

## **Investigating Agropreneurial Intention among Students in Higher Learning Institution using the Theory of Planned Behaviour**

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### **ABSTRACT**

This study uses the Theory of Planned Behaviour (TPB) to determine the factors influencing the intention of agriculture students in Universiti Putra Malaysia (UPM) to be involved in agribusiness. To meet the aim of this study, a Focus Group Discussion (FGD) was held among students from the Faculty of Agriculture, UPM. This method of qualitative data collection was utilized in order to gain an in-depth understanding of youth participation rates within the agriculture sector in Malaysia. A total of 20 students from UPM were involved in this study, most have had some amount of experience in entrepreneurship either formally or informally. Apart from personal factors and social norms, this study found that institutional factors, more specifically the way in which agricultural studies programs are set up, play an imperative role in influencing agropreneurial intention among students. A well-rounded, quality agropreneurship education that goes beyond theory-based learning, can in different ways positively influence the other determinants of agropreneurial

intention thereby increasing agropreneurial intention. Efforts should be intensified to align agriculture education and training. Beyond trade-based learning, it should also focus on providing knowledge, technical skills, and attributes that young farmers need for their agropreneurship careers. At the tertiary level, learning should be multidisciplinary so that students can grasp and incorporate concepts pertaining to, for example, food sciences, risk management,

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or data analytics - that can help them be dynamic in navigating the growth of their agribusiness and potential pitfalls.

*Keywords:* Agribusiness, agropreneur, Ajzen Theory of Planned Behaviour, entrepreneurship, youth

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## INTRODUCTION

Globally, the agricultural population is ageing whereby the average age of farmers is currently in the range of high-50s to early-60s (Musa, 2020, Musa et al., 2020). Youths who are the future generation need to be encouraged into a modern agricultural sector to improve global food supply and to address the issues of food security. At the same time, youth unemployment is also an issue. According to the International Labour Organisation (ILO), the global youth unemployment rate stands at 13.6% in 2020 and there are approximately 1.3 billion young people between the ages of 15 and 24 worldwide (ILO, 2020).

Further, the world population is at 7.8 billion in 2021 (United Nations Population Fund, 2020) which indicates a rapid increase. This means the demand for food will rise. Agriculture accounts for 32% of total employment globally and 39% in developing Asia and the Pacific (ILO, 2020). Yet, it still remains a less desirable career for young people. There are promising prospects of increased youth involvement in the agricultural sector if the policy goes beyond just farming and gives more emphasis on the off-farm sector and agropreneurial activities. With the interest of young people in business ventures, more policies are now focusing

on young agropreneurs to encourage youth participation in agriculture; for instance Malaysia.

Malaysia aspires to transform the agriculture sector to enable it to become an engine of growth and to add more value to the sector. At the micro-level, agropreneurship allows the individual to develop creative and innovative means in meeting the growing demand for food whereas, at the macro level, it benefits the economy by creating employment opportunities and contributing to the national income of the country (Yusoff et al., 2016). Out of the total population of 32.7 million in Malaysia, 44% are considered to be youth, and only 15% are involved in the agriculture sector (The Sun Daily, 2020). Meanwhile, the youth unemployment rate in Malaysia stood at 10.9% in 2019 – lower than the regional average of 12.2% in Southeast Asia and the Pacific, but the third-highest youth unemployment rate in ASEAN after Indonesia and the Philippines (Cheng, 2020).

Malaysia has spent billions of dollars to promote agropreneurship yet there is still a lack of interest among Malaysian youth to take part in the agriculture sector. This might be due to negative perceptions towards agriculture (Abdullah et al., 2012), or a lack of exposure to the available agropreneur programs (William et al., 2004) and could also be due to uncertainties about returns and profits in agribusiness (Man, 2008). Furthermore, young entrepreneurs often have poor access to land and capital to initiate their agriculture projects (Jamaludin, 2011).

The objective of this paper is to investigate the factors affecting the agropreneurial intention among agriculture students in one of the higher education institutions in Malaysia namely Universiti Putra Malaysia (UPM) using Ajzen's Theory of Planned Behaviour (TPB). The research questions that we aim to answer are first; based on TPB, what are the personal traits (attitude), social norms, and perceived behavioural control factors that affect agropreneurial intention among students in higher education institutions in Malaysia? And secondly, based on the findings, what can be done to encourage more youth to venture into agribusiness. The results of this study will better inform policymakers on the factors that motivate youths to venture into agribusiness and also address the challenges faced by the students that deter them from taking the agropreneurship route.

## LITERATURE REVIEW

### Agriculture and Entrepreneurship

Amongst the scholarly work on entrepreneurship was by Leković and Petrović (2020) that include the determinants of early entrepreneurial activity in the agricultural sector of Southeast European (SEE) countries. The research implies determinants such as national culture, personal entrepreneurial characteristics, and entrepreneurial aspirations (growth, innovation, and internationalization). Similarly, Fitz-Koch et al. (2018) conducted a systematic literature review of extant research in agricultural entrepreneurship worldwide. They identified the three key

background dimensions of the agricultural sector: identity, family, and institution, which offer promising opportunities for future research and provides the potential for the promotion and expansion of current theoretical and empirical analysis of entrepreneurship research.

Research from African countries like Kenya such as the study by Ntale et al. (2015) shows that Kenya's agricultural economy is suffering from limited agricultural entrepreneurship. Statistics show that only 6% of small farmers are adding value to their agricultural products. And farm scale is negatively correlated with agricultural entrepreneurship. The study further found that loan acquisition is highly correlated with the value-added of small farmers. The agricultural entrepreneurship readiness model is based on smallholders' personal and social factors, work experience, cultural and economic environment. Therefore, policymakers should encourage smallholder farmers to engage in agricultural entrepreneurial activities by establishing financial institutions that can borrow at reasonable interest rates.

