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A preliminary investigation of personality traits and characteristics of young agropreneurs

Pei Fen, Tan[1,2], Mohd Fairuz Abd Rahim[1*], Jeen Wei, Ong[1]
[1]*Faculty of Management, Multimedia University, Cyberjaya*
[2]*Marketing Lancers Consultancy Sdn. Bhd.*
**correspondence: fairus.rahim@mmu.edu.my*

Abstract

Agricultural entrepreneurship (agroentrepreneurship) plays a crucial role in Malaysia's agricultural industry, with the agricultural sector being a key driver of the nation's economic development and poverty reduction. Through a literature review, this study identifies three key personality traits that may predict the success of young agroentrepreneurs: individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy. These traits are vital to agroentrepreneurs, as they need to adapt to rapid market changes, discover and seize opportunities, deal with challenges, innovate, take calculated risks, and maintain a competitive edge. Thus, this study examined agroentrepreneurs' scores on these traits and characteristics. This study used a questionnaire to measure individual dynamic capabilities, individual entrepreneurial orientation, and entrepreneurial self-efficacy. Data were gathered from 54 participants during training sessions by the Malaysian Agricultural Research and Development Institute (MARDI) and the Federal Agricultural Marketing Authority (FAMA). The results indicate that agroentrepreneurs scored relatively high on most of these traits and characteristics, suggesting potential success in the sector. Of all traits and characteristics, passion, perseverance, and innovativeness had the highest mean scores. The government can support the development of high-potential agroentrepreneurs by creating programs that develop entrepreneurial qualities, encouraging youth to become agroentrepreneurs, improving education and training programs, and offering financial assistance, such as grants or loans, to young agroentrepreneurs.

Keywords:
Agropreneur, Entrepreneurial self-efficacy, Individual dynamic capabilities, Individual entrepreneurial orientation, Personality traits.

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1. Introduction

The agricultural sector is vital for economic growth and advancement in many countries, especially in least developed and developing ones (Jamshidi & Shafiee, 2023; Kaki et al., 2023; Pathak, 2023; Sassi, 2023). This sector is vital in ensuring food security to feed the growing population, especially as the global population is estimated to reach 10 billion by 2050 (United Nations, 2022). In addition, the agricultural sector is crucial in creating job opportunities, as it accounts for a significant percentage of total employment in the least developed and developing

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countries (International Fund for Agricultural Development [IFAD], 2021). With many rural residents depending on agriculture as the primary source of income, this further highlights the importance of the sector in alleviating poverty.

In Malaysia, the agricultural sector is a significant contributor to the country's economy, as shown by its consistent gross domestic product (GDP) contributions (7.4% in 2021, 7.2% in 2020, 7.1% in 2019). In addition, the sector accounts for a significant percentage in the country's total employment rate, with 10.5% in 2020, 10.2% in 2019, and 10.6% in 2018 (Department of Statistics Malaysia [DOSM], 2022; Economic Planning Unit [EPU], 2021). This further highlights the agricultural sector's pivotal role in ensuring food security, creating employment opportunities, and reducing poverty (Kim et al., 2022; Osabohien et al., 2019; Workie et al., 2020). Thus, the rise of entrepreneurship in the agricultural sector further emphasizes its growing importance and profitability in the Malaysian economy (Yap, 2019).

Entrepreneurship is essential to a country's economic growth (Beniwal & Mathur, 2023; Huo & Wei, 2023; Rafael et al., 2023). Agricultural entrepreneurship, also known as agroentrepreneurship, has gained significant traction in the Malaysian agricultural industry. Despite abundant resources, optimal growth requires effective entrepreneurs (Beniwal & Mathur, 2023). Agropreneurship covers a wide spectrum of agricultural products from growing crops, raising livestock, fishing, selling, using technology, thinking of fresh concepts, and even agro-tourism, and businesses related to agriculture that are crucial for ensuring food security, creating job opportunities, and reducing poverty (Kim et al., 2022; Lal Bairwa et al., 2014; Osabohien et al., 2019). The agricultural sector is perceived as a less favorable industry as it is seen as dirty, low-income potential, and labor-intensive (Corrado, Pisacane, & Alarcón Ferrari, 2023; Unay-Gailhard, Bavorová, Bednaříková, & Ponkina, 2019). However, agroentrepreneurs are now seeing the potential of agricultural business (agribusiness) and are starting to run businesses in aquaculture, seaweed cultivation, swiftlet nests, and large-scale paddy farming (Yap, 2019). In Malaysia, entrepreneurship supports the country's goal of becoming an entrepreneurial nation by 2030 (Keat & Ahmad, 2013) and is a catalyst for transitioning the country from a middle-income to a high-income economy (Mohamad et al., 2015). The change in perception towards the agricultural sector is transforming farmers from low-income to high-income groups and altering the landscape of the sector.

