 1. Introduction

The agricultural sector has received considerable attention worldwide to overcoming the issue of food security, and Malaysia is not an exception. Since the 1990s, the policy of the Malaysian government has emphasised the important agenda of the country's agricultural development. In line with the 5th Malaysia Plan (1986–1990), the government injected the elements of modernisation and commercialisation by encouraging the private sector to revitalise and modernise [1]. In this regard, the National Agrofood Policy (2011–2020) (NAP) was initiated to emphasise product commercialisation, and one of the policy objectives is to increase the income level of agricultural entrepreneurs. Since then, there have been improvements in terms of the involvement of the private sector and the use of new technology to improve productivity. The agenda is strengthened by the existence of National Agrofood Policy 2.0 (2021-2030), which focuses on 'smart agriculture'. However, the effectiveness of these policies is in doubt. According to Malaysia's gross domestic product (GDP), from 2010 to 2020, the percentage of agricultural growth in Malaysia reached a maximum level of 11.45% in 2011 before showing a stagnant growth of 9.79–7.51% (2012–2018) and recorded the lowest growth in 2019 (7.24%) and 2020 (7.40%) [2]. In this regard, Kunasekaran et al. [3,4] asserted that the contribution of the agricultural sector



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**Copyright:** © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). to Malaysia's economy is far too small compared with other Asian countries, including Thailand, Indonesia, and Vietnam.

Many developed and developing countries have associated the escalating number of local entrepreneurs with the current economic boost. Asian countries such as Korea, Japan, and Taiwan have achieved impressive success rates in their growth levels of economic development by developing their local entrepreneurs [5,6]. The similar concept of agropreneurs was derived from the core activities of farmers. This newly derived concept refers to 'a group of people who conduct part-time or full-time activities of farming, cultivating soil, growing crops, and raising livestock as their main source of income' [7]. The emerging concept of 'agropreneurship' combines entrepreneurship and agriculture to generate lucrative profits from various farming activities [8]. In the context of this study, however, agropreneurship refers to a farmer who cultivates crops or plants and nurtures agricultural products as a source of generating income for a living. In Malaysia, numerous agropreneurship training and education programs have already been implemented to support new agricultural policies, which aim to train and educate farmers to become entrepreneurs [1].

Entrepreneurship has been particularly recognised as a feasible solution to many economic, social, and environmental challenges [9–11]. It provides a robust platform for everyone to explore business opportunities using a variety of readily available resources. Schaltegger and Wagner [12] described sustainable entrepreneurship as 'an innovative, market-oriented and personality-driven form of creating economic and societal value'. Sustainable entrepreneurship is about seizing economic opportunities that bring into existence particular future products that provide both economic and non-economic gains to society and individuals [13–17].

Previous scholars [18,19] have stated that entrepreneurial opportunities could be an outcome of 'a self-transformation process, which can be achieved through training and education'. Having the right combination of motivation, skills, and opportunities will empower new entrepreneurs to become productive and successful [18]. In the agricultural sector, rural farmers usually have small plots of land, and they generate low yields from their farms. However, escaping poverty seems impossible to them [20]. Thus, agropreneurship development necessitates more effective strategies and policies to address the social and economic imbalance in less developed areas in the country [21–23]. According to Firdaus et al. [24], there is a trend in Malaysian society that family background, income potentials, the market environment, knowledge, skills, and incentives are among the major drivers of the younger generation to become involved in the agricultural sector.

Primarily, this study takes the initiative to bridge the gap in the literature about agropreneurship. Generally, previous studies [25,26] have investigated the factors contributing to becoming an entrepreneur in different fields, while only a handful of studies have focused on the agricultural sector [27–29]. Second, Alsos et al. [30] maintained that many studies have overlooked the significant role of entrepreneurs in the agricultural sector. Yusoff et al. [31] emphasised that further studies should examine the influential factors of agropreneurs' behaviour in Malaysia. Third, according to De Wolf et al. [32], many studies on entrepreneurship and farmers often question the necessary skills of farmers to compete in a market-driven environment. Providing education on entrepreneurship could help rural farmers in making strategic decisions about their livelihoods. This study mainly aims to encourage Malaysian farmers to become sustainable agropreneurs through a planned training program that is conducted by the Northern Corridor Implementation Authority (NCIA). The mission of the program is to elevate the living standards of the B40 rural community. The B40 community consists of those with a household income of RM 2388 (equivalent to USD 525.36) per month. The program is part of a government initiative under the 11th Malaysia Plan (11 MP) to increase the B40 group's mean income from below RM 3888 to RM 5, 270 by 2020, while simultaneously bridging the income gap within the B40 community. Therefore, to sustain agribusiness, entrepreneurship training is a requirement [1,33,34].