### Shifting Perceptions on Agriculture

A career in agriculture commonly evokes skeptical and negative responses from the general public. It is commonly considered to be an uncompetitive field of work involving high risks and unstable returns (Abiddin & Irsyad, 2012; Man, 2012). Seen as a dirty, dangerous, and difficult job, the profession is often associated with those of low socioeconomic status, the lowly

educated, and the unemployed. Recent government efforts to encourage young people, in particular, to consider pursuing agriculture as a career path has to some extent yielded positive responses (Noor & Dola, 2011). Careers within the agricultural sector in Malaysia are also said to be bright (Muhammad et al., 2013) and research has also shown that young farmers have the potential to excel in the field, seeing that they are a generation that is ambitious and flexible, able to adapt and identify more opportunities for business (Rezai et al., 2011).

Traditional farming has evolved with the advent of technology. It is said that young farmers with higher education levels are more likely to utilize ICT tools to improve the operational efficiency of their agribusiness (Abdullah & Samah, 2013a; Ramli et al., 2015). It can also assist in strengthening their marketing aspects and business processes. Evidence shows a positive correlation between the utilization of echo sounders and GPS, with the monthly income of young fishermen (Bolong et al., 2013). Hence, the allegation that agriculture as a profession is not favored by young people today is being challenged (Muhammad et al., 2013). On the contrary, young people are increasingly breaking barriers in the field and it has been observed that young farmers are developing interests in different areas of agriculture, for instance, contract farming (Shaffril et al., 2010). In the Malaysian context, contract farming is linked to a number of new agriculture activities such as worm or leech rearing, vanilla or herb farming, and more.

The concept of contract farming is well received amongst young farmers as it gives them the opportunity to be competitive by accessing input credit and new markets which would have otherwise be limited to them as startups. This arrangement also helps minimize production risks and transaction costs on their behalf (Bahaman et al., 2010). In the study above, data also revealed that both male and female youth alike possessed equally positive levels of acceptance towards contract farming. This finding is particularly significant since it addresses another common misconception, which is that females lack the strength and capability to be involved in agribusiness and actively participate in the agro-economy. Abdullah and Samah (2013b) refer to this determinant as 'social valuation', or in other words, the cultural factor. If society were to view the role of women in agriculture in a more positive light, it is more likely that more female graduates will also develop positive attitudes towards agribusiness.

### **Role of Education in Agriculture**

Academic programs have a significant influence on the intentions of graduates to pursue their ambitions; as such it is imperative that agriculture programs are designed in such a way that young people feel confident enough to start up their venture after completing their studies. A closer look by researchers, however, has revealed that the content and curriculum of local agriculture courses are overly theory burdened and lack the practical training that young graduates need to become operationally ready (Alam et al., 2009).

Another study found that close to 25% of their respondents that attended public universities, underwent agriculture courses to completion without ever participating in field trips to commercial agricultural farms (Muhammad et al., 2013). Ultimately, this lack of exposure keeps young farmers in the dark and limits their experiential learning and potential. As a result, students from such programs may decide against embarking on a career in agriculture or give up easily when faced with difficulties. To remedy the weak agricultural education and training system, it is proposed that higher learning institutions consider making changes to heavily trade-based courses to include modules such as agricultural ethics and agro-economics in order to produce more well-rounded and competent young farmers (Alam et al., 2009). Those who teach such programs are also key figures and should be chosen wisely as they can either build students' confidence or diminish their intentions of running an agribusiness in the future. Entrepreneurship can be taught (Yusoff et al., 2016), and higher education institutions can tailor the system to bring out this set of soft skills among students and direct them towards agropreneurial intention. It is also recommended that academic institutions enable means for students to establish networks and investment relationships early on be it through classroom interactions, club meetings, or professional networking events (Hashemi et al., 2012).

The concept of informal mentoring is said to have been effective in encouraging graduates to venture into commercial

agriculture, and studies have shown that students' early encounters and interaction with industry leaders and mentors have helped them to establish networks and expand their agribusiness (Abiddin, 2012). Such exposure is good for knowledge sharing; and at the same time, it gets young graduates excited about the prospect of becoming involved with agribusiness in due time (Muhammad et al., 2013).

### **THEORETICAL PERSPECTIVE: THEORY OF PLANNED BEHAVIOUR (TPB)**

The main theoretical framework used in this study is the Theory of Planned Behaviour (TPB) (Ajzen, 1991). The TPB emphasizes the importance of intention in any behaviour. The TPB is a cognitive theory that provides a useful foundation for predicting behavioural intentions and can be applied to describe many types of behaviours (Ajzen, 1991). Behavioural intentions are instructions individuals present to themselves to behave in particular ways (Ajzen, 1991). They are decisions to perform certain actions. Intentions can be inferred from participants' responses that have the form, "I intend to do X", "I plan to do X", or "I will do X". In psychological terms, behavioural intentions suggest an individual's motivation to perform a behaviour and is a reliable indicator of how hard a person is willing to try and how much effort he/she makes to accomplish a behaviour. Overall, behavioural intentions are seen as powerful predictors of behaviour, particularly in the case of purposive, planned, and goal-oriented behaviour (Nwankwo et

al., 2012). One can best predict, rather than explain, any planned behaviour by observing intentions toward that behaviour (Krueger et.al, 2000).

In the TPB framework proposed by Ajzen (1991), the intention for any action is based on three qualifications: Firstly, a positive or negative evaluation of the behaviour (attitude). The individual's intention is a fundamental factor in carrying out a given behaviour. When the intention to engage in a behaviour is stronger, the behaviour is more likely to be carried out. Second is the subjective norm which is the perceived social pressure to perform or not to perform the behaviour. It is based on how one ought to act in response to the views or thoughts of others. Subjective norm influences may include friends, family members, and colleagues. The third is Perceived Behavioural Control (PBC). It is the perceived ease or difficulty of executing the behaviour and it is assumed to reflect past experience, opportunities, and anticipated obstacles.

The use of TPB can be found in similar studies. For instance, Basir and Musa (2021) used TPB as one of the theories to determine the factors that affect Islamic agropreneurial intention. Similarly, Rehan et al. (2019) draw on TPB to explain an individual's intentions toward entrepreneurship. Vamvaka et al. (2020), on the other hand, used TPB to identify gender-related differences in the levels of and the interrelations among attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention.

