



# **Entrepreneurial Marketing Intentions and Behaviours among Students: Investigating the Roles of Entrepreneurial Skills, Entrepreneurial Self-efficacy, and Family Business Exposure**

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**Abstract.** This study investigates the relationships between entrepreneurial skills (ES), entrepreneurial self-efficacy (ESE), entrepreneurial marketing intentions (EMI), and entrepreneurial marketing behaviours (EMB) of university students, while considering the influence of family business exposure as a moderating factor. A sample of 149 Malaysian university students was analysed using partial least square structural equation modelling (PLS-SEM) to assess the roles of ES, ESE, and EMI in predicting EMB. Our findings reveal that EMI partially mediates the effects of ES and ESE on EMB. In addition, having a family-owned business background did not affect the relationships in our model. However, students with friends involved in family businesses exhibited significantly higher levels of EMB due to acquired entrepreneurial skills than those without such connections.

**Keywords:** entrepreneurial marketing, entrepreneurial skills, entrepreneurial self-efficacy, business education, reference group, social influence.

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## 1. Introduction

Stimulating entrepreneurship has long been recognised as one of the best economic development strategies to assist a nation's economic growth and sustain its competitiveness (e.g. Peprah and Adekoya, 2020; Acs, Carlsson, and Karlsson, 2011). In marketing-oriented matters, entrepreneurial qualities, such as creativity, risk-taking, and proactivity, are essential for marketing-tailored behaviours, as individuals who possess these qualities enable organisations to identify unique market opportunities, develop innovative solutions, and respond quickly to shifts in customer needs and preferences (Morris, Schindehutte, and LaForge, 2002). This recognition prompted a re-examination of traditional marketing perspectives, leading to the establishment of the concept of *entrepreneurial marketing*. Specifically, *traditional marketing* has been defined as the strategic and tactical actions employed to create, communicate, and deliver value to customers by promoting products or services (Kotler, Keller, and Chernev, 2021). On the other hand, entrepreneurial marketing reflects an integrative framework that combines critical facets of contemporary marketing and entrepreneurship practices into a single holistic construct (Morris, Schindehutte, and LaForge, 2002). This approach emphasises change, complexity, a high level of market uncertainty, depleting resources, and innovation-tailored considerations (Nijssen, 2021). Accordingly, the ability to identify entrepreneurial qualities that stimulate entrepreneurial marketing intentions and behaviours is increasing in demand by organisations seeking to hire graduates. Therefore, studying entrepreneurial marketing intentions and behaviours is crucial, as they enable organisations to identify and exploit market opportunities, foster innovation, and enhance competitiveness in the rapidly evolving business landscape (Hacioglu et al., 2012; Morris, Schindehutte, and LaForge, 2002).

Identifying entrepreneurial marketing talents and developing and cultivating related skills is a complex and challenging endeavour (Nabi et al., 2017). Among various organisations with related mandates, higher education institutions play a pivotal role in the development of entrepreneurial marketing skills (Keat, Selvarajah, and Meyer, 2011; Hacioglu et al., 2012). Universities act as ideal incubators for nurturing entrepreneurial cultures and aspirations among future business leaders (Nabi et al., 2017; Zahra, Wright, and Abdelgawad, 2014). Consequently, universities are witnessing increasing demand for entrepreneurship subjects and majors (Varamäki et al., 2015), as related aptitudes are increasingly valuable for a variety of business applications and processes worldwide (Landström, 2005; Mahmoud, Grigoriou, and Ball, 2022).

The purpose of entrepreneurship education is to develop students' understanding of the entrepreneurial process while cultivating attitudes and intentions that will enable them to become successful in entrepreneurial efforts (Wei, Liu, and Sha, 2019). While entrepreneurship is explicitly connected to opportunity exploitation (e.g. Venkataraman, 2019), marketing education also

increasingly emphasises developing skills necessary to identify novel marketable opportunities (Stokes and Wilson, 2010). As noted earlier, this is a relatively novel trend, as marketing and entrepreneurship have existed as two separate domains in academia (Stokes and Wilson, 2010). From the traditional perspective, marketing as a discipline primarily concentrates on tactics and strategies to create, communicate, and deliver value to customers by promoting products or services (Kotler, Keller, and Chernev, 2021). This discipline encompasses a variety of related topics, including market segmentation, consumer targeting and engagement, branding, optimising marketing mix, product positioning, pricing strategies, and more (Baker, 2017). In contrast, entrepreneurship focuses on discovering, assessing, and utilising opportunities for new businesses venturing (Shane and Venkataraman, 2000). This area of study investigates the traits, behaviours, and decision-making processes of entrepreneurs. It also explores the significance of innovation, risk-taking, and proactiveness in fostering business growth and economic development (Covin and Wales, 2018).

Notably, there is increasing evidence that the two subjects overlap in many critical considerations, such as the role of creativity and innovation, the value of new product development, and the prominence of customer networks and communications (Stokes and Wilson, 2010; Ahmadi and O'Cass, 2016; Buccieri, Javalgi, and Gross, 2023; Hulbert, Gilmore, and Carson, 2015). As we stipulated earlier, from a scholarly standpoint, the entrepreneurial perspective has changed the way marketing is considered and taught, modifying established perspectives from traditional marketing to entrepreneurial marketing (Carter and Jones-Evans, 2006; Holzweber, Mattsson, and Standing, 2015; Lindsay et al., 2014; Ferreira, Pitt, and Kietzmann, 2021; Habermann, 2016) with an increased focus on innovation and opportunity recognition (Stokes, 2000; Collinson and Shaw, 2001; Morris, Schindehutte, and LaForge, 2002). Consequently, entrepreneurial marketing is now viewed as an intersection between entrepreneurship and marketing, emphasising proactive identification and exploitation of opportunities, risk management, and innovativeness in product design and commercial processes (Bäckbro and Nyström, 2006; Kraus, Harms, and Fink, 2009).

We draw on the research of Stokes and Wilson (2010) to suggest a deeper understanding of how universities and organisations might conceptualise their approach to the development of entrepreneurial skills. Stokes and Wilson (2010) propose a three-dimensional approach to entrepreneurial education. In the first dimension, *context* refers to market, social and environmental factors and business disciplines such as marketing. In the second dimension, *behaviours* refer to entrepreneurial skills, attitudes, and behaviours. In the third dimension, *process* refers to starting new commercial projects, business and organisational processes, or the development of new products and brands (Stokes and Wilson, 2010). When taught as a holistic paradigm, these dimensions assist

entrepreneurship scholars in developing entrepreneurial skills and self-efficacy among students to meet the industry's challenges.

The aim of this article is to empirically assess the effects of entrepreneurial skills and self-efficacy on entrepreneurial marketing intentions and behaviours among university business students. We further investigate whether this relationship can be moderated by having reference groups in a family business, focusing primarily on family and friends. While previous studies have considered some of these factors separately, there remains a gap in the literature concerning the role of family business exposure in the development of entrepreneurial marketing intentions and behaviours. Therefore, this study advances existing knowledge by exploring not only the impact of entrepreneurial skills and self-efficacy on marketing intentions and behaviours but also the moderating effect of family business exposure (Zellweger, Sieger, and Halter, 2011) on these relationships. These insights are valuable for businesses in their efforts to successfully identify and exploit market opportunities, foster innovation, and enhance competitiveness in the face of current and future challenges (De Massis et al., 2016; Chrisman, Chua, and Sharma, 2003). Moreover, by examining business students and their entrepreneurial aptitudes, our study makes several notable contributions to the literature. While numerous publications assess various aspects of entrepreneurial competencies (Gerli, Gubitta, and Tognazzo, 2011), most of these studies concern established entrepreneurs, whereas the early stage of the entrepreneurial process remains understudied (Al Mamun, Fazal, and Muniady, 2019). Additionally, we extend the existing literature by focusing specifically on the marketing-tailored entrepreneurial process. Finally, our study provides novel insights regarding the role of the family business experience as a stimulus for entrepreneurial intent and the consequent action.

## 2. Literature Review and Hypotheses

Entrepreneurial competencies refer to a specific set of abilities that enable entrepreneurs to utilise resources, identify marketable opportunities, and create and manage new enterprises (Al Mamun et al., 2016; Mitchelmore and Rowley, 2010). To better understand the importance of competencies, Strebler, Robinson and Heron (1997) suggested considering competencies as *behaviours* that individuals demonstrate, and, in that vein, consider competencies as minimum *performance standards*. These generic competencies become specific when applied to entrepreneurial competencies. Entrepreneurial competencies have been identified as a specific group of competencies relevant to the exercise of successful entrepreneurship (Mitchelmore and Rowley, 2010).

## 2.1. Entrepreneurial Competencies and Family Business

The development of entrepreneurial competencies requires possessing various skills, aptitudes, and self-efficacy that allow entrepreneurs to identify opportunities, assess risks, and translate related intentions into entrepreneurial actions (Kutzhanova, Lyons, and Lichtenstein, 2009; Entrialgo and Iglesias, 2016). Previous studies indicate that entrepreneurial competencies influence new business venturing (Bird, 2019), sustainability and performance of established enterprises (Lewis and Churchill, 1983; Bird, 2019), and broader economic matters (Mitchelmore and Rowley, 2013).