Accordingly, the primary objective of this study is to identify the internal and external factors that determine the agropreneurs' sustainability among the ACTP participants (Bagan Datuk, Perak). In this regard, Ridzwan et al. [35] revealed that only 20% of entrepreneurs have successfully sustained their businesses owing to exceptional personal capabilities. To achieve sustainability, entrepreneurs must identify their strengths, available opportunities, and potential resources. Therefore, they must develop a highly effective network, understand the business ecosystem, and use the existing resources. This paper is organised into five sections, including the literature review, the development of the study framework, the methodology, the results and discussion, and the conclusion. The findings of the study have significantly contributed to the conducted training program for rural agropreneurs in Perak, Malaysia. Therefore, stakeholders are expected to be provided with a better understanding of the role of several key factors in devising training programs for rural communities to train and educate sustainable agropreneurs.

#### 2. Literature Review and Theoretical Framework

## 2.1. Underpinning Theory

The theory of planned behaviour is a theoretical construct that determines one's motivational factors or determinants of the likelihood to perform the target behaviour. According to Bird and Schjoedt [36], the predictor elements, such as experience, knowledge, skills, abilities, learning, intentions, and motivation, can influence entrepreneurial behaviour. Sustainable agropreneurship refers to farmers who successfully manage to sustain their farming and farming-related business for a longer duration. To sustain themselves in agrobusiness, agropreneurs should particularly consider potential opportunities and future market trends [37]. Based on the human motivation theory, McClelland [38] demonstrated that the motivational level is lower in poor countries or among poor people, which corresponds to the investigation scenario of the B40 group in the context of this study. In the same vein, Acs and Kallas [39] asserted that starting a business is easier than sustaining it in the long run, especially amidst low-income communities.

## 2.2. Sustainable Agropreneurs

The three key drivers of becoming sustainable agropreneurs are (1) having strong internal or altruistic motivation [37,40], (2) acquiring environmental knowledge [1,29,41], and (3) receiving external support and incentives [1,39,42,43]. According to Smith and Woods [44], despite the assistance provided by agencies and stakeholders, some farmers have failed to earn sufficient income as agropreneurs, and only a few farmers have sustained their agropreneurial activities for longer periods. Fisher et al. [45] suggested that businesses that can 'live' or 'sustain' beyond any involvement and continuous business growth constitute a key measurement tool of a successful entrepreneur.

### 2.3. Internal and External Factors for Sustainable Agrepreneurs

This study proposes that involvement in agropreneurship or entrepreneurial behaviour can be determined by a number of internal and external factors. The internal factors refer to the agropreneurs' attitudes towards behaviour [46], perceived behavioural control [47], attitudes towards behaviour [48], and knowledge or skills [43,49]. On the other hand, the external factors include family support [46], subjective norms [29], social networking, and government support [43,46,50,51] in conjunction with the community support [50] of the trained agropreneurs. The measurements of sustainable agropreneurs are sustained business duration, financial performance (e.g., increase in income), quality of life, business expansion, and productivity [33,52,53]. Figure 1 illustrates the proposed theoretical framework of the study.

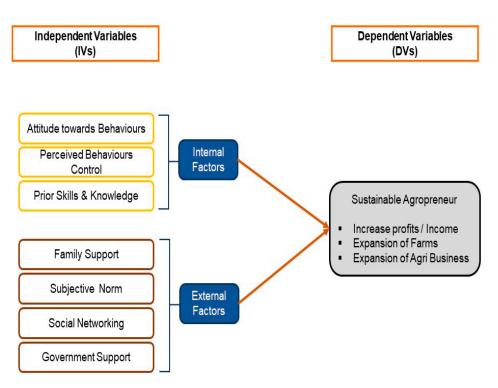


Figure 1. Theoretical framework.