The term 'agropreneurial intention' refers to an individual's willingness to become self-employed and make a living by means of running an agribusiness venture (Yusoff et al., 2016). When the TPB is applied to the choice of becoming an agropreneur, an intention to pursue it, together with perceived behavioural control, predicts the possibility that an individual will pursue becoming an agropreneur. Intention to pursue agropreneurship, in turn, is determined by the degree an individual has a positive or negative evaluation of agropreneur, the perception of social pressure to pursue agropreneurship, and perceived behavioural control (Khapova, et.al. 2007; Tan & Laswad, 2006). Hence, it should be possible to predict whether or not an individual will eventually pursue agropreneurship by studying his or her intention to do so (Audet, 2004). Azjen's TPB has been useful in making sense of students' inclinations towards becoming involved in agribusiness, because it recognizes that multiple factors can affect an individual's intentions and that the combination of those factors is mutually reinforcing.

### **Attitude-Youth's Behaviour**

According to the TPB, the 'attitude' towards a behaviour is determined by the total set of accessible behavioural beliefs linking the behaviour to various outcomes and other attributes. According to the TPB, attitudes are a function of the individual's beliefs that behaviour leads to particular outcomes and the individual's evaluation of these

outcomes. It represents the person's general feeling of approval or disapproval towards an object. Thus the person's attitude towards an object is a function of his evaluation of the attributes of the object (Ajzen, 1991). Fishbein and Ajzen (1975) argue that intentions to be involved in a particular activity are dependent upon the person's knowledge, experience, and information. For Addo (2018), out of all the factors involved, the most important would be the evaluation of the behaviour. This refers to individual-level traits that define a person's attitude, for example, creativity, risk-taking, proactiveness, business acumen, communication skills, leadership skills, and more. Consequently, students who exhibit such qualities are said to be more likely than others to choose agropreneurship as their future career.

### **Social Norm-Influence of Important People**

The second component, 'subjective norm', represents individuals' perceptions about the values, beliefs, and norms held by people whom they look up to or regard as important and their desire to comply with those norms (Basu & Virick, 2008). It also refers to the individual's perception of social pressure to perform or not to perform the behaviour under consideration (Ajzen, 1991). It has been suggested that in terms of the role modelling perspective, parents have the most impact on their children's entrepreneurial careers (Shamsudin et al., 2017). Students with family business backgrounds, in particular, may develop

stronger entrepreneurial attitudes than those who do not. Having a social circle and family that is supportive of their agropreneurial endeavours reduces the social pressure and fear that is associated with pursuing what is seen as a non-conventional career path. Professional networks and acquaintances can also play a part in encouraging young graduates in the field. While there are indeed established young agropreneurs in Malaysia who have demonstrated success in their undertakings, youth participation in agriculture still remains low (Abiddin, 2012). Public figures and industry leaders provided they have the right platforms to do so, can serve as an inspiration especially to agriculture graduates who remain on the fence about whether or not to turn their interests and passions into work that is full-time.

### **Perceived Behavioural Control-Institutional Factors**

The third TPB component is Perceived Behavioural Control (PBC) which refers to individuals' perceptions of the ease or difficulty of executing the behaviour (Ajzen, 1991). It is determined by control beliefs, i.e. beliefs about the presence of factors that facilitate or impede the performance of the behaviour in question based on past experience and anticipated issues, as well as their skills, abilities, opportunity, compulsions, and dependence upon others (Ajzen, 1991). The perception that there are limited or lack of resources or opportunities to perform a particular behaviour are unlikely to form strong behavioural

intentions, regardless of whether they hold favourable attitudes toward the behaviour and believe that significant persons would approve of them performing the behaviour (Tan & Laswad, 2006). Individuals with high levels of perceived behavioural control are more likely to actually pursue their career of choice compared to those with low levels of perceived behavioural control (Khapova et al., 2007).

In this paper, the main factor that was examined in PBC is the opportunity structure which is defined as the external factors that youths consider for their intention to turn into expectation. The opportunity structure that young people usually consider when making a decision to be involved in agropreneurship are information of the labour market, the ability to access land and credit for farming, and the opportunities available transmitted through government policies. If students perceive that they have the capacity to overcome environmental conditions, they are more likely to get involved in agribusiness. In this study, it is proposed that the institutional factor, more specifically the way in which agricultural studies programs are set up, plays an imperative role in influencing agropreneurial intention among students. It is during the duration of their studies that students are most exposed to the industry. If the academic program adequately equips young graduates with the right set of skills and knowledge, it is likely that more of them will perceive agribusiness as a promising and fulfilling form of employment for themselves.

Previous studies have suggested that it is an integration of all factors (at the individual, social and institutional level) that influences students' agropreneurial intentions (Yusoff et al., 2015) while others like Addo (2018) have pointed out that some factors carry more weight than others. In addition to that, there are also studies that similarly identify quality entrepreneurship education as being the key link between entrepreneurship barriers and entrepreneurial orientation (Shamsudin et al., 2017; Yusoff et al., 2016). This study likewise maintains that idea and goes further to posit that a well-rounded, quality agropreneurship education that goes beyond theory-based learning, can in different ways positively influence the other determinants of agropreneurial intention i.e. individual factors (attitude and perceived behavioural control) and social factors (subjective norms), thereby increasing agropreneurial intention. Figure 1 shows the relationship between the three factors, using the dynamics identified by Azjen's TPB as the basis for this study.

## **METHODS, DATA COLLECTION AND ANALYSIS**

This study employed Focus Group Discussions (FGD) as the main method of research, in order to achieve a better understanding of Malaysian youths' intentions to be involved in agribusiness. Singletary (1994) suggests that FGD is a popular method used for qualitative studies involving a small number of controlled respondents. This method can also be used to find a variety of data quickly (assisted

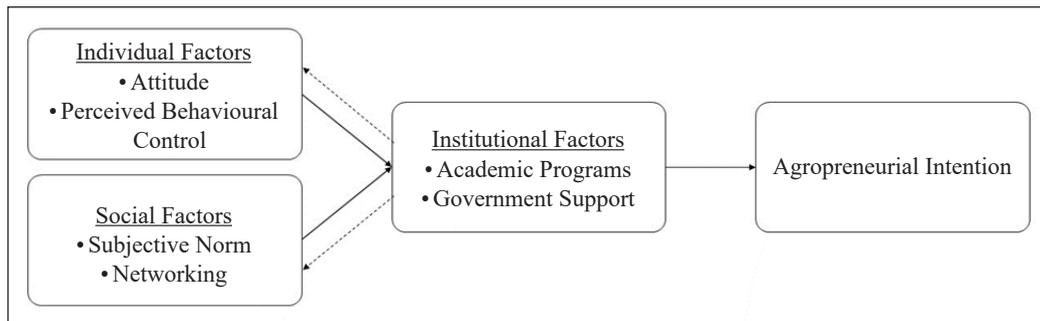


Figure 1. Factors affecting agropreneurial intention of UPM Students using Ajzen's TPB

by the recorder), so that the researchers can analyse the opinions and behavior of the sample in a more detailed manner (Berger, 1998).