Noting that agropreneurship plays a significant role in economic growth, encouraging participation in agroentrepreneurship is crucial, especially among the youth population, as the youth population represents a huge percentage of Malaysia's total population, with approximately 30.5% (9.9 million) falling within the age range of 15 to 30 and 46.5% (15.1 million) within the age range of 15 to 40, as of July 2019 (Ministry of Youth and Sports Malaysia, 2022). According to the Ministry of Agriculture and Food Security [KPKM], young agroentrepreneurs are between 18 and 40 years old (Kadir, 2014). Having them actively engage in agriculture could significantly contribute to the country's economic growth and reduce poverty. These young agroentrepreneurs, with their innovation, fresh ideas, and ability to adopt emerging technologies, can transform the sector and promote sustainable development.

The Malaysian government sees the importance of involving youth in agroentrepreneurship and has made numerous efforts to promote youth participation in the industry. Providing grants, financial assistance, and entrepreneurship training through the Young Agropreneur Program is one of these (Ministry of Agriculture and Food Security [KPKM], 2025). However, even with the huge amount of grants and financial assistance offered, the performance of the agricultural sector is below expectations (expected share of GDP: 7.5%, actual share of GDP: 7.4%), as highlighted in the Twelfth Malaysia Plan (Economic Planning Unit, 2021). Although the youth population is considered to be a future economic force in Malaysia, not everyone possesses the same quality. The success stories of young agroentrepreneurs are mostly based on individual capabilities, especially in the dynamic and evolving agriculture industry. This highlights the need to

understand the specific personality traits and characteristics that contribute to the success of young agroentrepreneurs in the agricultural sector, so that these success stories may be emulated. Having a comprehensive understanding of what contributed to the success of young agroentrepreneurs allows stakeholders, such as policymakers and government agencies, to come up with customized guidance and mentorship, and offer resources to develop these traits. These initiatives will help young agroentrepreneurs reach their potential and significantly contribute to the agricultural sector's growth and, inadvertently, the country's economy. To address these issues, the following research objectives were developed.

RO1: To examine the level of individual dynamic capabilities (sensing, seizing, and transforming) of young agroentrepreneurs.
RO2: To analyze the level of individual entrepreneurial orientation (risk-taking, innovativeness, proactivity, perseverance, and passion) of young agroentrepreneurs.
RO3: To investigate the level of entrepreneurial self-efficacy in young agroentrepreneurs.
RO4: To examine whether sex, age, business experience, and business category have a significant relationship with individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy.

2. Literature review

Examining the links between personality traits, entrepreneurial behavior, and its outcomes has gained traction in the recent literature. Numerous studies have investigated how these traits influence entrepreneurial intention, business performance, and overall success (Almeida et al., 2014; Leonelli et al., 2016; Leutner et al., 2014; Postigo et al., 2020, 2021; Rauch & Frese, 2007; Vizcaíno et al., 2021). Trait theories such as the Big Five personality traits, which consist of openness, conscientiousness, extraversion, agreeableness, and emotional stability (Costa & McCrae, 1992; Goldberg, 1990), have been widely researched in relation to entrepreneurial behavior.

Existing studies have consistently demonstrated positive correlations between the Big Five personality traits, entrepreneurial intention, and firm performance (Kang et al., 2023; Shinde et al., 2022; Zhao et al., 2010). However, recent research suggests that specific personality traits could provide a better understanding of predicting entrepreneurial success than the broader Big Five model (Almeida et al., 2014; Leutner et al., 2014; Nguyen et al., 2023; Postigo et al., 2020, 2021; Rauch & Frese, 2007; Vizcaíno et al., 2021). Traits such as willingness to take risks, desire for achievement, self-efficacy, and innovation are believed to have stronger associations with the unique demands and characteristics of entrepreneurship (Efrata et al., 2021; Postigo et al., 2021; Srimulyani & Hermanto, 2022).