While the role of an individual entrepreneur in organisational development is fairly well-researched (Gerli, Gubitta, and Tognazzo, 2011), the relevance of entrepreneurial competencies to entrepreneurial intentions and behaviour remains understudied (Al Mamun, Fazal, and Muniady, 2019). Moreover, in evaluating the role of entrepreneurial competencies, past literature focuses on factors related to individuals' general tendency to consider and engage in the development of new ventures. The relevance of entrepreneurial skills and aptitudes to specifically marketing-tailored entrepreneurial intentions and behaviours is less clear (Al Mamun, Fazal, and Muniady, 2019). This limitation is particularly notable considering that the possession of market-oriented competencies is known to affect important entrepreneurial outcomes, such as the ability to innovate or to identify profitable market niches (Baker and Sinkula, 2009). Furthermore, marketing capabilities and market-orientated culture are known to be relevant to the development of effective organisational strategies (Ali, Hilman, and Gorondutse, 2017) that translate to superior performance (Narver and Slater, 1990; Morgan, Vorhies, and Mason, 2009; Boso, Story, and Cadogan, 2013).

Finally, research indicates that involvement in a family business constitutes an important factor in the formation of entrepreneurial values and attitudes (Carr and Sequeira, 2007). Family business ownership is, therefore, a direct catalyst for the development of entrepreneurial competencies (Dyer and Handler, 1994), making family business experience a unique and powerful resource in regard to entrepreneurial intentions and behaviours of individuals (Aldrich and Cliff, 2003; Dyer and Handler, 1994). Therefore, social interactions with relatives and/or friends who are involved in a family business are likely to influence how (and if) the possession of entrepreneurial skills and self-efficacy translates to entrepreneurial intentions and behaviours (Fairlie and Robb, 2007; Carr and Sequeira, 2007). Such social interactions are particularly pertinent to young prospective entrepreneurs, such as university students. Accordingly, our conceptual framework is designed to assess the effects of entrepreneurial skills and self-efficacy on entrepreneurial marketing intentions and behaviours amongst university business students. We also investigate whether this model can be moderated by having reference groups in a family business, focusing primarily on family and friends. To achieve our aim, we adopt Liu's (2017, p. 3) definition

of marketing (itself, a synthesis of marketing theory and practice) *which states that marketing is the activities and value creation processes that facilitate exchange offerings within the domain of business and benefit the society at large.*

## 2.2. Entrepreneurial Skills and Entrepreneurial Marketing Intentions and Behaviours

Starting a new business venture is a highly complex and risky endeavour that requires the possession and/or development of relevant skills and aptitudes (Davidsson, 1991; Phelan and Sharpley, 2012). In the extant literature, entrepreneurial competencies are broadly divided into two categories: functional competencies (such as marketing, communication, and creative thinking) and organisational competencies (such as leadership and problem-solving) (Smith and Morse, 2005). This important aspect of the human capital is critical for entrepreneurs' consideration and engagement in new business development (Shabbir, Mohd Shariff, and Shahzad, 2016).

Previous research (e.g. Roxas, 2014) has shown the importance of gaining entrepreneurial knowledge as a predictor of entrepreneurial intentions. While there is evidence that some individual characteristics of entrepreneurs, such as age, education, and work experience, influence entrepreneurial processes (Reynolds, Storey, and Westhead, 1994), the explicit role of entrepreneurial skills as a catalyst for marketing-tailored entrepreneurial intentions and behaviours is less clear (Yaghmaei and Ghasemi, 2015). Such skills, however, are very likely to play a vital role in individuals' ability to identify new customer preferences, evaluate market opportunities, and engage in the development of new ventures. Therefore, the possession of such skills is likely to draw attention and stimulate interest in marketing-oriented entrepreneurial processes, thus promoting the development of entrepreneurial marketing intentions. These skills are also likely to reduce doubt, translating entrepreneurial intentions into consequent actions and behaviours. Also, building on Ajzen's (2011) Theory of Planned Behaviour (TPB), accordingly, we stipulate that the possession of entrepreneurial skills accelerates entrepreneurial marketing intentions and behaviours. Therefore, we posit:

***Hypothesis 1a: Entrepreneurial skills positively predict entrepreneurial marketing intentions.***

***Hypothesis 1b: Entrepreneurial skills positively predict entrepreneurial marketing behaviours.***

### 2.3. Entrepreneurial Self-efficacy and Entrepreneurial Marketing Intentions and Behaviours

Entrepreneurial self-efficacy reflects individuals' belief in their ability to engage and succeed in the development of new ventures (Boyd and Vozikis, 1994; Stroe, Parida, and Wincent, 2018). While most prospective entrepreneurs see new venture-related challenges as obstacles, individuals with high levels of self-efficacy are more likely to believe in their ability to successfully overcome related hurdles (Barbosa, Gerhardt, and Kickul, 2007; Nowiski et al., 2019; Li et al., 2020). Since self-efficacy enhances individuals' confidence in their professional aptitudes, entrepreneurial self-efficacy is shown to be a significant criterion for entrepreneurial intentions (Zhao, Seibert, and Hills, 2005). In the context of marketing-oriented entrepreneurship, similar logic applies. Specifically, we expect entrepreneurial self-efficacy to provide individuals with confidence in their ability to engage customers, and develop differentiated products and/or services, thus promoting the development of entrepreneurial marketing intentions. Furthermore, entrepreneurial self-efficacy is also likely to enhance individuals' confidence in their ability to identify profitable market niches and employ innovative marketing methods and strategies, thus translating entrepreneurial intentions to marketing oriented entrepreneurial behaviours. Building on the aforementioned argument as well as TPB, we posit:

**Hypothesis 2a:** *Entrepreneurial self-efficacy positively predicts entrepreneurial marketing intentions.*

**Hypothesis 2b:** *Entrepreneurial self-efficacy positively predicts entrepreneurial marketing behaviours.*

### 2.4. Entrepreneurial Marketing Intentions and Entrepreneurial Marketing Behaviours

Entrepreneurial intention refers to individuals' intent to engage in activities related to the development of new business ventures (Ward, Hernández-Sánchez, and Sánchez-García, 2019; Yi, 2021). It represents an exploration of the ways in which entrepreneurial attitudes and behaviours can be applied to the development of marketing strategy (Janet and Ngugi, 2014). Not surprisingly, past research shows that individuals with high levels of entrepreneurial intention are likely to follow through on their intent and engage in entrepreneurial behaviours (Kautonen, Van Gelderen, and Fink, 2015; Neneh, 2019; Li et al., 2020). However, the conceptualisation of this process in the literature suggests that intentions do not always lead to entrepreneurial action (Van Gelderen et al., 2008). Furthermore, existing literature indicates that entrepreneurial intentions explain less than a third of the variance in entrepreneurial action and that the relationship between entrepreneurial intention and action may be conditioned on

the particulars of entrepreneurial contexts (Shirokova, Osiyevskyy, and Bogatyreva, 2016; Neneh, 2019; Van Gelderen et al., 2008). Accordingly, in consideration of marketing-oriented entrepreneurial efforts, it is important to examine the relationship between entrepreneurial marketing intention and entrepreneurial marketing behaviours. We expect entrepreneurial marketing intentions to stimulate follow-up activities, translating to a wide range of marketing-oriented entrepreneurial behaviours, such as the assessment of customer preferences, the development of products and services, and the explicit examinations of market circumstances. This theorisation concurs with TPB. Accordingly, we posit:

**Hypothesis 3:** *Entrepreneurial marketing intentions positively predict entrepreneurial marketing behaviours.*

## 2.5. Family or Friends in a Family Business, Entrepreneurial Skills, and Entrepreneurial Marketing Intentions and Behaviours

Involvement in a family business influences the development of entrepreneurial competencies (Dyer and Handler, 1994). Past literature indicates that family business experiences represent a powerful socialising influence on people's values, attitudes, and behaviours (Carr and Sequeira, 2007). As such, family business experience forms a valuable resource in regard to individuals' inclination to translate entrepreneurial aptitudes to entrepreneurial intentions and behaviours (Aldrich and Cliff, 2003; Dyer and Handler, 1994). Social interactions with this reference group (i.e., family members and friends with experience in family business management) are likely to be particularly pertinent to young inexperienced prospective entrepreneurs, such as university students. One such behaviour separating small business operators from marketing entrepreneurs (MEs) is that small business owners typically manage their operations, whereas MEs continuously strive for growth through innovation (Hills and Hultman, 2011). As discussed earlier, entrepreneurial skills play an important role in individual's ability to identify new customer preferences, evaluate market opportunities, and engage in the development of new ventures. In the context of marketing-oriented entrepreneurial efforts, social interactions with relatives and/or friends who are involved in a family business are likely to increase the likelihood that entrepreneurial skills will translate to entrepreneurial marketing intentions and, consequently, entrepreneurial marketing behaviours. Specifically, having a family firm context among acquaintances of prospective young entrepreneurs is likely to influence the ability of these individuals to assess the importance and value of their entrepreneurial competencies against specific entrepreneurial opportunities in the marketplace (Elfving, Brännback, and Carsrud, 2009). Therefore, these types of connections can stimulate and foster important processes related to deeper examinations of entrepreneurial projects by



young individuals, thus stimulating a follow through from entrepreneurial skills to entrepreneurial intentions and the consequent entrepreneurial behaviours. Notably, friends tend to be in a particularly strong position of trust for many prospective entrepreneurs (Francis and Sandberg, 2000; Nair, Gaim, and Dimov, 2020). As such, the associated influence on the decision-making of prospective entrepreneurs may be particularly significant if the considered individuals (connections) are their close friends. Accordingly, we posit:

**Hypothesis 4a:** *Having a reference group (family members) in a family business moderates the relationship between entrepreneurial skills and entrepreneurial marketing intentions such that the relationship becomes stronger.*

**Hypothesis 4b:** *Having a reference group (family members) in a family business moderates the relationship between entrepreneurial skills and entrepreneurial marketing behaviours, such that the relationship becomes stronger.*

**Hypothesis 4c:** *Having a reference group (friends) in a family business moderates the relationship between entrepreneurial skills and entrepreneurial marketing intentions such that the relationship becomes stronger.*

**Hypothesis 4d:** *Having a reference group (friends) in a family business moderates the relationship between entrepreneurial skills and entrepreneurial marketing behaviours such that the relationship becomes stronger.*

## 2.6. Family or Friends in a Family Business, Entrepreneurial Self-efficacy, and Entrepreneurial Marketing Intentions and Behaviours

As noted in our rationale for Hypothesis 2, entrepreneurial self-efficacy reflects individuals' belief in their ability to engage and succeed in new business development (Boyd and Vozikis, 1994; Stroe, Parida, and Wincent, 2018). Entrepreneurial self-efficacy is expected (and empirically shown) to be a catalyst for entrepreneurial intentions (Zhao, Seibert, and Hills, 2005). Interactions among individuals with high levels of entrepreneurial self-efficacy and people who are actively engaged in the management of a family business are likely to provide additional references regarding the entrepreneurial process, increase confidence, and, therefore, enhance the likelihood of follow-through to entrepreneurial intentions. In the context of marketing-oriented entrepreneurship, similar logic applies. Specifically, in circumstances where prospective entrepreneurs have close acquaintances with family business owners, either relatives or friends, we expect the positive influence of entrepreneurial self-efficacy on entrepreneurial marketing intentions to be stronger.

Therefore, we posit:

**Hypothesis 5a:** *Having a reference group (family members) in a family business moderates the relationship between entrepreneurial self-efficacy and*

*entrepreneurial marketing intentions such that the relationship becomes stronger.*

**Hypothesis 5b:** *Having a reference group (family members) in a family business moderates the relationship between entrepreneurial self-efficacy and entrepreneurial marketing behaviours, such that the relationship becomes stronger.*

**Hypothesis 5c:** *Having a reference group (friends) in a family business moderates the relationship between entrepreneurial self-efficacy and entrepreneurial marketing intentions such that the relationship becomes stronger.*

**Hypothesis 5d:** *Having a reference group (friends) in a family business moderates the relationship between entrepreneurial self-efficacy and entrepreneurial marketing behaviours, such that the relationship becomes stronger.*

## 2.7. Family or Friends in a Family Business, Entrepreneurial Marketing Intentions and Behaviours

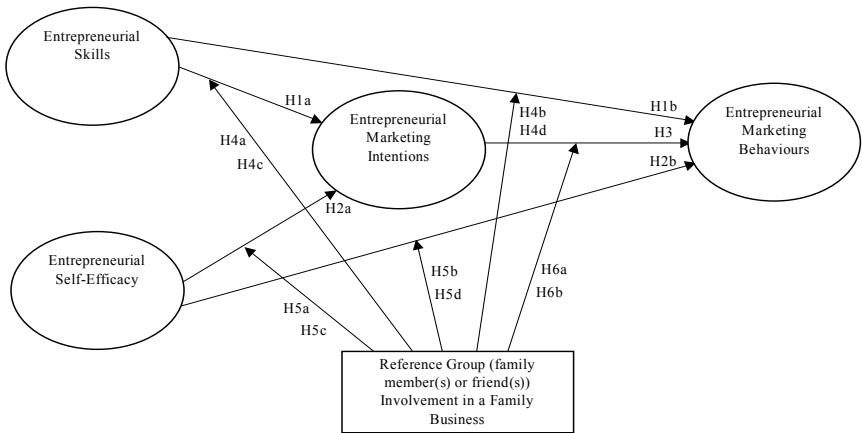
As stated earlier, we expect entrepreneurial marketing intentions to positively predict entrepreneurial marketing behaviours. It is intuitive to anticipate that individuals with high levels of entrepreneurial marketing intentions are likely to follow through on their intent and engage in entrepreneurial behaviours (Zellweger, Sieger, and Halter, 2011). We further stipulate that social interactions with relatives and/or friends involved in a family business will likely increase the likelihood that entrepreneurial marketing intentions will translate to entrepreneurial marketing behaviours. Specifically, social interactions with relatives and/or friends who are involved in a family business are likely to provide additional knowledge regarding marketing-tailored entrepreneurial processes, such as new product development or evaluation of customer preferences. Relatives who are business owners may also be considered a potential source of other relevant resources, such as capital or professional networks (Nair, Gaim, and Dimov, 2020), whereas friends with family business backgrounds are in a particularly strong position of trust and influence for prospective young entrepreneurs (Francis and Sandberg, 2000; Nair, Gaim, and Dimov, 2020). Accordingly, such social interactions are likely to enhance prospective entrepreneurs' confidence and increase the likelihood of a follow-through from entrepreneurial marketing intentions to related behaviours. Therefore, we posit:

**Hypothesis 6a:** *Having a reference group (family members) in a family business moderates the relationship between entrepreneurial marketing intentions and behaviours, such that the relationship becomes stronger.*

**Hypothesis 6b:** *Having a reference group (friends) in a family business moderates the relationship between entrepreneurial marketing intentions and behaviours, such that the relationship becomes stronger.*

Figure 1 offers a visualisation of the hypotheses introduced above, where arrows starting from “reference group (family member(s) or friend(s)) involvement in a family business” represent moderations.

**Figure 1: Conceptual model**



### 3. Methods

#### 3.1. Sample

G-Power version 3.1.9.2 was used to determine the sample size. Using 0.95 as power level and 0.15 as effect size, a non-probability convenience sample size of 119 university students was the target that guided our data collection. Sunway University granted ethics approval for this research. The study drew upon a sample of university students from both public and private universities and academic institutions in Malaysia. Data were collected in 2021 via an online self-administered survey that included construct measures and demographic questions. With the survey conducted online, respondents were asked to provide their permission to participate in the study. Responses to the survey were kept anonymous. All participants were informed that their responses would be kept strictly confidential and only be used for scientific research. Overall, our analysis drew on 149 valid responses. The sample was predominantly female (56%), aged between 20-21 (46%), and ethnically Chinese (60%), Malay (20%) and Indian (20%). Moreover, the majority were Malaysian nationals (96%), belonging to an upper-middle-class family (48%), with a background in family business (62%) and having at least one friend involved in a family business (69%).

3.2. Measures

Reference group (family member(s) vs friend(s)) involvement in a family business was assessed using two binary (yes/no) questions. Those questions were: “Do you belong to a business family background?” and “Do you have any friends involved in any kind of own or family business?”. Appendix 1 illustrates the validated measures used in this research. We adopted the measures of Al Mamun, Fazal, and Muniady (2019) to assess entrepreneurial skills, Carr and Sequeira (2007) to assess entrepreneurial self-efficacy and Li et al. (2020) to assess entrepreneurial marketing intentions and behaviours. All the measures were scored on a five-point Likert scale. We used various methods to test the validity and reliability of the measures used in this study. First, we utilised the Fornell-Larcker Criterion (see Table 1) to assess the discriminant validity using the Average Variance Extracted values (herein AVEs). Table 1 shows the square root of each construct’s AVE greater than its *correlations* with the remaining variables hence establishing the discriminant validity for all of the measures employed (Fornell and Larcker, 1981). Table 2 indicates that all of the constructs had AVEs higher than 0.5 (Fornell and Larcker, 1981), Composite Reliability values (herein CRs) above 0.7 (Hair et al., 2022), and Variance Inflation Factor values less than five hence establishing the discriminant validity, construct reliability, and convergent validity for all of the measures employed in this study. We ran Common-Method Bias (herein CMB) tests before conducting path and multigroup analyses with a Partial Least Squares Structural Equation Modelling (herein PLS-SEM) using SmartPLS 3 (Ringle, Wende, and Becker, 2015). CMB tests are required when using subjective, self-report measures from a single survey (Podsakoff et al., 2003). The inner Variance Inflation Factor (herein VIF) values were all less than 3.3, as Table 3 shows. Hence, no CMB issues were detected (Kock, 2015).