Because of the mixed results in the literature on the relationships among the variables, two main hypotheses and twenty-one sub-hypotheses are proposed in this study. The two main hypotheses are postulated as follows:

**Hypothesis 1:** *There is a significant positive relationship between internal factors and sustainable agropreneurs.* 

**Hypothesis 2:** *There is a significant positive relationship between external factors and sustainable agropreneurs.* 

# 3. Materials and Methods

Via NCIA, the Malaysian government organised an ACTP covering theoretical knowledge, practical training, and handholding processes at four different locations in Perak State, Malaysia, including Bagan Serai, Manjung, Sg Siput, and Bagan Datuk. The program has hosted 800 local communities and 200 participants at each location. The ACTP was originally developed in response to the government's progressive agenda under the National Agro-food Policy (2011–2020) to create well-equipped rural farmers who utilise effective farming practices, including soil and water management, as well as judicious use of fertilisers and pesticides. The program mainly aims to equip the farmers with the required farming knowledge and agricultural skills to achieve sustainability and eradicate poverty among rural communities. Under this training program, the participants (farmers) have a comprehensive eight-month training program. The objectives of ACTP are illustrated in Figure 2.

The ACTP has followed the approach of introducing the fertigation system (FS) to the participants because this system offers farmers many benefits. The FS is a combined activity with an efficient irrigation system, which can supply the right amount of fertiliser to meet the needs of the crops. Farmers can enjoy various advantages by participating in the fertigation system (FS), which saves time and money and maximises harvest with high-quality products. Moreover, by using the best irrigation system, the FS can effectively supply accurate and standard levels of fertiliser to the plants by using the fertiliser in specific areas. The FS can also provide a consistent supply of soil nutrients. This system saves labour costs, time, and water and produces minimum waste. Therefore, through the ACTP, the farmers are educated through the introduction of modern farming skills and the management of FS. They learn how to prepare and mix the fertiliser, set the irrigation system, and other effective farming practices. By educating the farmers in new farming and irrigation approaches, their yield will increase with the existing land size, thereby increasing their income and uplifting their living standards.

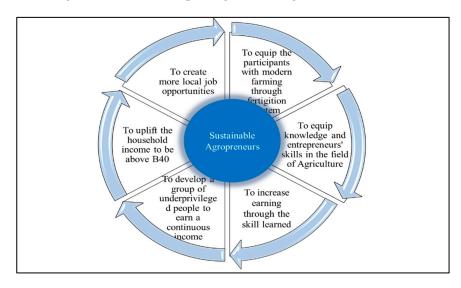


Figure 2. The objectives of the Agropreneur Community Training Program.

For this study, the training program included 200 trained farmers from an earlier ATCP conducted at Bagan Datuk, Perak. This group of trained farmers was selected mainly because they had completed their agropreneurship training program in 2019 and were under a post-monitoring period at the time the survey was conducted. The farmers had undergone four stages or eight months of training, which included 30% theoretical classes and classroom learning, 80% practical training, and six months of post-training, as shown in Table 1.

Table 1. Agropreneur	Community 7	Training Progran	n implementatio	n stages (Jaafar et al. [54]).
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Stage	Activity	Duration
Stage 1	Recruitment process Selection of participants, including shortlisting them Identify the location for practical training	2 months of pre-training
Stage 2	Execution of training Theory classes and land preparation process	2 months
Stage 3	Theory and practical training Twelve modules to be completed within 600 training hours	6 months
Stage 4	Monitoring	6 months of post-training