This highlights the need to further explore specific personality traits and characteristics that are better predictors of entrepreneurial success, specifically on the success of young agroentrepreneurs. With a better understanding of how certain specific traits influence young entrepreneurs, researchers and practitioners can identify potential agroentrepreneurs and design tailored strategies to foster the development of these traits. Ultimately, this will improve the likelihood of success and promote growth in the agricultural sector. This study aims to examine three key personality traits that predict the success of young agroentrepreneurs: individual dynamic capabilities, entrepreneurial orientation, and self-efficacy. These traits are crucial, as they allow agroentrepreneurs to effectively adapt to market changes, seize emerging opportunities, deal with challenges, find new opportunities, take calculated risks, drive proactive innovation, and effectively handle the complexities associated with establishing a new business while maintaining a competitive edge.

2.1 Individual dynamic capabilities (IDC)

Teece et al. (1997) introduced the concept of dynamic capabilities, which greatly influenced our perspective on how firms can develop and remain competitive in dynamic environments. According to the authors, dynamic capabilities refer to " a firm's capacity to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments" (Teece et al. 1997, p. 516). Scholars have extensively studied this framework and explored its role in wealth generation, especially in ever-changing technological landscapes (Alinaghian et al., 2020; del Mar Alonso-Almeida et al., 2017; Dejardin et al., 2023; Mishra & Kiran, 2025; Shi et al., 2022; Torres et al., 2018).

Initially, Teece et al. (1997) focused on latent abilities and competencies as the foundation of dynamic capabilities. Eisenhardt and Martin (2000) introduced a process-oriented perspective that emphasized routines and processes as key elements. This transition highlights the importance of using resources effectively to create new assets that have the potential to revolutionize markets (Eisenhardt & Martin, 2000). This study adopts Teece's (2007) definition and perspective because of its contextual relevance. Teece (2007) further categorizes dynamic capabilities into three dimensions: sensing, seizing, and transforming. Sensing is the ability "to sense and shape opportunities and threats," while seizing is the ability "to seize opportunities," and transforming refers to the ability to "maintain competitiveness through enhancing, combining, protecting, and, when necessary, reconfiguring the business enterprise's intangible and tangible assets" (Teece, 2007, p. 1319). This framework explains how firms adapt to dynamic environments and effectively leverage resources.

Most literature on dynamic capabilities focuses on a firm-level approach (Alinaghian et al., 2020; Shi et al., 2022; Torres et al., 2018), while there have only been a small number of studies on dynamic capabilities at the individual level (Al Dhaheri et al., 2024; del Mar Alonso-Almeida et al., 2017; Kirova, 2023; Pesqueira et al., 2023). Recent research illustrates the significance of individual-level dynamic capabilities for managers to navigate complex and dynamic business environments (Augier & Teece, 2008, 2009; del Mar Alonso-Almeida et al., 2017; Tang et al., 2012; Teece, 2012; Wilden et al., 2013). Individual dynamic capabilities are crucial in shaping the dynamics of the overall organization, promoting the growth of firm-level dynamic capabilities, and fostering positive stakeholder engagement (Del Mar Alonso-Almeida et al., 2017; Weaven et al., 2021). Furthermore, how managers and owners use these abilities also affects business survivability (Al Dhaheri et al., 2024). Thus, understanding and developing individual dynamic capabilities are crucial for responding effectively, seizing opportunities, and remaining competitive in evolving markets.

2.2 Individual entrepreneurial orientation (IEO)

Miller (1983) initially introduced the concept of entrepreneurial orientation to describe entrepreneurial firms that "engage in product market innovation, undertake somewhat risky ventures, and are first to come up with 'proactive' innovations, beating competitors to the punch" (p. 771). Entrepreneurial orientation has three dimensions: innovativeness, risk-taking, and proactiveness (Miller, 1983).

Expanding on Miller's work, Covin and Slevin (1989) asserted that "entrepreneurial firms are those in which top managers have entrepreneurial management styles, as evidenced by the firms' strategic decisions and operating management philosophy" (p. 77). Their study pointed out that managers' individual traits could greatly influence a firm's individual traits. Expanding on this concept, Lumpkin and Dess (1996) introduced two additional dimensions–competitive aggressiveness and autonomy–to define entrepreneurial orientation. According to them, entrepreneurial orientation is "the processes, practices, and decision-making activities that lead to new entry," whereby new entry is defined as "the act of launching a new venture, either by a start-up firm, through an existing firm, or via "internal corporate venturing" internal corporate

venturing' (p. 136). Lumpkin and Dess (1996) noted that a venture's success depends on attributes such as autonomy, risk-taking, innovativeness, proactivity, and competitive aggressiveness.