**Table 1: Fornell-Larcker Criterion**

	Mean	SD	Entrepreneurial Marketing Behaviour	Entrepreneurial Marketing Intentions	Entrepreneurial Self-Efficacy	Entrepreneurial Skills
Entrepreneurial Marketing Behaviour	3.58	1.06	0.86			
Entrepreneurial Marketing Intentions	3.78	0.84	0.708	0.827		
Entrepreneurial Self-Efficacy	3.84	0.79	0.695	0.813	0.841	
Entrepreneurial Skills	3.77	0.77	0.682	0.783	0.756	0.79

*Note.* The diagonal represents the square root of each construct’s AVE

Table 2: Outer loadings, VIFs, construct reliability & validity and descriptive statistics

	Entrepreneurial Marketing Behaviour	Entrepreneurial Marketing Intentions	Entrepreneurial Self-Efficacy	Entrepreneurial Skills	VIF
EB1	0.836				2.528
EB2	0.825				2.394
EB3	0.878				3.399
EB4	0.848				2.697
EB5	0.889				3.604
EB6	0.874				3.293
EB7	0.872				3.332
EI1		0.787			1.65
EI2		0.894			2.601
EI3		0.825			2.051
EI4		0.799			1.84
ES1				0.753	1.506
ES2				0.768	1.619
ES3				0.797	1.639
ES4				0.839	1.83
ESE1			0.812		1.47
ESE2			0.856		1.876
ESE3			0.854		1.896
$\alpha$	0.941	0.845	0.793	0.799	
$\rho_{ho\_A}$	0.941	0.851	0.792	0.804	
CR	0.952	0.896	0.879	0.869	
AVE	0.74	0.684	0.707	0.624	

Table 3: Inner VIFs values

	Entrepreneurial Marketing Behaviour	Entrepreneurial Marketing Intentions	Entrepreneurial Self-Efficacy	Entrepreneurial Skills
Entrepreneurial Marketing Intentions	2.843			
Entrepreneurial Self-Efficacy	2.989			
Entrepreneurial Skills	2.77			
Entrepreneurial Marketing Behaviour		2.232		
Entrepreneurial Self-Efficacy		2.719		
Entrepreneurial Skills		2.674		
Entrepreneurial Marketing Behaviour				2.507
Entrepreneurial Marketing Intentions				3.099
Entrepreneurial Self-Efficacy				2.635
Entrepreneurial Marketing Behaviour			2.519	
Entrepreneurial Marketing Intentions			2.918	
Entrepreneurial Skills			2.446	

Structural equation modelling (herein SEM) with the variance-based method or partial least squares (PLS-SEM) was the principal statistical tool for testing research hypotheses. We conducted our analysis using SmartPLS 3 (v. 3.3.3) software (Ringle, Wende, and Becker, 2015). Our choice of the PLS-SEM technique was based on prior research recommending this approach for examining predictive models (e.g. Hair, Ringle, and Sarstedt, 2014). The literature (e.g. Mahmoud, Reisel, et al., 2022) shows that most data are likely to fail to meet the multivariate normality criterion. Furthermore, an expanding body of literature has substantiated PLS-SEM for empirical research studies containing data sensitive to non-normality consternation (Hair et al., 2022). In addition, PLS-SEM is becoming more widely used and recognised in business research (e.g. Gao, Low, and Yeo, 2022; Athayde and Hart, 2012; Badwan, Tamvada, and Rentocchini, 2022).

Path analysis and multigroup analysis (MGA) were two methods we used to examine our hypotheses. This procedure covered the deployment of standardised betas ( $\beta$ : for direct effects), unstandardised betas ( $B$ : for indirect effects), and the accompanying t-values in bootstrapping mode. The standardised root mean square residual (SRMR) was used to evaluate the model's fit to our data (Henseler et al., 2014). In addition, we employed  $f^2$  to evaluate effect sizes and PLSpredict to test the out-of-sample prediction, as recommended by Hair et al. (2019).

Henseler, Ringle, and Sarstedt (2016) argue that multigroup analyses (MGAs) using PLS-SEM could risk producing 'misleading' findings unless the invariance of their measures is evidenced. This criterion may be met using the measurement invariance of composite models (MICOM) technique (Henseler, Ringle, and Sarstedt, 2016). As a result, before performing any multigroup comparisons, both configural invariance and compositional invariance, according to Hair et al. (2019), should be validated and established (in this case, with no data pooling). Since we adopted a PLS-SEM technique, the measurement configural invariance was, by default, achieved (Hair et al., 2018). As such, we continue to see whether the second condition, compositional invariance, was established. In this case, we did a permutation check. Table 4 reveals that all the variables have Permutation P-values greater than 0.05. As a result, we consider the null hypothesis to be supported, meaning that the initial correlations of the constructs are not considerably different from 1, proving compositional invariance (Hair et al., 2018).

Table 4: Compositional invariance assessment

No vs Yes	Having friend(s) Involved in a Family Business				Having Family Member(s) in a Family Business			
	Original Correlation	Correlation Permutation Mean	5.00%	Permutation p-Values	Original Correlation	Correlation Permutation Mean	5.00 %	Permutation p-Values
Entrepreneurial Behaviour	1	1	0.999	0.528	0.997	0.999	0.997	0.099
Entrepreneurial Intentions	1	0.999	0.999	0.903	1	0.999	0.998	0.837
Entrepreneurial Self-Efficacy	0.998	0.999	0.998	0.074	0.999	0.999	0.998	0.444
Entrepreneurial Skills	0.997	0.998	0.993	0.308	0.996	0.998	0.994	0.091

4. Results

We used Bootstrapping set at 5,000 sub-samples (Preacher and Hayes, 2008), and found that entrepreneurial skills positively predict entrepreneurial marketing intentions ( $\beta = 0.399$ ,  $P < 0.001$ ,  $f^2 > 0.15$ ) and entrepreneurial marketing behaviours ( $\beta = 0.248$ ,  $P < 0.05$ ,  $f^2 > 0.02$ ). We also found that entrepreneurial self-efficacy positively predicts both entrepreneurial marketing intentions ( $\beta = 0.512$ ,  $P < 0.001$ ,  $f^2 > 0.35$ ) and entrepreneurial marketing behaviours ( $\beta = 0.269$ ,  $P < 0.05$ ,  $f^2 > 0.02$ ). Finally, entrepreneurial marketing intentions positively predict entrepreneurial marketing behaviour ( $\beta = 0.298$ ,  $P < 0.05$ ,  $f^2 > 0.02$ ). As a result, we judge H1a, H1b, H2a, H2b, and H3 as supported (see Table 5).

Table 5: H1a, H1b, H2a, H2b and H3 testing

Hypothesis	Path	$\beta$	t	$f^2$	Decision
H1a	Entrepreneurial Skills -> Entrepreneurial Marketing Intentions	0.399**	5.368**	>0.15	Supported
H1b	Entrepreneurial Skills -> Entrepreneurial Marketing Behaviour	0.248*	2.493*	>0.02	Supported
H2a	Entrepreneurial Self-Efficacy -> Entrepreneurial Marketing Intentions	0.512**	7.023**	>0.35	Supported
H2b	Entrepreneurial Self-Efficacy -> Entrepreneurial Marketing Behaviour	0.269*	1.983*	>0.02	Supported
H3	Entrepreneurial Marketing Intentions -> Entrepreneurial Marketing Behaviour	0.298*	2.408*	>0.02	Supported

\*\*  $P < 0.001$ ; \*  $P < 0.05$

Table 6 reveals that all unstandardised betas are positive and significant at a probability value less than 0.05. We therefore conclude that entrepreneurial marketing intentions not only directly predict entrepreneurial marketing behaviours, but also serves as a mediator through which additional positive effects of entrepreneurial skills ( $B = 0.118$ ,  $SD = 0.069$ ,  $P < 0.05$ ) and self-efficacy ( $B = 0.153$ ,  $SD = 0.069$ ,  $P < 0.05$ ) travel to entrepreneurial marketing behaviours.

Table 6: Indirect effects testing

Path	B	SD	t
Entrepreneurial Self-Efficacy -> Entrepreneurial Marketing Intentions -> Entrepreneurial Marketing Behaviour	0.153*	0.069	2.22*
Entrepreneurial Skills -> Entrepreneurial Marketing Intentions -> Entrepreneurial Marketing Behaviour	0.118*	0.054	2.177*

\*  $P < 0.05$

In line with Hu and Bentler (1999), the SRMR value is found to equal 0.05, which is less than 0.08, indicating that our conceptual model fits our data well. Finally, Table 7 illustrates that, when compared to the naive LM benchmark, most of the observed variables in the PLS-SEM evaluation possess lower mean absolute error (MAE) and root mean square error (RMSE) scores (Hair et al., 2019), implying that the model has a medium level of predictive power (Shmueli et al., 2019).