In this study, the quantitative research method, SPSS software, descriptive analysis, and multiple regression analysis were used to examine the relationships between the independent and dependent variables. In the questionnaire, the five-point Likert scale was employed to measure the selected variables. The items and constructs of the questionnaire were adapted and modified from previous studies. The examined internal factor items, which designated 'attitudes towards behaviour', were retrieved from previous studies, including Schwarz et al. [55], Liñán and Chen [56], and Yusoff et al. [31], whereas the items that designated 'perceived behavioural control' were obtained from Kolvereid and Iakovleva [57], Yusoff et al. [31], Liñán and Chen [56]. The questionnaire items that designated 'prior knowledge or skills' were taken from Lee and Zhang [58], Liñán and Chen [56]. Moreover, the examined external factors items, which consisted of 'family support or involvement and subjective norm', were retrieved from Autio et al. [59], 'social networking' from Taormina and Lao [60], and 'government support' from Yusoff et al. [31]. In this study, sustainable agropreneurship was focused on increasing income, farm expansion, and agribusiness expansion [45]. It is perhaps worth mentioning that a pilot survey was also conducted using 25 respondents from a different project group. The Cronbach alpha values for all variables exceeded 0.69. The quantitative data of this study were gathered via a face-to-face survey.

# 4. Results

# Profile of Respondents

A total of 200 participants were involved in this study. The results of SPSS descriptive analysis showed that most of them belonged to an age group ranging between 41 and 50 years old (50.5%), followed by 18–40 years old (25.5%), and 51–60 years old (24%). Regarding gender, 67.5% of the participants were males and 32.5% females. As for marital status, 92.5% of them were married, 6.0% single, and 1.5% widows. In terms of race, 73.0% were Malays, 26.5% Indians, and one participant only (0.5%) was Chinese. Regarding the participants' levels of education, most participants (82.0%) completed secondary school education (up to Form 5), while 1.5% of the participants completed primary school, 3.0% held an STPM/Diploma, and 3.5% had higher education qualifications. Regarding family size, 77.0% of the participants had 4-6 family members, 18.0% had fewer than 3 family members, 3.0% had 7–9 family members, and 2.0% had more than 10 family members. Regarding the participants' occupations, 70.0% of them were self-employed, 20.0% were homemakers/housewives, 5.0% had jobs in private-sector factories, 4.5% had jobs in the public sector, and 0.5% were students. Remarkably, after attending the designated training program, a significant improvement was observed in terms of earning additional family income. Therefore, for the income category of less than RM 1000, an 8% reduction was observed (8-20 participants), whereas a 53% reduction (45-96 participants) was recorded for the (RM 1001-2000) income category. As for the (RM 2001-3001) category and above, an increment of 4% and 27% (72-81 and 12-66 participants) was observed, respectively.

This study used SPSS software to analyse the data. Confirmatory factor analysis (CFA) is a multivariate statistical procedure. It is used to test how properly the measured variables represent the number of constructs. As illustrated in Table 2 the value of the Kaiser–Meyer–Olkin Measure (KMO) and Bartlett's test for the desired correlations among the variables was >0.7.

The formula for this test is as follows:

$$MO_j = \frac{\sum_{i \neq j} r_{ij}^2}{\sum_{i \neq j} r_{ij}^2 + \sum_{i \neq j} u}$$
(1)

 $R = [r_{ij}]$  is the correlation matrix,

 $U = [u_{ij}]$  is the partial covariance matrix,

 $\Sigma$  = summation notation ("add up").

The significance of the study was p < 0.05. Table 2 tabulates the values of both tests for the selected variables of the study. In addition, multiple regression was used to test the hypotheses of the study.

As for the factor loadings (see Tables 3–5), all the tested items were valid and highly significant (factor values that exceeded 0.50 signified acceptable construct validity). Considering the dependent variables, the factor loadings for sustainable agropreneurs (9 items) indicated that two items scored below 0.4, and, therefore, they were deleted (the second measure of the expansion of agribusiness). Accordingly, all the hypotheses about the expansion of agribusiness were excluded from further analysis. Table 1 tabulates the mean, standard deviation (SD), and alpha values for the study variables.

** * 11	1010		Bartlett's Test		
Variable	КМО	Value	df	Sig. ( <i>p</i> )	
Internal factor	0.837	5126.767	351	0.000	
External factor	0.702	1322.060	66	0.000	
Sustainable agropreneur	0.765	838.000	36	0.000	

 Table 2. Kaiser–Meyer–Olkin Measure and Bartlett's Test.

