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ORIGINAL PAPER

Exploring the impact of entrepreneurial experience on future entrepreneurship aspirations

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Abstract

This paper evaluates how different types of direct and vicarious experience in entrepreneurship determine the perceived entrepreneurial intention in short, medium, and long-term horizons. The paper concludes with a discussion of the importance of considering both personal experiences and social influences in designing curriculum. A survey was conducted on four types of entrepreneurial experience and four intention horizons. Two of the experiences were direct experiences: current and previous, whilst two were vicarious: family and knowing someone. The four intention horizons were now, short-term, long-term and no intention. The study looks at 679 agricultural students from universities in both China and the United Kingdom. The paper uses the integrated model of entrepreneurial intentions together with a temporal horizon model of intention as the theoretical underpinning for this approach. The study's results reinforce the positive relationship between family experience and long-term intentions, thus supporting the idea that familial exposure to entrepreneurship can shape individuals' long-term entrepreneurial aspirations. The lack of a significant association between current direct experience and long-term intentions deviates from previous research and may be attributed to other factors influencing individuals' long-term intentions, such as changing circumstances or evolving entrepreneurial opportunities. The cohorts available, whilst from China and UK, as participants were limited which presents several opportunities to expand upon this work and challenge its central premise. An understanding of the role of family in shaping long-term entrepreneurial intention has widespread social implications. The discovery that individuals with entrepreneurial experience, be it direct or through vicarious means, generally show heightened entrepreneurial intentions, coupled with the insight that knowing an entrepreneur correlates with shorter-term intention horizons, whereas family-influenced experiences align with longer-term venture creation ambitions, offers valuable new perspectives for those involved in entrepreneurial education and support.

Keywords Entrepreneur · Education · Intention · Agriculture · China · UK

Extended author information available on the last page of the article

Introduction

Agriculture is a vital global sector, employing over one billion people and contributing to 3% of the global GDP (FAO, 2016; Fitz-Koch et al., 2018). Beyond its economic impact, agriculture underpins food security and is integral in the larger manufacturing process, generating foreign income through exports (Kansheba & Wald, 2020) and playing a crucial role in the development of natural capital (OECD, 2008).

Traditionally, the agricultural sector has been perceived as low-tech and static, dominated by small, family-based businesses and subject to significant government regulation (Dias et al., 2019a; Lans et al., 2020; Martinho, 2020). However, this image is rapidly evolving. The past decade has witnessed transformative changes due to global shifts in consumer behaviour, international conflicts, and rising input costs (Calicioglu et al., 2019). These changes have spurred farmers to adopt data-driven, precision approaches to agriculture (Pérez Sigüenza et al., 2022), explore environmental stewardship, and diversify their enterprises (Yoshida et al., 2020), thereby attracting a diverse range of new market entrants (Pindado et al., 2018).

This shift towards entrepreneurialism in agriculture is further evidenced by research showing that new farmers are more productive, invest more, and are more engaged in agri-environmental schemes (Hamilton et al., 2015; Hopkins et al., 2020). Both successors and new entrants exhibit a stronger inclination towards entrepreneurial activities compared to established farmers, with a positive outlook on future opportunities (Hopkins et al., 2020).

Put bluntly, the business of agriculture is changing across the world (FAO, 2021) and whilst farmers may be profiled as predominantly male, older and less entrepreneurial than other industries (Martinho, 2020). A new generation of agricultural entrepreneurs are emerging, who will have an important role to play globally.

One vanguard of this revolution should be agricultural students, positioned as they are to develop new ideas and take these into practice. Prior research has shown that agricultural students have a higher total early-stage entrepreneurship activity rate than the national average (Bozward et al., 2023). The same study also showed that 14% of these students in the UK and China were actively launching a business, this is higher than the base rate in the UK, reported to be 9.3% (Hart et al., 2020), and in China, reported to be 10.4% (GEM, 2019).

In an agricultural household, experience is often developed before students go to university, through a range of direct and vicarious activities in and around the business which shape a nascent entrepreneurial identity (Fitz-Koch et al., 2019). This identity is located squarely in the context of the family business (Rosa et al., 2014), often balancing a commitment to both the 'external' rural business ecosystem and the 'internal' family portfolio of businesses (Fitz-Koch & Nordqvist, 2017). Therefore, these dynamics are strong influences in developing entrepreneurial intention.

We know from extensive research that familial groups have an impact on an individual's propensity to start a business. Furthermore, we understand that,

central to this, is the manner in which these groups promote and foster entrepreneurial attitudes alongside the access they provide to practical experiences of venturing which together, appear key in nurturing entrepreneurial capabilities (Rogers-Draycott, 2021). One might expect national differences in culture and parental attitudes to heighten this, for example the stereotypical view of autocratic Chinese parents controlling their child's career choice. However, work by Nan Zhou et al. (2020) suggests that a range of parental behaviours exist in China in relation to career choice, the most common of which they characterise as supportive but not intrusive. Further work exploring the effect of parental expectation in China by Qi et al. (2023) shows that parental expectation is not significantly related to subsequent career aspiration. Instead, they contend that any influence occurs through the children's exploration of different careers, and the manner in which the parent encourages this. A pattern which they found consistent regardless of the child's gender. There is some work which explores these trends in an entrepreneurial context, but they either add nothing to the debate given their findings (Su et al., 2022), focus on policy impacts unique to China which have little bearing on this work (Hayward et al., 2023), or find similar trends to studies from other countries in relation to effect of entrepreneurial parents on their offspring (Wang et al., 2018). Based on this, we contend that graduates in China and the UK might be affected similarly by the phenomena the paper seeks to understand, and we also note that none of the current work relates specifically to an agricultural context.