Most previous studies have focused on examining the association between firm-level entrepreneurial and firm performance and success (Adomako et al., 2016; Anderson et al., 2015; Covin et al., 2006, 2020; Covin & Lumpkin, 2011; Covin & Slevin, 1989; Elidjen et al., 2022; Khan et al., 2021; Lumpkin & Dess, 1996; McGee & Peterson, 2019; Nson, 2025; Rauch et al., 2009; Santos et al., 2018; Wales et al., 2021). Recently, more attention has been placed on studying individual-level entrepreneurial orientation (Anwar et al., 2022; Bilal & Fatima, 2021; Bolton & Lane, 2012; Covin et al., 2006; Fatima & Bilal, 2020; Ferreira et al., 2017; Forcadell & Úbeda, 2022; Hassan et al., 2021; Koe, 2016; Kraus et al., 2019; Salehe et al., 2024; Santos et al., 2020; Stouraitis et al., 2019). While the original Covin and Slevin (1989) entrepreneurial orientation scales viewed individuals as representatives of the organization, rather than as distinct individuals (Kraus et al., 2019), the concept of individual entrepreneurial orientation continues to be further developed. Bolton and Lane (2012) introduced individual entrepreneurial orientation and adapted the five dimensions defined by Rauch et al. (2009): innovativeness, risk-taking, proactiveness, autonomy, and competitive aggressiveness. However, Bolton and Lane (2012) found that innovativeness, risk-taking, and proactiveness were reliable and valid.

Building upon Bolton and Lane's work, Santos et al. (2020) created a new individual entrepreneurial orientation scale that includes the dimensions of innovativeness, risk-taking, and proactiveness, and added two additional dimensions: passion and perseverance, which were also identified by Gerschewski et. al. (2016). This scale enriches the understanding of individual entrepreneurial orientation. Nevertheless, individual entrepreneurial orientation complements the understanding of firm-level entrepreneurial orientation by focusing on the specific attributes and behaviors of individuals (Bolton & Lane, 2012; Santos et al., 2020). Numerous studies have shown that individuals with high levels of individual entrepreneurial orientation are more likely to have positive business outcomes (Bilal & Fatima, 2021; Bolton & Lane, 2012; Fatima & Bilal, 2020; Forcadell & Úbeda, 2022; Gerschewski et al., 2016; Santos et al., 2020). Table 1 summarizes some of the EO dimensions and definitions of entrepreneurial orientation from the literature.

2.3 Entrepreneurial self-efficacy (ESE)

The concept of self-efficacy, rooted in Bandura's (1977) social cognitive theory, is prominent in business and management studies, particularly in entrepreneurship. Self-efficacy refers to "an individual's belief in their personal capability to accomplish a job or a specific set of tasks" (Mcgee et al., 2009, p. 966; Bandura, 1977). Hence, self-efficacy reflects a person's confidence in their ability to successfully address challenging issues or complete tasks (Bandura, 1986; Kumar & Shukla, 2022).

Entrepreneurial self-efficacy is an essential trait for entrepreneurs, as it reflects an individual's confidence in his or her ability to fulfil the responsibilities and duties of an entrepreneur (Chen et al., 1998). High entrepreneurial self-efficacy enhances an entrepreneurs' ability to navigate business challenges and uncertainties associated with starting a new business, according to numerous studies (Bandura, 1977; Kumar & Shukla, 2022; Sarman, 2025; Wood & Bandura, 1989). Furthermore, entrepreneurial self-efficacy can enhance one's ability to manage risks and difficulties in entrepreneurship. On the other hand, a person with low entrepreneurial self-efficacy may lack the ability to deal with fear and be unable to develop competencies (Bandura, 1977).

Entrepreneurial self-efficacy is connected to an entrepreneurial mindset, as it serves as a driving factor for a person to choose to be an entrepreneur, while driving them towards a higher chance of business success (Neneh, 2015; Sarman, 2025). A confident entrepreneur will have greater entrepreneurial abilities and be more resourceful in driving engagement, promoting innovation, and proactively pursuing opportunities (Gkypali & Roper, 2024; Neneh, 2015). Specifically,

entrepreneurs with high entrepreneurial self-efficacy persist despite challenges and consistently pursue goals until they achieve them (Srimulyani & Hermanto, 2022). Their actions are driven by their confidence in their abilities, which makes them more resilient and more adaptable. These are all important criteria for survival in today's dynamic environment with many unknown challenges. While there are many other behavioral theories and concepts, self-efficacy offers a unique perspective by focusing on an individual's personal beliefs and confidence in their abilities (Mcgee et al., 2009; Bandura, 1986; Kumar & Shukla, 2022), particularly within the entrepreneurial context. It provides an in-depth understanding of how an individual's confidence in their own abilities directly influences their decisions, actions, and outcomes.