Source: The authors.

Table 3. Factor loading, mean, and SD values of the internal factors of the study.

	Factor Loading			
Item	Attitudes toward Behaviour	Perceived Behavioural Control	Prior Knowledge/Skill	
I have succeeded in making a living by earning a higher income as an agropreneur.	0.791			
I believe that the agricultural sector can provide a higher return.	0.717			
As an agropreneur, I can generate a lot of money.	0.812			
If I had the opportunity, I would start my own farm-based business.	0.712			
I have the opportunity to succeed if I run a business based on agriculture.	0.789			
It is very easy to start a business based on agriculture.	0.811			
Agropreneurship will give me more advantages.	0.759			
Agropreneur is my top choice career.	0.608			
I will have the maximum self-satisfaction as an agropreneur.	0.732			
Doing my own business in the agricultural sector is easy for me.		0.808		
As an agropreneur, I can easily manage agricultural business activities.		0.678		
If I continue my career as an agropreneur, the chances of failure are low.		0.788		
I am willing to make personal sacrifices to sustain my agricultural business.		0.728		
To be a successful agropreneur, I need to be more efficient.		0.867		
As a farming entrepreneur, I must adapt to any situation to achieve more promising results.		0.835		
It is easy for me as an agropreneur to keep my farming business running smoothly.		0.837		
If I initiate agropreneur activities, I will have broader success prospects.		0.816		
I strongly believe that I will be a successful agropreneur.		0.806		
My family members have extensive experience in farming.			0.842	
My family has successfully cultivated my interest in agriculture.			0.699	
My family members have skills in agriculture or as agropreneur.			0.690	
I have the practical knowledge needed to start a farm-based business.			0.765	
I have innovative skills and techniques in agriculture.			0.866	
I attended agricultural entrepreneurship training before.			0.857	
I'm willing to do anything to become an agropreneur.			0.828	
I look forward to establishing a more progressive agriculture-based business in the future.			0.850	
I will do my best to run and sustain an agriculture-based business.			0.787	
Cronbach's alpha value Mean and SD	0.894 M: 4.23 SD: 0.39	0.723 M: 3.99 SD: 0.33	0.894 M: 3.83 SD: 0.39	

Source: The authors.

	Factor Loading				
Item	Family Support	Subjective Norm	Social Networking	Government Support	
If I became an agropreneur, my family would consider it a good career.	0.765				
My family will encourage me to become an agropreneur.	0.748				
My family will motivate me when I face challenges.	0.764				
If I became an agropreneur, my best friends would consider it very good.		0.744			
If I became an agropreneur, people close to me would consider it a success.		0.852			
If I became an agropreneur, villagers and the community would consider it a success.		0.782			
For me, having good relationships with other entrepreneurs is an important factor to succeed as an agropreneur.			0.752		
When I need help, I often refer to other agropreneurs for advice.			0.809		
From my perspective, good relationships, in conjunction with support from stakeholders in agriculture, are crucial to success.			0.673		
Government training and financial assistance programs helped me start my own business as an agropreneur.				0.694	
It is very easy for me to access information on government assistance.				0.821	
The government has been very supportive in helping new agropreneurs like me.				0.813	
Cronbach's alpha value	0.894	0.723	0.723	0.723	
Mean and SD	M: 3.75 SD: 0.47	M: 3.90 SD: 0.53	M: 4.02 SD: 0.46	M: 4.06 SD: 0.48	

Table 4. Factor loading, mean, and SD of the external factors of the study.

Table 6 presents the results of multiple regression. The coefficient determination of the developed model was 0.29 ( $R^2 = 0.29$ ). The standard coefficient values (Beta =  $\beta$ ) indicated that the variables of 'social networking' emerged as the main indicators of increased profit and agribusiness sustainability based on the highest standard coefficient values ( $\beta = 0.273$ ,  $\rho \leq 0.05$ ), followed by 'family support' ( $\beta = 0.210$ ,  $\rho \leq 0.05$ ). 'Subjective norm' had a significant negative correlation with an increased profit and agribusiness sustainability ( $\beta = -0.339$ ,  $\rho \leq 0.05$ ).