A total of 20 students from various backgrounds were randomly selected from the Faculty of Agriculture, UPM. Students from UPM were chosen for this study because of UPM's involvement in the Agropreneur Incubation Program certified by MAFI. Under this program, the students involved are given direct exposure to the world of entrepreneurship. This is in line with the nation's aspirations to produce graduates that are not only excellent in academics but also capable, disciplined, creative, and innovative. The six-month-long course in UPM includes modules on fertigation, aquaculture, and hybrid indigenous chicken breeding, and ruminant breeding covering aspects such as production, processing, and farm entrepreneurship. The first two months equips students with theoretical knowledge, while the remaining four months will equip them with field (practical) skills. After completing this program, it is expected that the participants will be able to run their farms confidently, know how to

seek assistance from relevant stakeholders, and forge a broader network that can lead to collaborations and boost their farm marketing.

The respondents involved in the research were either in their 3rd or 4th year (final semester) of study in the Faculty of Agriculture, UPM (Serdang Campus) in 2019. They were divided into two main groups. The first group of 10 students was majoring in Aquaculture whereas the second group was majoring in Agriculture. These students were selected based on their enrolment in the Agricultural Entrepreneurship course (PPT 3701) that allows only cohorts from Bachelor Science Agriculture and Bachelor Science Aquaculture in Semester 2 (2019/2020) to be registered. They've completed their courses in the semester, and their experience in undertaking the entrepreneurship module in the faculty may provide relevant insight for the purpose of this study, in terms of their intention to undertake agribusiness in the future.

This study uses thematic analysis to analyse and organise the data. Braun and Clark (2006) defined thematic analysis "as

a method for identifying, analysing and reporting patterns (themes) within data. It minimally organises and describes data sets in detail and most of the time it goes further than this, and interprets various aspects of the research topic.”

The first step of familiarizing with the data involves listening to the audio of the recordings, transcribing, and reading repetitively all the transcripts from the interviews and focus group. The next stage is ‘coding’ whereby data is organised into meaningful groups. Codes identify a feature of the data that appears interesting to the researcher and refers to “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon” (Braun & Clarke, 2006). In phase three, the researcher’s task is to “re-focus the analysis at the broader level of themes, rather than codes, involving sorting the different codes into potential themes, and collating all the relevant coded data extracts within the identified themes” (Braun & Clark, 2006). This is done by extracting the most significant themes in the text segments of each code to identify the underlying patterns and structures. Finally, after all the steps, there should be a satisfactory thematic map of the data whereby the themes are more “defined and refined” meaning that it should cover the “essence” of what each theme is about and what aspect of data each theme consists of. The themes for this study were categorized into three areas according to the Ajzen TPB framework namely attitude, social norm, and PBC, and are further discussed in the section below.

## FINDINGS AND DISCUSSION

### Attitude

The overall response (see Appendix 1) from participants (Table 1) of the focus groups revealed that young people in Malaysia have some level of positive acceptance towards the prospect of a career in agribusiness. What is interesting to note is that their agropreneurial intentions are by no means traditional. While most had an interest in pursuing conventional forms of commercial farming to meet recognized market demands, a significant proportion of respondents have also set their sights on modern agribusiness ventures such as agritourism.

*The reason for switching from farm management is to broaden my scope of knowledge and expertise and possibly proliferate my produce.*  
(Participant 1, FGD 1)

*Agriculture offers a plethora of opportunities and that perked up my interest to study agriculture.*  
(Participant 2, FGD 2)

Recent trends, both locally and abroad perhaps, have increased the popularity of agritourism activities like getaways to nature resorts, fruit-picking, and farm tours. Among this group of students, there was a keen interest in developing agritourism sites i.e. homestays in order to accommodate domestic tourists mainly from built-up city centers, who wish to experience rural living for a change. Hence it can be gathered that young people are not completely indifferent

Table 1  
Description of respondents

Focus Group 1 Participants	Year, Course
1. Participant 1 (Female, 22)	Third year, Animal Husbandry Science course.
2. Participant 2 (Female, 23)	Third year, Animal Husbandry Science course.
3. Participant 3 (Female, 24)	Third year, Bachelor of Science, Agribusiness
4. Participant 4 (Female, 20)	Second year, Bachelor of Agricultural Science.
5. Participant 5 (Male, 21)	Second year, Bachelor of Agricultural Science
6. Participant 6 (Female, 21)	Third year, Aquaculture, Bachelor of Science
7. Participant 7 (Male, 24)	Third year, Aquaculture, Bachelor of Science
8. Participant 8 (Male, 22)	Third year, Aquaculture, Bachelor of Science
9. Participant 9 (Male, 24)	Third year, Aquaculture, Bachelor of Science
10. Participant 10 (Female, 22)	Third year, Aquaculture, Bachelor of Science
Focus Group 2 Participants	Year, Course
11. Participant 11 (Male, 23)	Third year, Bachelor of Agricultural Science
12. Participant 12 (Male, 23)	Third year, Bachelor of Agricultural Science
13. Participant 13 (Male, 23)	Third year, Bachelor of Agricultural Science
14. Participant 14 (Male, 24)	Third year, Bachelor of Agricultural Science
15. Participant 15 (Male, 21)	Third year, Bachelor of Agricultural Science
16. Participant 16 (Male, 23)	Third year, Bachelor of Agricultural Science
17. Participant 17 (Male, 24)	Third year, Bachelor of Agricultural Science
18. Participant 18 (Male, 21)	Third year, Bachelor of Agricultural Science
19. Participant 19 (Male, 21)	Third year, Bachelor of Agricultural Science
20. Participant 20 (Male, 23)	Third year, Bachelor of Agricultural Science

to the idea of agriculture as a profession but rather they are seeking ways to find meaning in it.