Table 1 Entrepreneurial orientation dimensions and definitions

Dimension	Definition	Source
Innovativeness	"Predisposition to engage in creativity and experimentation through the introduction of new products/services as well as technological leadership via R&D in new processes"	*Rauch et al. (2009, p.6)*
Risk Taking	"Taking bold action by venturing into the unknown, borrowing heavily and/or committing significant resources to ventures in uncertain environment"	*Rauch et al. (2009, p. 6-7)*
Proactivity	"An opportunity-seeking, forward-looking perspective characterised by new products and services ahead of the competition and acting in anticipation of future demand"	*Rauch et al. (2009, p.7)*
Competitive Aggressiveness	"Intensity of a firm's effort to outperform rivals"	*Rauch et al. (2009, p. 7)*
Autonomy	"Independent action undertaken by entrepreneurial leaders or teams directed at bringing about a new venture and seeing it to fruition"	*Rauch et al. (2009, p. 7)*
Proactivity	"An opportunity-seeking, forward-looking perspective characterised by new products and services ahead of the competition and acting in anticipation of future demand"	*Rauch et al. (2009, p.7)*
Passion	"A set of intense positive feelings that are consciously accessible and experienced by those involved in entrepreneurial activities linked with roles entrepreneurs consider significant."	*Santos et al. (2020, p. 191)*
Perseverance	"A trait that involves sustaining goal-directed action and energy even when faced with obstacles."	*Baum & Locke (2004, p. 588)*

3. Methodology

The main aim of this study was to evaluate the scores of personality traits and characteristics crucial for the success of agroentrepreneurs. A questionnaire survey was used to measure various constructs related to individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy. The questionnaire items were sourced from validated scales and the existing literature, and a professional translator translated them from English to Malay. The items on individual dynamic capabilities were adapted from del Mar Alonso-Almeida et al. (2017), while the items on individual entrepreneurial orientation were sourced from Santos et al. (2020) and Cardon et al. (2013). The items on entrepreneurial self-efficacy were adapted from Shahab et al. (2019). Questionnaires were distributed to 70 participants who attended training sessions conducted by the Malaysian Agricultural Research and Development Institute (MARDI) and the Federal Agricultural Marketing Authority (FAMA). Given that the sampling frame of young agroentrepreneurs in Malaysia is not available to the public, data were collected from participants who attended the training session, where the participants were those who currently run businesses in the agricultural sector. Of these 70 participants, 54 provided complete responses, which were used for the analysis.

To mitigate the potential risks of common method bias from affecting the findings of the studies, this study utilized procedural and statistical remedies, as suggested by Podsakoff et al. (2012). These remedies included providing a good research information coversheet and a set of instructions, using different scale properties for the independent and dependent variables, and incorporating reverse-coded items.

The data analysis focused on mean analysis to evaluate the scores of personality traits and characteristics among agroentrepreneurs. A one-sample *t*-test was used to test whether the mean was significantly different from the midpoint. This method was chosen to assess the general level of these constructs among the participants. In addition, an independent sample *t*-test was used to check the relationship between sex, age, business experience, and business category and individual dynamic capabilities, individual entrepreneurial orientation, and entrepreneurial self-efficacy.

4. Results

The study analyzed the demographics of respondents who were agroentrepreneurs in the agricultural sector and evaluated the scores of personality traits and characteristics crucial for agroentrepreneurs' success. A total of 54 responses were collected in this study, with 68.5% males and 31.5% females (Table 2). The age of most respondents was between 26 and 35 years, with 37.0% between 26 and 30 years, and 24.1% between 31 and 35 years. The remaining respondents were below 25 years of age (18.6%) or between 36-40 years old (20.4%). With regard to business experience, most respondents had 1-2 years of experience (38.9%), followed by those with five years or more (35.2%). A smaller proportion of respondents had 3-4 years of experience (14.8%) or less than 1 year of experience (11.1%). Most respondents (60.4%) were doing agrofood business, 26.4% were farming, 5.7% were livestock, and 7.5% were in other business categories.