Item	Factor Loading				
Item	Increased Income	Expansion of Agrobusiness	Expansion of Farm		
I am looking forward to increasing my income within 3 years.	0.550				
I will set the expectation of increasing my income within 3 years.	0.669				
I will work hard to achieve the increase in revenue that I have set.	0.728				
I have the desire to stay in the agriculture-based business for a longer time.		0.697			
I am determined to stay in the agriculture-based business because I have good relationships with other agropreneurs.		0.410			
I am determined to stay in the agriculture-based business with the help and support of stakeholders.		0.316			
I have set plans to expand my farm.			0.795		
I will use technical facilities to grow my agriculture-based business.			0.705		
I will improve the cultivation and harvesting process to develop agrobusiness.			0.835		
Cronbach's alpha value	0.838	-	0.859		
Mean and SD	M: 4.19 SD: 0.43	-	M: 4.16 SD: 0.42		

 Table 5. Factor loading, mean, and SD related to the intention to be a sustainable agropreneur.

Source: The authors.

# Table 6. Multiple regression.

	M. 1.1	Standardised Coefficients	L L	Sia	<b>Collinearity Statistics</b>	
	Model	Beta	Beta t Sig.		Tolerance	VIF
	(Constant)		4.840	0.000		
	Attitude towards Behaviour (ATB)	0.049	0.647	0.519	0.640	1.563
	Perceived Behavioural Control (PBC)	0.047	0.517	0.606	0.454	2.204
4	Prior Knowledge/Skill (PKS)	0.163	1.535	0.126	0.329	3.037
1	Family Support (FS)	0.210	2.283	0.024	0.437	2.287
	Subjective Norm (SN)	-0.339	-3.919	0.000	0.495	2.022
	Social Networking (SNt)	0.273	3.525	0.001	0.616	1.622
	Government Support (GS)	0.109	1.419	0.157	0.627	1.595

Note: The significant values are  $p \le 0.01$ ,  $p \le 0.05$ , and  $p \le 0.10$ . Source: The authors.

Table 7 illustrates the results of the postulated sub-hypotheses in relation to the determinants of the internal and external factors of a sustainable agropreneur.

	Hypothesis	Finding
	Internal Factor	
H1a1	Attitude towards behaviour has a significant and positive relationship with increased profit/income	Not Supported
H1a3	Attitude towards behaviour has a significant and positive relationship with farm expansion	Supported
H1b1	Perceived behavioural control has a significant and positive relationship with increased profit/income	Not Supported
H1b3	Perceived behavioural control has a significant and positive relationship with farm expansion	Not Supported
H1c1	Prior knowledge/skill has a significant and positive relationship with increased profit/ income	Not Supported
H1c3	Prior knowledge/skill has a significant and positive relationship with farm expansion	Not Supported
	External Factor	
H2a1	Family supports has a significant and positive relationship with increased profit/income	Supported
H2a3	Family supports has a significant and positive relationship with farm expansion	Not Supported
H2b1	Subjective norm has a significant and positive relationship with increased profit/income	Negatively Supported
H2b3	Subjective norm has a positive relationship with farm expansion	Not Supported
H2c1	Social networking has a significant and positive relationship with increased profit/income	Supported
H2c3	Social networking has a significant and positive relationship with farm expansion	Not Supported
H2d1	Government support has a significant and positive relationship with increased profit/income	Not Supported
H2d3	Government support has a significant and positive relationship with farm expansion	Not Supported

Table 7. Results of hypothesis testing on two dimensions of a sustainable agropreneur.

Source: The authors.

#### 5. Discussion

Entrepreneurship in rural agriculture often sheds light on issues of how to increase the income level. According to [61], this can be realised by focusing on behaviour. Based on the theory of planned behaviour, this study proposed a framework to examine the key internal and external factors that identified the sustainable agropreneurs among the ACTP training participants in Bagan Datuk, Perak State, Malaysia. To this end, regression analysis was conducted based on using five-point Likert scale variables to test two dependent variables, which were the increase in profit or income and farm expansion.