*I'm keen on doing AgroTourism. I have a piece of land at Sepang and over there there's a river, fruit tree.s (Participant 2, FGD 2)*

*The place is perfect to establish an AgroTourism area with a little village house intact (as such to put in emphasis)... because I had experience working under AgroTourism when I did my*

*practical (before) at Hulu Langat, where they reared goats, opened up homestays and did plantation businesses, these got me interested to do the same. (Participant 3, FGD 2)*

It was also found that there were students who enrolled in the program with little personal interest in agriculture studies, to begin with, let alone a career in agriculture. However, as the course progressed with ample opportunity for practical exposure, these students were able to identify some areas of interest and potential to them. This

shows that the relationship between the institutional factor and the individual factor is not linear.

### Subjective Norms

In addition, the discussions also revealed how big of an impact, subjective norms could have on agropreneurial intentions. As per Shamsudin et al. (2017), parents have tremendous influence over their children's entrepreneurial careers. This was overwhelmingly the case for the majority of students in this study who shared how their agricultural ambitions were either directly or indirectly influenced by their parents or other relatives. It was also this particular set of students that expressed their intentions to embark on agropreneurship immediately after they graduate.

*I have background knowledge about this course because of my father who happens to be a farmer and for that, he's one of the reasons who gave me the motivation to broaden my expertise further in agriculture. (Participant 4, FGD 2)*

*I may have no background knowledge in the field of agriculture but what drew my motivation in studying agriculture is my parents - well, one of many reasons. They have their intentions set on opening a field in the village and they need a professional handling the works and dear hopes are pinned down on their son to be the one dealing with it. (Participant 5, FGD 2)*

*I'm pursuing this (Agriculture) course mainly because of my family. Even though they're government employees but they do put in their own energy into palm oil fields and many more and that made me want to follow in upholding my father's legacy. (Participant 4, FGD 2)*

Having said this, there is however also a very practical reason for such a response. The ownership of private land tremendously reduces the burden of starting up, especially for young farmers with little capital to invest. It is thus advantageous to have family members and networks that can offer guidance and resources to support their agropreneurship ambitions. As for students that lack such connections, the journey to self-employment is less straightforward. These students generally opt to seek salaried work while preparing for their long-term agropreneurship plan.

Of this group of students, some are keen to actively pursue agriculture-related areas of work such as research and development, farm management, pesticide or feed formulation, and the like in order to gather experience and maintain relevance. There were also a considerable few who mentioned that they had obligations to serve out scholarship bonds following the completion of their studies. This hinders them from joining the agriculture sector and limits them to the world of corporate employment. There is also an opportunity cost to the agroecconomy in terms of human capital.

Female participants of this study expressed how starting out in this line of work would be a challenge for them. Resistance to women's participation in agriculture starts early on from the home and continues in the workplace as shared by the respondents. Nevertheless, one student pointed out that females possess different strong traits than their male counterparts, hence, there is a part to play for both men and women. One example that she gave was in algae culture where there is a preference for female workers because of their attentiveness and patience.

### **Perceived Behavioral Control**

A high-quality agropreneurship program can have positive effects on students' attitudes and their perceived behavioral control as mentioned by most of the students. This supports our proposition that a well-rounded, quality agropreneurship education can positively influence the other agropreneurial intention.

*The agricultural programmes are also one of UPM's strengths relative to other higher education institutions; that was one of the factors that drove me to take this programme. (Participant 7, FGD 2)*

*During my foundation studies, we had field trips and were given the opportunity to work in the fields. From there, it ignited my interest in agriculture. (Participant 2, FGD 2)*

*During my time in UPM Bintulu, there were a few modules relating to the fishery. From there, I gained an interest in the subject of breeding (seeding) and following that, aquaculture, which led to me choosing aquaculture as my first choice. (Participant 8, FGD 1)*

It is inevitable that challenges abound for budding agropreneurs and this fact is well known among the students, as they were able to list out the obstacles, they know they must face one day. One of the main issues that many participants resonated with was the difficulty of qualifying for startup funding. While they acknowledged that there are government grants and schemes available for agriculture projects, there is a lack of transparency on the steps involved in applying for them. This leaves them at a loss on where to even begin with little to no capital. Meanwhile, the students shared that private sources of funding from organizations such as the Agrobank were also available but required projects to already be in motion with a solid business plan. So, while this type of scheme would be beneficial for agropreneurs at the growth stage, it in fact does little in terms of providing financial support for young graduates that are starting out in the field and do not qualify for the funding. Hence, the discrepancies between designing financial aid packages and their delivery are something that providers must carefully (re) consider.

*The majority of us here already have excitement to start (our venture in agriculture and the likes). We are passionate about it, we have the background knowledge, but the biggest hurdle is just the financial problem. Of course, if you want to apply for a loan, it is available; there are just the risks that you have to face. Some may not want to apply for a loan because even now we have student loans. (Participant 6, FGD 2)*

### RECOMMENDATIONS FOR AGROPRENEURSHIP IN MALAYSIA

Several recommendations can be made based on the key issues identified in this study and this can be summarized in Figure 2. Firstly, efforts should be intensified to align agriculture education and training in Malaysia with the development objectives of the country and the labour market. Curriculum and teaching methods must be

updated in response to local needs, interests, and merit. Agriculture courses at the diploma level should not be limited to job tasks. It should focus beyond trade-based learning, providing knowledge, technical skills, and attributes that young farmers need for their agopreneurship careers. Likewise, at the tertiary level, learning should be multidisciplinary so that students can grasp and incorporate concepts pertaining to, for example, food sciences, risk management, or data analytics that can help them be dynamic in navigating the growth of their agribusiness and potential pitfalls.