Table 2 Demographic profile of respondents

Variable	Elements	Frequency	Percentage
Sex	Male	37	68.5
	Female	17	31.5
Age	Below 25	10	18.6
	26-30	20	37.0
	31-35	13	24.1
	36-40	11	20.4
Business experience	Less than 1 year	6	11.1
	1-2 years	21	38.9
	3-4 years	8	14.8
	5 years and above	19	35.2
Business category	Agrofood	32	60.4
	Farming	14	26.4
	Livestock	3	5.7
	Others	4	7.5

In addition, the relationship between the demographic factors of the respondents and their personality traits and characteristics were tested using the independent sample *t*-test. The response category for age, business experience and business category were recoded into binomial categories, namely 30 years old and below vs. more than 30 years old for age, 2 years and below vs. more than 2 years for business experience, and agrofood vs. non-agrofood for business category. The results (Table 3) review that the only significant difference across all

the four demographic factors is the agropreneurs with 30 years old and above score higher in transforming than the younger counterparts.

Table 3 Independent sample t-test for the mean difference

		Sex		Age (years)		Business Experience (years)		Business Category	
Variables	Sub-dimension	M	F	≤30	>30	≤2	> 2	Agrofood	Non-agrofood
Individual Dynamic Capabilities (IDC)	Sensing (SS)	6.07	5.69	5.81	6.13	5.77	6.13	5.82	6.19
	Seizing (SZ)	5.64	5.28	5.36	5.73	5.41	5.64	5.48	5.63
	Transforming (TF)	5.82	5.73	5.58	6.06	5.59	5.99	5.74	5.90
Individual Entrepreneurial Orientation (IEO)	Risk-taking (RT)	5.62	5.24	5.57	5.40	5.60	5.40	5.50	5.51
	Innovativeness (INNO)	5.77	5.55	5.79	5.59	5.88	5.52	5.68	5.76
	Proactivity (PRO)	5.86	5.49	5.70	5.79	5.69	5.79	5.68	5.87
	Perseverance (PERS)	5.85	5.69	5.64	6.00	5.69	5.91	5.72	5.96
	Passion (PAS)	6.25	6.19	6.26	6.19	6.27	6.19	6.29	6.19
Entrepreneurial Self-Efficacy (ESE)		5.69	5.82	5.64	5.84	5.68	5.78	5.72	5.78

4.1 Individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy

This study analyzed the mean scores, standard deviations, skewness, kurtosis, and Cronbach's alpha values for personality traits and characteristics related to individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy. The results are presented in Table 4. In addition, a one-sample *t*-test was performed to test for significant differences in the mean score of all the variables against the midpoint of the seven-point scale employed in this study. The results confirmed that all the variables had a mean that was significantly higher than the midpoint.

Using a 7-point scale, the sub-dimensions of individual dynamic capabilities (IDC) demonstrated mean scores above the midpoint of 4, with sensing (SS) at 5.95, seizing (SZ) at 5.53, and transforming (TF) at 5.79, indicating scores above the average. The standard deviations for these sub-dimensions were 0.77, 1.04, and 0.89, respectively. The skewness values for all subdimensions were negative, indicating that the distributions were slightly negatively skewed. The kurtosis values for sensing (SS), seizing (SZ), and transforming (TF) are all negative, indicating a relatively flat distribution. Cronbach's alpha values for sensing (SS), seizing (SZ), and transforming (TF) were 0.74, 0.91, and 0.84, respectively.

Table 4 Mean analysis for personality traits and characteristics

Variables	Sub-dimension	Mean	Std Dev.	Skewness	Kurtosis	Cronbach's Alpha
Individual Dynamic Capabilities (IDC)	Sensing (SS)	5.95*	0.77	-0.22	-0.33	0.74
	Seizing (SZ)	5.53*	1.04	-0.50	-0.05	0.91
	Transforming (TF)	5.79*	0.89	-0.64	1.46	0.84
Individual Entrepreneurial Orientation (IEO)	Risk-taking (RT)	5.50*	0.95	-0.15	-0.60	0.81
	Innovativeness (INNO)	5.70*	0.88	-0.05	-1.16	0.81
	Proactivity (PRO)	5.74*	0.85	-0.07	-0.73	0.72
	Perseverance (PERS)	5.80*	0.91	-0.37	-0.49	0.86
	Passion (PAS)	6.23*	0.70	-0.61	-0.48	0.86
Entrepreneurial Self-Efficacy (ESE)		5.73*	0.78	0.08	-0.87	0.91

*significant differences from the midpoint of the scale using a one-sample *t*-test.