The results in Table 6 regarding attitudes towards behaviour displayed a significant positive relationship with farm expansion. In this regard, Sadati et al. [62] reported that attitudes emerged as a crucial factor for the acceptance of sustainable agriculture in the business domain. Attitude is a psychological construct that is shaped by cognition (thought), values (beliefs), and affection (emotions) towards a particular object. This may lead to a strong desire to encourage an individual to act accordingly [63]. The trained participants' positive attitudes such as passion and ambition have empowered them to have positive and optimistic perceptions towards agropreneurship. Therefore, they developed the desire to expand their farms to engage in agrobusiness more effectively. However, perceived behavioural control did not influence the intention of the trained participants to become sustainable agropreneurs. This finding was inconsistent with the results reported by Solesvik et al. [64]. In addition, prior knowledge/skill was found to be insignificant regarding the intention to be a sustainable agropreneur. On the contrary, previous studies concluded that upon acquiring adequate knowledge and skills regarding entrepreneurship, farmers were able to apply more efficient agricultural practices in their cultivation of crops [25,65,66]. The majority of participants in the ACTP program (75%) were considered

older generation (above 50 years old) and 82% received up to the secondary level of formal education. The background could explain the insignificant result for the internal factors. It can be assumed that: (1) the participants did not possess proper agricultural knowledge and skills; the training program had a minimal impact on their behaviour, (2) they may not have fully engaged themselves in this sector; thus, transferring knowledge to the participants did not bring about a noticeable impact.

Considering the external factors, the three sub-hypotheses displayed a significant positive relationship with being a sustainable agropreneur. First, family support was positively linked with increasing profits and sustaining agribusiness. This finding was consistent with the results of previous studies conducted by Abdullah and Sulaiman, [46], who reported that family support has a significant role in influencing people to become involved in agropreneurship. Moreover, the social network positively influenced the intention to be sustainable agropreneurs by increasing their income. Previous scholars [67,68] found that the network is important in helping entrepreneurs to gather relevant and accurate information about entrepreneurial activities, apart from identifying market opportunities. Personal ties within social networks are considered resources that are important in establishing a business [69,70]. Wang and Qian [71] identified a close and good relationship with stakeholders, wherein other entrepreneurs were willing to aid farmers, especially in terms of resources to increase their profit and sustain agribusiness. Additionally, D'Silva et al. [72] found that adequate support from stakeholders, community, and family is needed to influence the entrepreneur's intention.

More importantly, government support was not significantly linked to the intention to become a sustainable agropreneur. This can be attributed to the fact that the ACTP participants sought government support in terms of funding, training, and other incentives, but not to become sustainable agropreneurs. Similarly, Papzan et al. [73] observed an insignificant correlation between government support and entrepreneurs' success. Hendratmi and Sukmaningrum [74] confirmed that government support is less effective in relation to women entrepreneurs' behaviour in Indonesia because of the lack of coverage and socialisation. This finding, however, contradicted previous findings on the role of government in encouraging the participation of the youth in agropreneurship. Previous studies showed that the role of the government is significant in promoting agropreneurship [46,49,75–79]. However, it is insignificant when it comes to supporting entrepreneurial practices. The role of government agencies should be more effective and focus on their strategy implementation, especially in encouraging sustainable entrepreneurs to support the national policy.

The 'subjective norm' exhibited a significant negative link with the intention related to income increase. According to Yeop Abdullah et al. [80], a subjective norm is belief in the significance of referents and the motivation to act in accordance with those referents. For example, if the respondents have a mentor, they may tend to follow their behaviour. This finding was supported by García-Rodríguez et al. [81], who confirmed the insignificant impact of 'subjective norm' on sustainable entrepreneurship. Additionally, Nguyen et al. [82] verified that 'subjective norm' does not affect the entrepreneurial intention in the context of Vietnam. Nishimura and Tristán [83] found that 'subjective norm' did not significantly influence the people's intentions to engage and sustain themselves in agribusiness. To further illustrate, entrepreneurship represents an innovative business opportunity platform provided for them, and it is not embedded in their normal culture. In the same vein, Zampetakis et al. [84] asserted that 'subjective norm' occasionally influences the shaping of an individual's intention to become an entrepreneur.