Table 7: Predictive performance of the PLS model vs Benchmark LM

Indicator	PLS		LM	
	RMSE	MAE	RMSE	MAE
EB6	1.04	0.776	1.077	0.809
EB4	0.91	0.686	0.934	0.7
EB2	0.939	0.693	0.93	0.662
EB1	0.919	0.689	0.867	0.652
EB3	0.919	0.693	0.957	0.71
EB9	1.049	0.79	1.079	0.817
EB5	1.022	0.774	1.044	0.783
E11	0.769	0.614	0.798	0.629
E13	0.776	0.588	0.826	0.626
E14	0.74	0.569	0.77	0.57
E12	0.641	0.499	0.657	0.51

We perform a multigroup analysis (MGA) to examine the hypothetical model invariance related to the involvement of either the participant or any of their friends in a family business to determine if the involvement of such reference groups in a family business can moderate the hypothesised path envisaged by Figure 1. We use t-values associated with the comparisons indicated in the parametric analyses. The findings (see Table 8) demonstrate that the path, representing the direct effects of entrepreneurial skills on entrepreneurial marketing behaviours, is non-equivalent across the levels of involvement in a family business only when it is friend(s)' involvement. Explained differently, having friend(s) involved in a family-run business is suggested to boost the improvement of entrepreneurial marketing behaviours as a result of possessing entrepreneurial skills ( $\beta_{Yes} = 0.41$ ,  $P < 0.01$ ;  $\beta_{No} = -0.07$ ,  $P = 0.595$ ;  $t(No - Yes) = 2.435$ ). Therefore, we judge H4a, H4b, H4c, H5a, H5b, H5c, H5d, H6a and H6b as unsupported whilst H4d supported, meaning that having friend(s) involved in



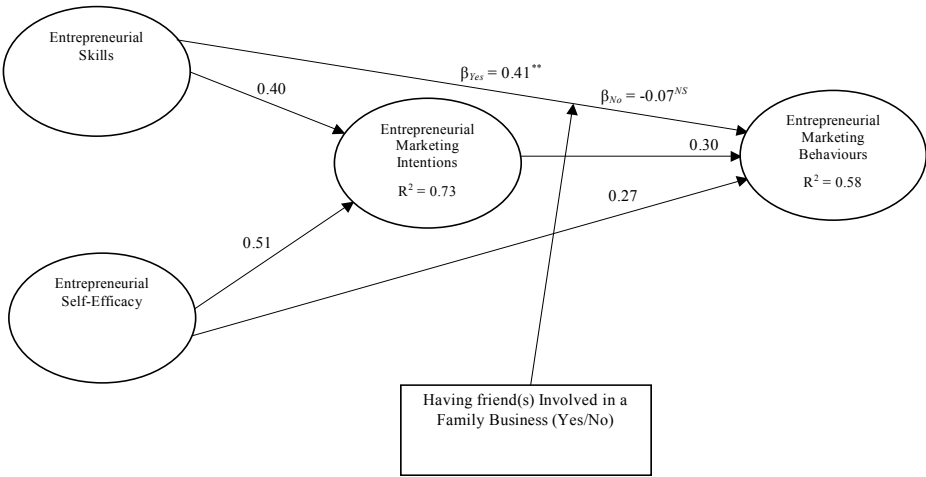
a family business is likely to enhance the effectiveness of equipping students with entrepreneurial skills as a way to nurture their entrepreneurial marketing behaviours. Figure 2 illustrates the results of hypotheses testing.

**Table 8: Multigroup/moderation analysis**

Path	Having friend(s) Involved in a Family Business		Having Family Member(s) in a Family Business	
	$\beta$ (No - Yes)	<i>t</i> (No - Yes)	$\beta$ (No - Yes)	<i>t</i> (No - Yes)
Entrepreneurial Marketing Intentions -> Entrepreneurial Marketing Behaviour	-0.252 <sup>NS</sup>	0.949 <sup>NS</sup>	0.307 <sup>NS</sup>	1.333 <sup>NS</sup>
Entrepreneurial Self-Efficacy -> Entrepreneurial Marketing Behaviour	-0.302 <sup>NS</sup>	1.093 <sup>NS</sup>	-0.182 <sup>NS</sup>	0.683 <sup>NS</sup>
Entrepreneurial Self-Efficacy -> Entrepreneurial Marketing Intentions	-0.002 <sup>NS</sup>	0.014 <sup>NS</sup>	-0.047 <sup>NS</sup>	0.305 <sup>NS</sup>
Entrepreneurial Skills -> Entrepreneurial Marketing Behaviour	-0.473 <sup>*</sup>	2.435 <sup>*</sup>	-0.208 <sup>NS</sup>	0.962 <sup>NS</sup>
Entrepreneurial Skills -> Entrepreneurial Marketing Intentions	0.062 <sup>NS</sup>	0.405 <sup>NS</sup>	0.011 <sup>NS</sup>	0.073 <sup>NS</sup>

<sup>\*</sup>  $P < 0.05$ ; <sup>NS</sup>: Non-significant

**Figure 2: Hypotheses testing results**



## 5. Discussion

We set out to empirically assess the effects of entrepreneurial skills and entrepreneurial self-efficacy on entrepreneurial marketing intentions and behaviours among a sample of business students and the moderation effects of this relationship by exposure to reference groups (friends and family members) who are involved in a family business. Our study found support for entrepreneurial skills positively predicting entrepreneurial marketing intentions. This finding is consistent with those of Chang and Rieple (2013), who empirically linked entrepreneurial skills with marketing competencies, and those of Mitchelmore and Rowley (2013) whose work focused on female entrepreneurs.

In addition, consistent with Samuel, Ernest, and Awuah (2013), our results reveal that entrepreneurial marketing intentions positively predict entrepreneurial marketing behaviour. Furthermore, our analysis found support for entrepreneurial self-efficacy positively predicting entrepreneurial marketing intentions and behaviours. Finally, consistent with Zhang and Ma (2009), our study indicates that interactions with *friends* who are involved in a family business strengthens the above-stated relationship among entrepreneurial skills and entrepreneurial marketing intentions and behaviours. Remarkably though, we find that such a reinforcing effect does not hold for *family members* engaged in a family business.

We make several notable contributions to the literature. First, our findings provide valuable insights regarding the role of entrepreneurial competencies in the early stage of entrepreneurial processes. Second, we extend existing literature regarding the relevance of entrepreneurial skills and self-efficacy to entrepreneurial intentions and behaviours by focusing specifically on the marketing-tailored entrepreneurial process. This perspective is particularly pertinent for young prospective entrepreneurs, such as university students. Third, our study provides novel insights regarding the role of the family business experience as a stimulus for entrepreneurial intent and the consequent action. We specifically show that social interactions with friends who are involved in a family business enhance the likelihood that entrepreneurial skills will be practically applied. Even stronger, our empirical results suggest that such interactions are a prerequisite for entrepreneurial skills to be translated directly into entrepreneurial marketing behaviours.

### 5.1. Practical Implications

The present research offers several valuable insights that support the academic preparation of next-generation entrepreneurs. Specifically, we looked at two aspects of education as predictors of entrepreneurial intentions and behaviours. Notably, both the entrepreneurial skill development of students and the developing of student self-efficacy were separately and significantly related to the desired outcomes: entrepreneurial marketing intentions and behaviours. This suggests that universities should focus on these elements of academic training to prepare students for the demands and expectations of future employers who want students who can identify and exploit market opportunities.

Our second objective was to understand if there is a moderating effect associated with having friends or family member in family-run businesses. The findings here indicated a moderating effect where we found support for hypothesis 4d only, such that the moderation was significant between entrepreneurial skills and entrepreneurial marketing behaviours. We interpret this to mean that academic focus on entrepreneurial skills seems to be supplemented by real-life exposure to friends—but not family members—with entrepreneurial

experiences. Hence, we suggest that student entrepreneurial behaviours can be guided in the classroom, but the value of internships or exposure to real entrepreneurs increases the likelihood of students' self-reported behaviours towards pursuing entrepreneurial marketing activities.

## 5.2. Research Limitations and Implications

The present study has several limitations. First, the setting and context of this research limit the generalisability of the results to others with potentially distinct cultural styles or situational patterns. For instance, based on the cultural metrics offered by Hofstede Insights (2021), Malaysia rates very high on the power distance scale (with a score of 100, compared to the USA's 40), showing that people are prepared to accept a hierarchical society in which everyone has a position without additional justification. Furthermore, with a score of 26, Malaysia is ranked low on individualism (the USA scores 91), showing that collectivism is a stronghold in Malaysian culture. This kind of culture nurtures strong bonds where everybody takes responsibility for the members of their group (Hofstede Insights, 2021; Toh et al., 2022). Such variations in prevalent cultural patterns motivate future research to address this limitation by replicating our study in culturally different contexts or further investigating the cross-cultural effects on the invariance of the model presented by this study. Moreover, the Marketing/Entrepreneurship connection has facilitated our understanding of how small firms function and carry out marketing activities (O'Brien and Clark, 1997; Carson, McGowan, and Hill, 1996; Stokes, 1997). Therefore, with entrepreneurial marketing believed to play an instrumental role in vitalising businesses in post-crisis eras (e.g. Miles et al., 2016), future research is suggested to investigate how the relationships reported in this study can be further moderated by crisis (e.g. COVID-19) perceptions.