For individual entrepreneurial orientation (IEO), the mean scores were 5.50 for risk-taking (RT), 5.70 for innovativeness (INNO), 5.74 for proactivity (PRO), 5.80 for perseverance (PERS), and 6.23 for passion (PAS). The standard deviation ranged from 0.70 0.95. The skewness values were negative for risk-taking (RT), innovativeness (INNO), and perseverance (PERS), indicating a slightly negatively skewed distribution, whereas the skewness values for proactivity (PRO) and passion (PAS) were negative, indicating a slightly positively skewed distribution. The kurtosis values ranged from -1.16 to 1.46, thus indicating varying degrees of peakedness or flatness in the distributions. Cronbach's alpha values for risk-taking (RT), innovativeness (INNO), proactivity (PRO), perseverance (PERS), and passion (PAS) were all above 0.8, indicating good internal consistency.

For entrepreneurial self-efficacy (ESE), the mean score was 5.73, with a standard deviation of 0.78. The skewness value is positive, indicating a slightly positively skewed distribution. The kurtosis value is negative, indicating a relatively flat distribution. The Cronbach's alpha value was 0.91, indicating good internal consistency.

5. Discussion

The analysis revealed that among the personality traits and characteristics examined, the highest mean scores were observed in the sub-dimension of passion (PAS) within individual entrepreneurial orientation (IEO), with a score of 6.23. Furthermore, the Cronbach's alpha values of all dimensions were above 0.7, deemed acceptable according to Hair et al. (2020). This demonstrated good internal consistency and reliability across the measured traits. Of the three dimensions, individual dynamic capabilities (IDC) have the highest mean scores, suggesting that individuals tend to exhibit relatively strong capabilities in sensing, seizing, and transforming. The results of this study, with a specific focus on individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy, offer important insights into personality traits and characteristics that are potentially related to individual performance. The analysis revealed noteworthy patterns and characteristics within each dimension, shedding light on their implications for individuals' effectiveness and success. The independent samples *t*-test also highlighted that regardless of the participant's age, sex, business experience, and business category, there was no impact on the individual's level of individual dynamic capabilities, individual entrepreneurial orientation, and entrepreneurial self-efficacy. This suggests that future research should explore other factors that influence the levels of these traits.

Individuals with higher levels of dynamic capabilities demonstrate an enhanced ability to promptly identify and respond to opportunities promptly (del Mar Alonso-Almeida et al., 2017). Moreover, dynamic capabilities at the individual level are crucial in facilitating the growth of dynamic capabilities within organizations (Weaven et al., 2021). In line with these findings, our study revealed that the mean scores for sensing, seizing, and transforming in the individual dynamic capabilities dimension were all above the midpoint of the scale, indicating a significant level of dynamic capability among the participants. These results underscore the importance of nurturing and leveraging individual dynamic capabilities to improve overall firm performance.

Moving on to the dimension of individual entrepreneurial orientation, the highest mean score was observed in the sub-dimension of passion. This indicates that the participants exhibited a strong passion for entrepreneurial endeavors, which is consistent with prior studies that highlight the importance of passion as the primary motivator for business success (Cardon et al., 2009, 2013; Gerschewski et al., 2016; Santos et al., 2018, 2020). Additionally, the mean scores for the other sub-dimensions of individual entrepreneurial orientation, such as risk-taking, innovativeness, proactivity, and perseverance, were all above the midpoint of the scale. This shows that participants in our study displayed a propensity to engage in entrepreneurial behaviors and adopt entrepreneurial attitudes. They are inclined to take calculated risks,

proactively innovate, and effectively handle the challenging circumstances associated with starting or running a business. These traits collectively contribute to an entrepreneurial mindset and establish a foundation for success. Although our study did not explore the direct link between individual entrepreneurial orientation and performance, prior research (Bilal & Fatima, 2021; Fatima & Bilal, 2020; Forcadell & Úbeda, 2022; Gerschewski et al., 2016) suggests that these traits correlate with favorable performance. Individual entrepreneurial orientation reflects an individual's passion, propensity for risk-taking, innovativeness, proactivity, and perseverance, which cumulatively contribute to an entrepreneurial mindset and have been associated with both successful businesses and positive performance.