### 6. Contribution

The findings of this study can be employed as a benchmark for upcoming government programs to establish agropreneur entrepreneurship. The attitudes of an individual can be seen as a collection of personal traits, which can be developed by learning through general knowledge, including cognition, emotions, and actions. The findings of this study emphasised that family support exerts a significant positive effect on sustainable agropreneurs. The results highlighted the role of family and social networks in encouraging and supporting sustainable agropreneurs. More importantly, people's mindsets towards agropreneurship, as well as family support, should be considered because they can influence the trained participants. This study provides significant practical implications for the government and policy makers to open new cooperative channels for supporting rural farmers. Government support, which may include financial assistance, training programs, marketing promotion assistance, and consultation service assistance, are all crucial to helping rural farmers raise their living standards. The provided support and information, however, have not benefited these farmers so far. In this regard and as prescribed by Chang et al. [85], the government should encourage entrepreneurial drive and agropreneurial intention by providing adequate policy tools, such as agropreneurial funds and loans, as well as promoting the exchange and sharing of experiences by successful entrepreneurs who possess agropreneurship expertise. The government should ensure that support is effectively delivered for agropreneurship development, particularly for the B40 group in rural areas. The study results are useful for relevant authorities in devising more effective policies or finalising initiatives aiming at creating sustainable B40 agropreneurs. Moreover, the findings of the study mainly contribute to achieving the national agenda of eradicating poverty and enhancing the living standards of rural communities.

This study also contributes to the body of knowledge by providing essential theoretical and practical contributions. Theoretically speaking, this study spotlights the implementation of the theory of planned behaviour as the underpinning theory in assessing the ACTP participants' intentions to sustain their farming activities. Accordingly, this study investigates ACTP-trained participants who become sustainable agropreneurs as an outcome of actual agropreneurship behaviour.

## 7. Conclusions and Future Research

In general, the findings of the study supported the achievement of the Sustainable Development Goal (SDG) agenda on achieving food security and reducing poverty levels. The agricultural sector has become a global concern, with pressing issues such as natural disasters, wars, and climate change. This has, in turn, necessitated training programs to inject new or modern techniques into the agricultural sector. Therefore, training or supporting new agropreneurs should be a constant effort shouldered by the government with the identification of the right talent. The identification of the right trainee is significant in ensuring effective solutions in the agricultural sector in the future.

Such changes mean that farmers should continually appraise their professional and management skills and develop viable farm strategies in order to be successful. However, a major challenge for the agricultural sector is to enable farmers to develop their entrepreneurial skills through providing support in education and training.

Similar to any other research, this study has some limitations that can be addressed in further studies, such as suggesting improvements based on conditions before the participants joined the training program. For further studies, future training programs should focus on attitudes towards behaviour as a key factor in achieving agribusiness sustainability. The selection of participants should be reconsidered for this kind of training to ensure a higher value for the training program. Conducting more focused programs, such as mentoring and coaching, might be a more effective tactic to gain the necessary knowledge and skills, thereby enhancing the participants' intentions towards becoming sustainable agropreneurs.

The respondents' categories were as follows: only 25.5% of the young population (average age of 18–40 years old) and only 32.5% females. Young people represent the future generation and, therefore, they should be encouraged to become involved in the modern agricultural sector. Furthermore, women should be targeted, as 70% of the world population are women [74]. Moreover, further studies should focus on training programs,

particularly for these groups of people, and the results could be different as the new generations are more educated and proactive with technology.

Furthermore, it is worth mentioning that this study examined one rural location only, thus dismissing statistical generalisation. The findings may be influenced by the individual-specific socioeconomic conditions and, therefore, they might not mirror the intentions of the entire group of ACTP-trained participants to become sustainable agropreneurs. Thus, more representative samples are required to verify the results of the hypotheses, which should refer to the relationships between the internal and external factors to become a sustainable agropreneur. Additionally, different research techniques may be deployed to explore other factors that are associated with attitude, owing to the importance of this dimension in determining the actual behaviour of agropreneurs. More specifically, exploring the mediating or moderating role of several viable factors is highly recommended.

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