Second, despite satisfying the conditions of concluding meaningful multigroup analysis results, the sample size for this study is relatively small for capturing variances across the groups. Of 149 responses (the whole sample), 93 (62%) participants had a family business background vs 56 (38%) who did not; furthermore 103 (69%) of the students had at least one friend with a family business background vs 46 (31%) who did not. Thus, using larger samples could help detect additional occurrences of non-invariance. The study's use of non-probability sampling (convenience) may limit the generalisability of our findings. Nonetheless, many survey methodologies include bias (e.g., non-response); accordingly, the present inquiry interpretations are predicted to exceed the sampling procedure's constraints (Mahmoud et al., 2021). Employing force answering (FA) to limit the quantity of missing data might cause bias in the forced responses. As a result, we encourage future research to utilise methods other than FA. For example, utilising "soft reminders" in conjunction with an additional

choice of “Prefer not to answer” (Sischka et al., 2022) or “Not wish to disclose” when responding to questionnaire questions might help reduce missing data without increasing the threat of FA bias (Mahmoud, Reisel, et al., 2022).

Third, the study results were limited in that they were produced using quantitative methods. The study lacked qualitative data that would have been necessary for generating more profound insights into the moderation results. Thus, future research may look at conducting qualitative inquiries to answer the “why” questions about the non-equivalence resulting from having reference group(s) engaging in a family business.

Fourth, the hypothesised model could have benefited from including control variables such as study type (business-oriented vs other) and study year (as likely later-year students have better insights into their intentions and may already engage in a behaviour). Notwithstanding, such inclusion would have required theoretical justification as substantial as the inclusion premises of the independent and dependent variables (c.f. Wysocki, Lawson, and Rhemtulla, 2022; Spector, 2022; Becker, 2005). Future research is, therefore, encouraged to re-examine our hypotheses alongside controls with proper conceptualisation.

Finally, we adopted a cross-sectional approach in which all data were obtained at a single time point. Although cross-sectional research has been criticised for having a limited capacity for establishing causation (Langdridge and Hagger-Johnson, 2013), it has also been argued (Spector, 2019) that the ability of longitudinal designs to reflect causality has been exaggerated and that they offer few advantages over cross-sectional designs in the majority of instances where they are used. Additionally, cross-sectional research findings can still be regarded as interpretable and valid if conducted on a solid theoretical premise (Tharenou, Donohue, and Cooper, 2007). Nonetheless, we call for further replicating studies using a longitudinal paradigm.

In conclusion, notwithstanding the above limitations, we believe our paper makes an insightful contribution to our knowledge of the determinants of entrepreneurial marketing intentions and behaviours.

## References:

- Acs, Z.J., Carlsson, B., and Karlsson, C. (2011), *Entrepreneurship, Small and Medium-Sized Enterprises and the Macroeconomy*. Cambridge, UK: Cambridge University Press.
- Ahmadi, H., and O'Cass, A. (2016), "The role of entrepreneurial marketing in new technology ventures first product commercialisation", *Journal of Strategic Marketing* 24(1): p 47-60.
- Ajzen, I. (2011), "The theory of planned behaviour: Reactions and reflections", *Psychology & Health* 26(9): p 1113-1127.
- Al Mamun, A., Fazal, S.A., and Muniady, R. (2019), "Entrepreneurial knowledge, skills, competencies and performance", *Asia Pacific Journal of Innovation and Entrepreneurship* 13(1): p 29-48.
- Al Mamun, A., Subramaniam, P., Che Nawi, N.B., and Binti Zainol, N.R. (2016), "Entrepreneurial competencies and performance of informal micro-enterprises in Malaysia", *Mediterranean Journal of Social Sciences* 7(3): p 273-281.
- Aldrich, H.E., and Cliff, J.E. (2003), "The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective", *Journal of Business Venturing* 18(5): p 573-596.
- Ali, G.A., Hilman, H., and Gorondutse, A.H. (2017), "The effect of entrepreneurial orientation, market orientation, total quality management and organizational culture on the SMEs performance: A theoretical framework", *Journal of Business and Retail Management Research* 12(1): p. 26-40.
- Athayde, R., and Hart, M. (2012), "Developing a methodology to evaluate enterprise education programmes", *International Review of Entrepreneurship* 10(3): p 91-114.
- Bäckbro, J., and Nyström, H. (2006), *Entrepreneurial Marketing: Innovative Value Creation*, Master's Thesis in business administration, Jönköping International Business School, Sweden.
- Badwan, A.R., Tamvada, J.P., and Rentocchini, F. (2022), "Evaluating mentorship-based learning in entrepreneurship education", *International Review of Entrepreneurship* 20: p 69-86.
- Baker, M.J. (2017), *Marketing Strategy and Management*. London: Bloomsbury Publishing.
- Baker, W.E., and Sinkula, J.M. (2009), "The complementary effects of market orientation and entrepreneurial orientation on profitability in small businesses", *Journal of Small Business Management* 47(4): p 443-464.
- Barbosa, S.D., Gerhardt, M.W., and Kickul, J.R. (2007), "The role of cognitive style and risk preference on entrepreneurial self-efficacy and entrepreneurial intentions", *Journal of Leadership & Organizational Studies* 13(4): p 86-104.
- Becker, T.E. (2005), "Potential problems in the statistical control of variables in organizational research: A qualitative analysis with recommendations", *Organizational Research Methods* 8(3): p 274-289.
- Bird, B. (2019), "Toward a theory of entrepreneurial competency". In: J.A. Katz and A.C. Corbet (Eds.), *Seminal Ideas for the Next Twenty-Five Years of Advances*, pp. 115-131. Bingley, UK: Emerald Publishing.
- Boso, N., Story, V.M., and Cadogan, J.W. (2013), "Entrepreneurial orientation, market orientation, network ties, and performance: Study of entrepreneurial firms in a developing economy", *Journal of Business Venturing* 28(6): p 708-727.
- Boyd, N.G., and Vozikis, G.S. (1994), "The influence of self-efficacy on the development of entrepreneurial intentions and actions", *Entrepreneurship Theory and Practice* 18(4): p 63-77.
- Buccieri, D., Javalgi, R.G., and Gross, A. (2023), "Innovation and differentiation of emerging market international new ventures the role of entrepreneurial marketing", *Journal of Strategic Marketing* 31(3): p 549-577.
- Carr, J.C., and Sequeira, J.M. (2007), "Prior family business exposure as intergenerational influence and entrepreneurial intent: A Theory of Planned Behavior approach", *Journal of Business Research* 60(10): p 1090-1098.
- Carson, D., McGowan, P., and Hill, J. (1996), "Effective marketing education for SME executives", *Marketing Education Review* 6(2): p 59-70.
- Carter, S., and Jones-Evans, D. (Eds.) (2006), *Enterprise and Small Business: Principles, Practice and Policy*. Harlow, UK: FT Prentice Hall.
- Chang, J., and Rieple, A. (2013), "Assessing students' entrepreneurial skills development in live projects", *Journal of Small Business and Enterprise Development* 20(1): p 225-241.