Individuals with an elevated level of entrepreneurial self-efficacy display strong faith in their capabilities to participate in entrepreneurial activities, which contributes to enhanced performance and an increased likelihood of effectively navigating the challenges associated with starting a new business (Bandura, 1977; Kumar & Shukla, 2022; Wood & Bandura, 1989). Our study reveals respondents' confidence in their entrepreneurial capabilities, as evidenced by their high assessment scores. Furthermore, entrepreneurs with high entrepreneurial self-efficacy exhibit greater perseverance in pursuing entrepreneurial goals, while those with low entrepreneurial self-efficacy typically refrain from entrepreneurial situations, limiting their potential to develop entrepreneurial competencies (Bandura, 1977; Srimulyani & Hermanto, 2022).

5.1 Research implications

The findings of this study have significant implications for fostering the success of young agroentrepreneurs in'slaysia the agricultural industry. Practically, the emphasis on dynamic capabilities highlights the need for initiatives to enhance an individual's ability to adapt to market changes and seize emerging opportunities. Agencies in the agricultural sector can offer training programs that develop the specific capabilities of sensing, seizing, and transforming, thus equipping agroentrepreneurs with the skills to effectively navigate the changing agricultural landscape. The strong passion observed within the individual entrepreneurial orientation dimension suggests that promoting an entrepreneurial mindset is important for success within the agricultural sector. Education and training programs should be designed to cultivate passion, risk-taking, innovativeness, proactivity, and perseverance among young agroentrepreneurs by focusing on practical skills, mentorship, and networking to support venture establishment and growth. Furthermore, understanding the importance of entrepreneurial self-efficacy highlights the need to foster self-confidence and belief in one's abilities among young agroentrepreneurs. Practical interventions could include workshops, mentorship programs, and networking events that can boost self-efficacy, enabling them to tackle challenges, persist in their business ventures, and effectively navigate agribusiness complexities.

Theoretically, the findings from the current study contribute to the existing entrepreneurship literature by highlighting the significance of individual dynamic capabilities, entrepreneurial orientation, and entrepreneurial self-efficacy within the realm of agroentrepreneurship. Validation of the significance of these traits provides a foundation for further research on their role and influence on individual- and firm-level agricultural outcomes.

In summary, understanding and nurturing key traits, such as individual dynamic capabilities, individual entrepreneurial orientation, and entrepreneurial self-efficacy, will enhance the success rate of young agroentrepreneurs in the agricultural sector. By incorporating these findings into practical initiatives and policy development, the government and relevant agencies could design and implement programs and policies to cultivate young agroentrepreneurs with high potential by focusing on developing these traits. This, in turn, drives entrepreneurial success, fuels economic growth, and contributes to poverty alleviation in Malaysia's agricultural sector.

6. Conclusion and future research

In conclusion, this study highlights the importance of three essential personality traits–individual dynamic capabilities, individual entrepreneurial orientation, and entrepreneurial self-efficacy–on the success of young agroentrepreneurs in Malaysia's agricultural sector. The findings show that agroentrepreneurs in Malaysia possess relatively high levels of these traits, implying a likelihood of success in the sector. Practical implications include the development of programs and policies that nurture dynamic capabilities, foster an entrepreneurial mindset, and enhance self-efficacy among young agroentrepreneurs. Government support and the implementation of these initiatives create an environment that encourages entrepreneurs' success. The theoretical implications revolve around validating the relevance of these traits in the context of agroentrepreneurship and laying the groundwork for future research on their interaction and impact on individual- and firm-level outcomes in the agricultural sector.

Nevertheless, this study had several limitations. First, the sample size was relatively small, consisting only of participants who attended specific training sessions. Therefore, these findings may not be fully representative of the entire population of young agroentrepreneurs in Malaysia. Additionally, the study relied on self-reported data, which may have been subject to response bias. Future research could employ larger and more diverse samples and incorporate more objective measures. Moreover, it is worth noting that the scope of this research primarily focuses on identifying the key characteristics and traits of individuals without the intention of exploring external factors that may influence the long-term consistency of staying in agroentrepreneurship. Factors such as market conditions, policy frameworks, and support systems can play significant roles in the success and survival of young agroentrepreneurs in the agricultural sector. Thus, future studies could explore both the long-term impact of these personality traits on agropreneurial success and performance as well as the impact of external factors on the entrepreneurial journey of young agroentrepreneurs. Despite these limitations, this study provides valuable insights into the traits that contribute to the success of young agroentrepreneurs in the agricultural industry. It offers direction for cultivating high potential young agroentrepreneurs, which may lead to growth in the agricultural sector and, ultimately, the country's economic growth.

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