Secondly, a strong research and development (R&D) environment has proven to increase the productivity and competitiveness of young farmers. In Australia for example, the majority of government support comes from broad-based policies with a lesser emphasis on policy interventions and regulations, and more so on funding R&D, farm financing, drought relief, and the like (Sterly et al., 2018). Senior and experienced members of

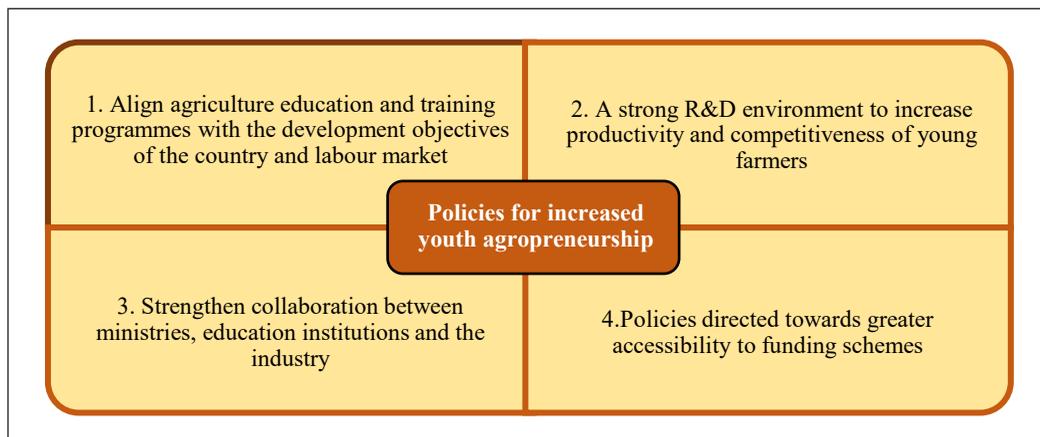


Figure 2. Proposed policies for increased youth agropreneurship

the industry are an asset and can positively contribute through their participation in the teaching, training, and mentoring of students (Rezai et al., 2011).

Thirdly, greater inter-ministerial collaboration, namely between the Ministry of Agriculture and food industries and the Ministry of Education is needed. Private-public partnerships are also mutually beneficial, and a whole government approach is needed to realize the potential of youth involvement in agriculture. Based on this study, for example, it is observed that young people have an interest in developing agritourism sites. Hence, closer collaboration between the relevant authorities including the Ministry of Tourism, Art and Culture as well as the Ministry of Entrepreneurship Development and Co-operatives can facilitate the ease of doing business for the young agropreneurs.

Finally, policies need to be directed towards greater access to funding schemes. For example, in the USA, young and beginning farmers, along with minorities and new entrants are given preference for access to direct lending and loan guarantee programs to help them expand their agribusiness into a viable production unit (Sterly et al., 2018). Furthermore in Japan, the government has policy support mechanisms such as strict controls on imports and elaborate agriculture insurance schemes in place to better protect local producers (Reyes et al., 2017). Based on models like these, the Malaysian government can do more to give their young agropreneurs a greater sense of security in pursuing their ambitions.

## **THEORETICAL, PRACTICAL AND MANAGERIAL IMPLICATIONS**

The theoretical implication suggests that in addition to personal factors and social norms, this study found that the institutional factor, more specifically the design and structure of agricultural studies programs, plays a critical role in influencing agropreneurial intention among students.

In terms of practical and managerial implications, a robust and holistic agropreneurship curriculum that goes beyond theory-based learning can be impactful in increasing agropreneurial intention amongst the youth. These issues open potential areas for future research and policy implications for efforts to align agriculture education and training. Beyond trade-based learning, education and government policies should also focus on providing knowledge, technical skills and building attributes that young farmers need for their agropreneurship career.

At the tertiary level, learning should be holistic and multidisciplinary in order for students to master practical and theoretical knowledge pertaining to, for example, food sciences, risk management, or data analytics that can help them be dynamic in navigating the growth and potential pitfalls they may face in their own agribusiness. It is recommended for universities to focus their research and development on agropreneurship training to further strengthen students' agropreneurial intentions. Additionally, in response to the ever-changing labour markets and the quest for sustainable competitive advantage in Malaysia, it is suggested that higher

educational institutions should integrate skills and abilities on agropreneurship in order to nurture university students' agropreneurial intentions.

### LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Although the research managed to uncover the critical issues faced by youths with regards to agropreneurial intention, there are several limitations that need to be addressed. Firstly, this study requires added empirical evidence in order to establish stronger findings on the major issues encountered. Secondly, the sample has been limited to only include UPM students and this may result in a bias. Therefore, future studies should include views from government agencies, educators in the agricultural field, trainers, and also consumers to yield greater findings. Finally, this study only focuses on the agropreneurial intention of university students and neglects other youths involved in agriculture such as vocational students. Research on other youth clusters is needed to have a wider view of the issues faced by youths with regards to their agropreneurial intention.

For future work, a follow-up study of the same participants that are interested in agropreneurship in this study would give more insights on their ongoing journeys and their transitions from education towards agropreneurship. This would create a greater understanding of young people's agropreneurial intention and show the extent to which it meets their expectations. It will also allow the investigation of

accessibility and obstacles involved in their agropreneurship journey.

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### REFERENCES

- Abdullah, F. A., & Samah, B. A. (2013a). Factors impinging farmers' use of agriculture technology. *Asian Social Science*, 9(3), 120-124. <http://dx.doi.org/10.5539/ass.v9n3p120>
- Abdullah, F. A., & Samah, B. A. (2013b). Factors influencing inclination toward agriculture entrepreneurship among students in agriculture learning institute. *Asian Social Science*, 10(2), 273-278. <https://doi.org/10.5539/ass.v10n2p273>
- Abdullah, F. A., Samah, B. A., & Othman, J. (2012). Inclination towards agriculture among rural youth in Malaysia. *Journal of Basic and Applied Scientific Research*, 2(11), 10892-10894.
- Abiddin, N. Z. (2012). The sources to acquire informal mentor on the graduate agricultural entrepreneurs in Malaysia. *International Journal of Engineering Education*, 1(1), 209-217.
- Abiddin, N. Z., & Irsyad, S. (2012). The involvement of graduates youth in commercial agriculture: Issues and Challenges. *EDUCARE: International Journal for Educational Studies*, 5(1), 15-24.
- Addo, L. (2018). Factors influencing agripreneurship and their role in agripreneurship performance among young graduate agripreneurs. *International Journal of Environment, Agriculture and Biotechnology*, 3(6), 2051-2066. <http://dx.doi.org/10.22161/ijeab/3.6.14>

- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211. [https://doi.org/10.1016/0749-5978\(91\)90020-T](https://doi.org/10.1016/0749-5978(91)90020-T)
- Audet, J. (2004). A longitudinal study of the entrepreneurial intentions of university students. *Academy of Entrepreneurship Journal*, 10(2), 3-16.
- Bahaman, A., Jeffrey, L., Azril, M. H., & Jegak, U. (2010). Acceptance, attitude and knowledge towards agriculture economic activity between rural and urban youth: The case of contract farming. *Journal of Applied Sciences*, 10(19), 2310-2315. <https://doi.org/10.3923/jas.2010.2310.2315>
- Basir, K. H., & Musa, S. F. P. D. (2021). An Islamic perspective of agripreneurs motivation. *Journal of Enterprising Communities: People and Places in the Global Economy*, ahead-of-print. <https://doi.org/10.1108/JEC-08-2020-0147>
- Basu, A., & Virick, M. (2008). *Assessing entrepreneurial intentions amongst students: A comparative study*. In VentureWell. Proceedings of Open, the Annual Conference (p. 79). National Collegiate Inventors & Innovators Alliance. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.483.7035&rep=rep1&type=pdf>
- Berger, A. A. (1998). *Media research techniques*. Sage Publications.
- Bolong, J., Omar, S. Z., D'Silva, J. L., Azril, H., Shaffril, M., & Hassan, M. A. (2013). ICT utilisation and its impact on the income of young fishermen in Malaysia. *Pertanika Journal of Social Sciences & Humanities*, 21(S), 49-58.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <http://dx.doi.org/10.1191/1478088706qp063oa>
- Cheng, C. (2020, January 10). *Youth unemployment in Malaysia & the region*. Institute of Strategic and International Studies Malaysia. [https://www.jef.or.jp/journal/pdf/229th\\_Special\\_Article.pdf](https://www.jef.or.jp/journal/pdf/229th_Special_Article.pdf)
- D'Silva, J. L. (2010). Acceptance and sustainability of contract farming among youth in Malaysia. *American Journal of Agricultural and Biological Sciences*, 5(3), 350-356. <https://doi.org/10.3844/ajabssp.2010.350.356>
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behaviour*. Addison-Wesley.
- Faiz, A. N. A., Khairuddin, I., Jegak, U., Azril, M. S. H., & Jeffrey, L. S. (2010). Aquaculture industry potential and issues: A case from cage culture system entrepreneurs: Suggestions for intensification of aquaculture industry. *Journal of Social Sciences*, 6(2), 206-211. <https://doi.org/10.3844/jssp.2010.206.211>
- Fitz-Koch, S., Nordqvist, M., Carter, S., & Hunter, E. (2018). Entrepreneurship in the agricultural sector: A literature review and future research opportunities. *Entrepreneurship Theory and Practice*, 42, 129-166. <https://doi.org/10.1177/1042258717732958>
- Hashemi, S. M. K., Hosseini, S. M., & Rezvanfar, A. (2012). Explaining entrepreneurial intention among agricultural students: Effects of entrepreneurial self-efficacy and college entrepreneurial orientation. *Research Journal of Business Management*, 6(3), 94-102.
- International Labour Organisation. (2020). *Global employment trends for youth 2020: Technology and the future of jobs*. [https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/--publ/documents/publication/wcms\\_737648.pdf](https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/--publ/documents/publication/wcms_737648.pdf)
- Jamaludin, S. (2011). *Annual report 2011*. Technology Promotion and Development Centre, Malaysian Agricultural Research and Development Institute (MARDI).
- Khapova, S. N., Arthur, M. B., & Wilderom, C. P. M. (2007). The subjective career in the knowledge economy. In *Handbook of career studies*. Sage.

- Krueger, N., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing, 15*(5), 411-432. [https://doi.org/10.1016/S0883-9026\(98\)00033-0](https://doi.org/10.1016/S0883-9026(98)00033-0)
- Leković, B., & Petrović, M. (2020). Characteristics of agro-entrepreneurs in Southeast Europe. In J. Andrei (Ed.), *Agricultural policy, rural development, and entrepreneurship in contemporary economies*. IGI-Global.
- Mamun-Ur-Rashid, M., Kamruzzaman, M., & Emad, M. (2018). Women participation in agricultural extension services in Bangladesh: Current status, prospects and challenges. *Bangladesh Journal of Extension Education, 29*(1), 93-107.
- Man, N. (2008). Perception towards agriculture among youth farmers and the necessity for agriculture education. *Malaysian Journal of Youth Studies, 1*, 99-114.
- Man, N. (2012). Unleashing youth potentials in developing the agricultural sector. *Pertanika Journal of Social Sciences & Humanities, 20*(1), 93-106.
- Muhammad, M., Ismail, A. A., & Rak, A. E. (2013). Competency of agriculture graduates in Malaysian public universities. *International Journal of Enhanced Research in Education Development, 1*(1), 1-9.
- Musa, S. F. P. D. (2020). A study on youths' aspirations and perceptions of agriculture and its policy implications. In J. Andrei (Ed.), *Agricultural policy, rural development, and entrepreneurship in contemporary economies*. IGI-Global.
- Musa, S. F. P. D., Idris D. S. R. P. H., & Basir, K. H. (2020). Exploring the entrepreneurial motivations and barriers of agripreneurs in Brunei Darussalam. In P. O. de Pablos (Ed.), *Economics, business, and Islamic finance in ASEAN economics community*. IGI-Global.
- Noor, K. B. M., & Dola, K. (2011). Investigating training impact on farmers' perception and performance. *International Journal of Humanities and Social Science, 1*(6), 145-152.
- Ntale, J. F., Anampiu, R., & Gathaiya, C. W. (2015). Agro-entrepreneurship readiness model: An empirical investigation in Kenya. *International Journal of Development and Sustainability, 4*(7), 825-839.
- Nwankwo, B. E., Marire, M. I., Kanu, G. C., Balogun, S. K., & Uhiara, A. C. (2012). Gender-role orientation and self efficacy as correlates of entrepreneurial intention. *European Journal of Business and Social Sciences, 1*(6), 9-26.
- Ramli, S. A., Samah, B. A., Hassan, M. S., Omar, S. Z., Bolong, J., & Shaffril, H. A. M. (2015). Potential benefits of ICT for youth agro-based entrepreneurs in Malaysia. *Journal of Applied Sciences, 15*(3), 411-414. <https://doi.org/10.3923/jas.2015.411.414>
- Rehan, F., Block, J., & Fisch, C. (2019). Entrepreneurship in Islamic communities: How do Islamic values and Islamic practices influence entrepreneurship intentions? *Journal of Enterprising Communities: People and Places in the Global Economy, 13*(5), 557-583. <http://dx.doi.org/10.2139/ssrn.3405196>
- Reyes, C. M., Agbon, A. D., Mina, C. D., & Gloria, R. B. (2017). *Agricultural insurance program: Lessons from different country experiences* [PIDS Discussion Paper Series, No. 2017-02]. *Philippine Institute for Development Studies*.
- Rezai, G., Mohamed, Z., & Shamsudin, M. N. (2011). Informal education and developing entrepreneurial skills among farmers in Malaysia. *International Journal of Social, Behavioural, Educational, Economic, Business and Industrial Engineering, 5*(7), 906-913.
- Shaffril, H. A. M., D'Silva, J. L., Uli, J., & Samah, B. A. (2010). Gender issue in contract farming: The case of Malaysian students. *American Journal of Agricultural and Biological*