- Chrisman, J.J., Chua, J.H., and Sharma, P. (2003), "Current trends and future directions in family business management studies: Toward a theory of the family firm", Article written for the 2003 *Coleman White Paper* series.
- Collinson, E., and Shaw, E. (2001), "Entrepreneurial marketing – a historical perspective on development and practice", *Management Decision* 39(9): p 761-766.
- Covin, J.G., and Wales, W.J. (2018), "Crafting high-impact entrepreneurial orientation research: Some suggested guidelines", *Entrepreneurship Theory and Practice* 43(1): p 3-18.
- Davidsson, P. (1991), "Continued entrepreneurship: Ability, need, and opportunity as determinants of small firm growth", *Journal of Business Venturing* 6(6): p 405-429.
- De Massis, A., Frattini, F., Kotlar, J., Petruzzelli, A.M., and Wright, M. (2016), "Innovation through tradition: Lessons from innovative family businesses and directions for future research", *Academy of Management Perspectives* 30(1): p 93-116.
- Dyer, W.G., and Handler, W. (1994), "Entrepreneurship and family business: Exploring the connections", *Entrepreneurship Theory and Practice* 19(1): p 71-83.
- Elfving, J., Brännback, M., and Carsrud, A. (2009), "Toward a contextual model of entrepreneurial intentions". In: A.L. Carsrud and M. Brännback (Eds.), *Understanding the Entrepreneurial Mind: Opening the Black Box*, pp. 23-33. New York: Springer.
- Entrialgo, M., and Iglesias, V. (2016), "The moderating role of entrepreneurship education on the antecedents of entrepreneurial intention", *International Entrepreneurship and Management Journal* 12(4): p 1209-1232.
- Fairlie, R.W., and Robb, A. (2007), "Families, human capital, and small business: Evidence from the Characteristics of Business Owners Survey", *Industrial and Labor Relations Review* 60(2): p 225-245.
- Ferreira, C., Pitt, L., and Kietzmann, J. (2021), "The sharing economy's impact on motivations to enter hybrid entrepreneurship: Using self-determination theory as an explanatory framework", *International Review of Entrepreneurship* 19(1): p 93-116.
- Fornell, C., and Larcker, D.F. (1981), "Evaluating Structural Equation Models with Unobservable Variables and Measurement Error", *Journal of Marketing Research* 18(1): p 39-50.
- Francis, D.H., and Sandberg, W.R. (2000), "Friendship within entrepreneurial teams and its association with team and venture performance", *Entrepreneurship Theory and Practice* 25(2): p 5-26.
- Gao, S., Low, S.P., and Yeo, Q.Z.Y. (2022), "Exploring the drivers and barriers to lifelong learning in Singapore's construction industry", *Journal of Education and Work* 35(3): p 340-356.
- Gerli, F., Gubitta, P., and Tognazzo, A. (2011), "Entrepreneurial competencies and firm performance: An empirical study". Paper presented at VIII International Workshop on Human Resource Management, Seville, May 2011.
- Habermann, H. (2016), "Explaining Investment Dynamics: Empirical Evidence from German New Ventures", *International Review of Entrepreneurship* 14(1): p 85-101.
- Hacioglu, G., Eren, S.S., Eren, M.S., and Celikkan, H. (2012), "The effect of entrepreneurial marketing on firms' innovative performance in Turkish SMEs", *Procedia - Social and Behavioral Sciences* 58: p 871-878.
- Hair, J., Hult, G.T.M., Ringle, C.M., and Sarstedt, M. (2022), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. London: SAGE.
- Hair, J.F., Ringle, C.M., and Sarstedt, M. (2014), "PLS-SEM: Indeed a silver bullet", *Journal of Marketing Theory and Practice* 19(2): p 139-152.
- Hair, J.F., Risher, J.J., Sarstedt, M., and Ringle, C.M. (2019), "When to use and how to report the results of PLS-SEM", *European Business Review* 31(1): p 2-24.
- Hair, J.F., Sarstedt, M., Ringle, C.M., and Gudergan, S.P. (2018), *Advanced Issues in Partial Least Squares Structural Equation Modeling*. Thousand Oaks, CA: SAGE Publications.
- Henseler, J., Dijkstra, T.K., Sarstedt, M., Ringle, C.M., Diamantopoulos, A., Straub, D.W., Ketchen, D.J., Hair, J.F., Hult, G.T.M., and Calantone, R.J. (2014), "Common beliefs and reality about PLS: Comments on Rönkkö & Evermann (2013)", *Organizational Research Methods* 17(2): p 182-209.
- Henseler, J., Ringle, C.M., and Sarstedt, M. (2016), "Testing measurement invariance of composites using Partial Least Squares", *International Marketing Review* 33(3): p 405-431.

- Hills, G.E., and Hultman, C.M. (2011), "Academic roots: The past and present of entrepreneurial marketing", *Journal of Small Business & Entrepreneurship* 24(1): p 1-10.
- Hofstede Insights. (2021), "Country comparison", Hofstede Insights, accessed 31 December 2021. <https://www.hofstede-insights.com/country-comparison/malaysia,the-usa/>
- Holzweber, M., Mattsson, J., and Standing, C. (2015), "Entrepreneurial business development through building tribes", *Journal of Strategic Marketing* 23(7): p 563-578.
- Hu, L.-T., and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives", *Structural Equation Modeling: A Multidisciplinary Journal* 6(1): p 1-55.
- Hulbert, B., Gilmore, A., and Carson, D. (2015), "Opportunity recognition by growing SMEs: A managerial or entrepreneurial function?", *Journal of Strategic Marketing* 23(7): p 616-642.
- Janet, M., and Ngugi, K. (2014), "Influence of entrepreneurial marketing on the growth of SMEs in Kiambu Town-CBD, Kenya", *European Journal of Business Management* 1(11): p 361-377.
- Kautonen, T., Van Gelderen, M., and Fink, M. (2015), "Robustness of the Theory of Planned Behavior in predicting entrepreneurial intentions and actions", *Entrepreneurship Theory and Practice* 39(3): p 655-674.
- Keat, O.Y., Selvarajah, C., and Meyer, D. (2011), "Inclination towards entrepreneurship among university students: An empirical study of Malaysian university students", *International Journal of Business and Social Science* 2(4): p. 206-220.
- Kock, N. (2015), "Common method bias in PLS-SEM: A full collinearity assessment approach", *International Journal of e-Collaboration (IJeC)* 11(4): p 1-10.
- Kotler, P., Keller, K.L., and Chernev, A. (2021), *Marketing Management*. London: Pearson Education.
- Kraus, S., Harms, R., and Fink, M. (2009), "Entrepreneurial marketing: Moving beyond marketing in new ventures", *International Journal of Entrepreneurship and Innovation Management* 11(1): p 19-34.
- Kutzhanova, N., Lyons, T.S., and Lichtenstein, G.A. (2009), "Skill-based development of entrepreneurs and the role of personal and peer group coaching in enterprise development", *Economic Development Quarterly* 23(3): p 193-210.
- Landström, H. (2005), *Pioneers in Entrepreneurship and Small Business Research*. New York: Springer.
- Langdridge, D. and Hagger-Johnson, G. (2013), *Introduction to Research Methods and Data Analysis in Psychology (Third Edition)*. Harlow, UK: Pearson Education Limited.
- Lewis, V.L., and Churchill, N.C. (1983), "The five stages of small business growth", *Harvard Business Review* 61(3): p 30-50.
- Li, C., Murad, M., Shahzad, F., Khan, M.A.S., Ashraf, S.F., and Dogbe, C.S.K. (2020), "Entrepreneurial passion to entrepreneurial behavior: Role of entrepreneurial alertness, entrepreneurial self-efficacy and proactive personality", *Frontiers in Psychology* 11, article 1611.
- Lindsay, V., Ashill, N., Roxas, B., and Victorio, A. (2014), "Entrepreneurial orientation and performance of microenterprises in an emerging economy", *Journal of Strategic Marketing* 22(7): p 631-656.
- Liu, R. (2017), "A reappraisal of marketing definition and theory", *Journal of Eastern European and Central Asian Research* 4(2): p 1-7.
- Mahmoud, A.B., Grigoriou, N., and Ball, J. (2022), "Breathing life into marketing scholarship through creativity learning and teaching: Integrating creativity into marketing education". In: J. Keengwe (Ed.), *Handbook of Research on Promoting Global Citizenship Education*, pp. 176-194. Hershey, PA, USA: IGI Global.
- Mahmoud, A.B., Hack-Polay, D., Grigoriou, N., Mohr, I., and Fuxman, L. (2021), "A generational investigation and sentiment and emotion analyses of female fashion brand users on Instagram in Sub-Saharan Africa", *Journal of Brand Management* 28(5): p 526-544.
- Mahmoud, A.B., Reisel, W.D., Fuxman, L., and Hack-Polay, D. (2022), "Locus of control as a moderator of the effects of COVID19 perceptions on job insecurity, psychosocial, organisational, and job outcomes for MENA region hospitality employees", *European Management Review* 19(2): p 313-332.

- Miles, M.P., Lewis, G.K., Hall-Phillips, A., Morrish, S.C., Gilmore, A., and Kasouf, C.J. (2016), "The influence of entrepreneurial marketing processes and entrepreneurial self-efficacy on community vulnerability, risk, and resilience", *Journal of Strategic Marketing* 24(1): p 34-46.
- Mitchelmore, S., and Rowley, J. (2010), "Entrepreneurial competencies: A literature review and development agenda", *International Journal of Entrepreneurial Behavior & Research* 16(2): p 92-111.
- Mitchelmore, S., and Rowley, J. (2013), "Entrepreneurial competencies of women entrepreneurs pursuing business growth", *Journal of Small Business and Enterprise Development* 20(1): p 125-142.
- Morgan, N.A., Vorhies, D.W., and Mason, C.H. (2009), "Market orientation, marketing capabilities, and firm performance", *Strategic Management Journal* 30(8): p 909-920.
- Morris, M.H., Schindehutte, M., and LaForge, R.W. (2002), "Entrepreneurial marketing: A construct for integrating emerging entrepreneurship and marketing perspectives", *Journal of Marketing Theory and Practice* 10(4): p 1-19.
- Nabi, G., Liñán, F., Fayolle, A., Krueger, N., and Walmsley, A. (2017), "The impact of entrepreneurship education in higher education: A systematic review and research agenda", *Academy of Management Learning & Education* 16(2): p 277-299.
- Nair, S., Gaim, M., and Dimov, D. (2020), "Toward the emergence of entrepreneurial opportunities: Organizing early-phase new venture creation support systems", *Academy of Management Review* 47(1): p 162-183.
- Narver, J.C., and Slater, S.F. (1990), "The effect of a market orientation on business profitability", *Journal of Marketing* 54(4): p 20-35.
- Neneh, B.N. (2019), "From entrepreneurial alertness to entrepreneurial behavior: The role of trait competitiveness and proactive personality", *Personality and Individual Differences* 138: p 273-279.
- Nijssen, E.J. (2021), *Entrepreneurial Marketing: How to Develop Customer Demand*. London: Routledge.
- Nowiski, W., Haddoud, M.Y., Lanari, D., Egerová, D., and Czeglédi, C. (2019), "The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries", *Studies in Higher Education* 44(2): p 361-379.
- O'Brien, E.M., and Clark, D. (1997), "Graduates—Their Entrepreneurial Role in the Small Firm", *Marketing Education Review* 7(3): p 29-37.
- Peprah, A.A., and Adekoya, A.F. (2020), "Entrepreneurship and economic growth in developing countries: Evidence from Africa", *Business Strategy & Development* 3(3): p 388-394.
- Phelan, C., and Sharpley, R. (2012), "Exploring entrepreneurial skills and competencies in farm tourism", *Local Economy* 27(2): p 103-118.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y., and Podsakoff, N.P. (2003), "Common method biases in behavioral research: A critical review of the literature and recommended remedies", *Journal of Applied Psychology* 88(5): p 879-903.
- Preacher, K.J., and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods* 40(3): p 879-891.
- Reynolds, P., Storey, D.J., and Westhead, P. (1994), "Cross-national comparisons of the variation in new firm formation rates", *Regional Studies* 28(4): p 443-456.
- Ringle, C.M., Wende, S., and Becker, J.-M. (2015), *SmartPLS 3: Technical Report*. Boenningstedt, Germany: SmartPLS GmbH.
- Roxas, B. (2014), "Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students", *Journal of Education and Work* 27(4): p 432-453.
- Samuel, Y.A., Ernest, K., and Awuah, J.B. (2013), "An assessment of entrepreneurship intention among Sunyani Polytechnic Marketing students", *International Review of Management and Marketing* 3(1): p 37-49.
- Shabbir, M.S., Mohd Shariff, M.N., and Shahzad, A. (2016), "A conceptual development of entrepreneurial skills and entrepreneurial intentions: A case of IT employees in Pakistan", *International Journal of Academic Research in Business and Social Sciences* 6(3): p 65-78.