- Sciences*, 5(2), 204-209. <https://doi.org/10.3844/ajabssp.2010.204.209>
- Singletary, M. W. (1994). *Mass communication research: Contemporary methods and applications*. Longman.
- Shamsudin, S. F. F., Mamun, A., Che Nawi, N., Nasir, A., & Zakaria, M. (2017). Factors affecting entrepreneurial intention among the Malaysian university students. *Journal of Developing Areas*, 51(4), 423-431.
- Sterly, S., Jongeneel, R., Pabst, H., Silvis, H., Connor, J., Freshwater, D., Shobayashi, M., Kinoshita, Y., Van Kooten, C., & Zorn, A. (2018). *Research for AGRI Committee - A comparative analysis of global agricultural policies: Lessons for the future CAP*. European Parliament, Policy Department for Structural and Cohesion Policies.
- Tan, L. M., & Laswad, F. (2006). Students' beliefs, attitudes and intentions to major in accounting. *Accounting Education*, 15(2), 167-187. <https://doi.org/10.1080/09639280600787194>
- The Sun Daily. (2020, December 19). The participation in agriculture still low. <https://www.thesundaily.my/local/youth-participation-in-agriculture-still-low-AY5724013>
- United Nations Population Fund. (2020). *World population dashboard*. <https://www.unfpa.org/data/world-population-dashboard>
- William, K., Allen, W., Joseph, C., & Peterson, H. C. (2004). Entrepreneurship and innovation in the agri-food system. *American Journal Agricultural Economic*, 86(5), 1330-1336.
- Yusoff, A., Ahmad, N. H., & Halim, H. A. (2015). Promoting agropreneurship among Gen Y: An integration of individual, institutional and social level factors. *Australian Journal of Basic and Applied Sciences*, 9(14), 74-86.
- Yusoff, A., Ahmad, N. H., & Halim, H. A. (2016). Entrepreneurial orientation and agropreneurial intention among Malaysian agricultural students: The impact of agropreneurship education. *Advances in Business-Related Scientific Research*, 7(1), 77-92.
- Vamvaka, V., Stoforos, C., Palaskas, T., & Botsaris, C. (2020). Attitude toward entrepreneurship, perceived behavioral control, and entrepreneurial intention: Dimensionality, structural relationships, and gender differences. *Journal of Innovation and Entrepreneurship*, 9(5), 1-26.

## APPENDIX

### Appendix 1

*Focus group protocol for UPM students: Discussion guide*

#### 1. Welcome

- Welcome the participants and thank them for their willingness to participate.
- Health and Safety – exits in case of fire.
- Give a brief explanation of the research and why the participants have been invited to attend.
- Explain the focus group process (structure of the group, no right or wrong answers, use of audio recorders, how we report the results - commitment to confidentiality with participant responses anonymised, also remind participants participation is voluntary and they can withdraw from the focus group at any time).
- Establish the ground rules for the focus groups (e.g. no speaking over one another).
- General introductions beginning with the moderator going clockwise around the table.

#### 2. Introduction (this is a warm-up so there won't be much need to encourage expansion or probing of responses).

- (i) We'd like to begin the discussion by asking you about your expectations of future career in the field of agriculture?
- (ii) Why did you choose to take up a course in agriculture? What are your main motivators?
- (iii) Where do you envision yourself in 5 years to come?

#### 3. Attitude towards agriculture and agribusiness

- (i) What do you think of agriculture/agribusiness/becoming an agropreneur? Do you think it is a good/secured career pathway?
- (ii) Do you think that are specific traits needed to be an agropreneur? For example risk taker, leadership qualities, innovativeness? Do you see yourself having entrepreneurial traits?

#### 4. Knowledge of agriculture/agribusiness

- (i). Do you think necessary knowledge in agriculture is important when setting up agribusiness? Is formal education important? How about practical training? Remember to **summarise** responses from this section.

#### 5. Government Policies that motivates them to become an agropreneur

- (i) Apart from personal interest, knowledge and education being motivators; are there any government policies that may have an effect on your intention to become an agropreneur? Are there any policies that further encouraged you to become an agropreneur? Or are there any policies that you suggest that can attract more youth to venture in to agriculture?

#### 6. Other External Factors affecting their intention?

- (i) Parents' encouragement; other successful stories of agropreneurs; having a family business.

#### 7. Perceived Challenges of becoming an Agropreneur

- (i). What your expected challenges of becoming an agropreneur? Financial challenges? Infrastructure? Technology?

#### 8. Debrief, Close and Thanks

We are coming to the end of the discussion.

- First I would like to ask what you think about the discussion and its content. Provide participants with debrief letter (Appendix 3) and identify telephone numbers if anyone would like to discuss matters further.
- Does anyone have any further questions or comment?
- Thank participants for time and contribution