- Shane, S., and Venkataraman, S. (2000), "The promise of entrepreneurship as a field of research", *Academy of Management Review* 25(1): p 217-226.
- Shirokova, G., Osiyevskyy, O., and Bogatyreva, K. (2016), "Exploring the intention-behavior link in student entrepreneurship: Moderating effects of individual and environmental characteristics", *European Management Journal* 34(4): p 386-399.
- Shmueli, G., Sarstedt, M., Hair, J.F., Cheah, J.-H., Ting, H., Vaithilingam, S., and Ringle, C.M. (2019), "Predictive model assessment in PLS-SEM: Guidelines for using PLSpredict", *European Journal of Marketing* 53(11): p 2322-2347.
- Sischka, P.E., Décieux, J.P., Mergener, A., Neufang, K.M., and Schmidt, A.F. (2022), "The impact of forced answering and reactance on answering behavior in online surveys", *Social Science Computer Review* 40(2): p 405-425.
- Smith, B., and Morse, E. (2005), *Entrepreneurial Competencies: Literature Review and Best Practices*. Ottawa: Small Business Policy Branch, Industry Canada.
- Spector, P.E. (2019), "Do not cross me: Optimizing the use of cross-sectional designs", *Journal of Business and Psychology* 34(2): p 125-137.
- Spector, P.E. (2022), "Statistical control is academic rigor theater", Paul Spector, accessed 2 November 2022. <https://paulspector.com/statistical-control-is-academic-rigor-theater/>
- Stokes, D. (1997), "A lesson in entrepreneurial marketing from the public sector", *Marketing Education Review* 7(3): p 47-54.
- Stokes, D. (2000), "Entrepreneurial marketing: A conceptualisation from qualitative research", *Qualitative Market Research: An International Journal* 3(1): p 47-54.
- Stokes, D., and Wilson, N.C. (2010), "Entrepreneurship and marketing education: Time for the road less travelled?", *International Journal of Entrepreneurship and Innovation Management* 11(1): p 95-108.
- Strebler, M., Robinson, D., and Heron, P. (1997), *Getting the Best Out of Your Competencies*, IES Report No. 304. Brighton, UK: The Institute for Employment Studies.
- Stroe, S., Parida, V., and Wincent, J. (2018), "Effectuation or causation: An fsQCA analysis of entrepreneurial passion, risk perception, and self-efficacy", *Journal of Business Research* 89: p 265-272.
- Tharenou, P., Donohue, R., and Cooper, B. (2007), *Management Research Methods*. Cambridge, UK: Cambridge University Press.
- Toh, S.-Y., Tehseen, S., Mahmoud, A.B., Cheok, J.B., and Kaur, R. (2022), "Stress amongst private university students in Malaysia: Do personality differences matter?", *International Journal of Public Sociology and Socioterapy (IJPSS)* 2(1): p 1-16.
- Van Gelderen, M., Brand, M., Van Praag, M., Bodewes, W., Poutsma, E., and Van Gils, A. (2008), "Explaining entrepreneurial intentions by means of the theory of planned behaviour", *Career Development International* 13(6): p 538-559.
- Varamäki, E., Joensuu, S., Tornikoski, E., and Viljamaa, A. (2015), "The development of entrepreneurial potential among higher education students", *Journal of Small Business and Enterprise Development* 22(3): p 563-589.
- Venkataraman, S. (2019), "The distinctive domain of entrepreneurship research". In: J.A. Katz and A.C. Corbet (Eds.), *Seminal Ideas for the Next Twenty-Five Years of Advances*, pp. 5-20. Bingley, UK: Emerald Publishing.
- Ward, A., Hernández-Sánchez, B., and Sánchez-García, J.C. (2019), "Entrepreneurial intentions in students from a trans-national perspective", *Administrative Sciences* 9(2): article 37.
- Wei, X., Liu, X., and Sha, J. (2019), "How does the entrepreneurship education influence the students' innovation? Testing on the multiple mediation model", *Frontiers in Psychology* 10: article 1557.
- Wysocki, A.C., Lawson, K.M., and Rhemtulla, M. (2022), "Statistical control requires causal justification", *Advances in Methods and Practices in Psychological Science* 5(2): p 1-19.
- Yaghmaei, O., and Ghasemi, I. (2015), "Effects of influential factors on entrepreneurial intention of postgraduate students in Malaysia", *International Letters of Social and Humanistic Sciences* 51: p 115-124.
- Yi, G. (2021), "From green entrepreneurial intentions to green entrepreneurial behaviors: The role of university entrepreneurial support and external institutional support", *International Entrepreneurship and Management Journal* 17(2): p 963-979.

- Zahra, S.A., Wright, M., and Abdelgawad, S.G. (2014), "Contextualization and the advancement of entrepreneurship research", *International Small Business Journal* 32(5): p 479-500.
- Zellweger, T., Sieger, P., and Halter, F. (2011), "Should I stay or should I go? Career choice intentions of students with family business background", *Journal of Business Venturing* 26(5): p 521-536.
- Zhang, J., and Ma, H. (2009), "Adoption of professional management in Chinese family business: A multilevel analysis of impetuses and impediments", *Asia Pacific Journal of Management* 26(1): p 119-139.
- Zhao, H., Seibert, S.E., and Hills, G.E. (2005), "The mediating role of self-efficacy in the development of entrepreneurial intentions", *Journal of Applied Psychology* 90(6): p 1265-1272.

### Appendix 1: Measures used in the study

Variable	Code	Item	Scoring	Source
Entrepreneurial Marketing Behaviour	EB1	I have discussed product or business idea with potential customers.	5-point Likert scale. 1 = 'strongly disagree,' 5 = 'strongly agree'	(Li et al., 2020)
	EB2	I will sell products or services.		
	EB3	I have collected information about markets or competitors.		
	EB4	I have written a marketing plan.		
	EB5	I have started marketing or promotion efforts.		
	EB6	I have purchased material, equipment, or machinery for the business.		
	EB7	I have started product/service development.		
Entrepreneurial Marketing Intentions	EI1	I am ready to do anything to adopt innovative marketing methods in the future.	5-point Likert scale. 1 = 'strongly disagree,' 5 = 'strongly agree'	(Li et al., 2020)
	EI2	My professional goal is to become a customer-centric entrepreneur.		
	EI3	I will make every effort to start and run my own future firm with customers in mind.		
	EI4	I intend to start a firm someday to make a difference in people's lives.		
Entrepreneurial Skills	ES1	I consider myself very creative.	5-point Likert scale. 1 = 'strongly disagree,' 5 = 'strongly agree'	(Al Mamun et al., 2019)
	ES2	I have adequate problem-solving skills.		
	ES3	I possess high level of leadership.		
	ES4	I possess adequate entrepreneurial skill to manage the enterprise.		
Entrepreneurial Self-Efficacy	ESE1	I am convinced that I can successfully discover new business opportunities.	5-point Likert scale. 1 = 'strongly disagree,' 5 = 'strongly agree'	(Carr & Sequeira, 2007)
	ESE2	I am convinced that I can successfully create new products.		
	ESE3	I am convinced that I can successfully commercialize ideas.		