Taken together, we contend that there remains a gap in research on entrepreneurial skills in agriculture and their development (Dias et al., 2019a, 2019b). Mainstream entrepreneurship research has largely overlooked this sector (Alsos et al., 2011; Grande et al., 2011; Heinert & Roberts 2017) highlight the need for further study in this area, suggesting a focus on how entrepreneurship is taught in agricultural programmes and the entrepreneurial mindset of various student groups. This paper aims to address these gaps, exploring factors that impact entrepreneurial intention and the implications of these for a range of stakeholders.

This paper opens with a comprehensive literature review, constructing the theoretical framework and research model underpinning this study. Subsequently, it delineates the research methodology and analytical procedures employed and the systematic approach to data collection and analysis. The presentation of the data is methodical, setting the stage for an in-depth discussion that revisits and critically evaluates the findings in the light of previous scholarly work. The conclusion of the paper encapsulates the study's key contributions, thoughtfully acknowledges its limitations and discusses the broader implications of the research findings.

Theoretical Considerations

This section develops the theoretical narrative for the paper by looking at entrepreneurial intentions and the development of a horizon-based intention model. The final part of this section connects these intentions through the theory with the different types of experience.

Entrepreneurial intention

In the investigative work of Omido Najafabadi et al. (2016), the scholars explore two models that frame entrepreneurial intention: the theory of planned behaviour (TPB) (Ajzen, 1991; Bird, 1988; Boyd & Vozikis, 1994) and Shapero's Model of the Entrepreneurial Event (SEE) (Shapero & Sokol, 1982). TPB posits that an individual's behaviour is propelled by intentions, which are subsequently influenced by attitudes, subjective norms, and perceived behavioural control. On the other hand, SEE conceptualises the entrepreneurial intention event as a function of perceived desirability, inclination to act, and perceived feasibility.

A multitude of authors have subjected these models to rigorous analysis, most notably Krueger et al. (2000). However, it was Iakovleva and Kolvereid (2009) who pioneered the integration of these models, arguing that intention is shaped by perceived desirability and feasibility, which in turn is influenced by attitude, subjective norms, and perceived behavioural control (Fig. 1).

From the perspective of entrepreneurial research, one could suggest that an individual's attitudes, convictions, familial influence, values, and the cognisance of the simplicity or complexity associated with implementing the behaviour of interest will collectively determine their inclination towards entrepreneurial action within a specific context, subsequently impacting their intention to act accordingly.

Boissin et al. (2017) assert that intention is not a binary variable where the nascent entrepreneur either initiates a business today or refrains from doing so. Instead, they scrutinise the notion of short-term versus long-term intentions, illustrating that initial factors influence intention differently depending on the temporal horizon. In essence, an individual may be disinclined to start a business in the short term, but more open to it in the long term as they anticipate changes

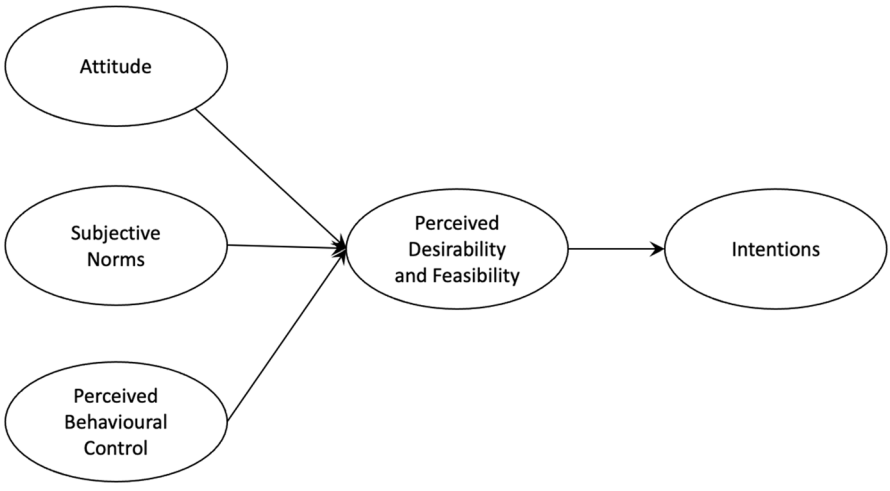

Fig. 1 An integrated model of entrepreneurial intentions (*Source*: Iakovleva & Kolvereid, 2009 p. 74)

in their life circumstances (Fig. 2). Consequently, intention ought to be considered with a more nuanced approach.

Interestingly, both Boissin et al. (2017) and Nasar et al. (2019) discovered that students tend to exhibit a stronger long-term intention compared to short-term intention. Short-term intentions are more significantly swayed by perceived control and attitude towards long-term intention. Notably, Joensuu-Salo et al. (2020) highlighted in a decade-long longitudinal study that entrepreneurial intention remains a consistent construct over time.

Bozward et al. (2023) developed this work into an entrepreneurship intention model, exploring the relationship between horizons of entrepreneurial intention amongst university students and the interventions required by institutions to develop activity in the cohort. This paper demonstrated the dynamic nature of entrepreneurial intentions, the role that skill interventions have in this process and the portfolio of interventions required.

The prominence of entrepreneurial skills aligns with the burgeoning consensus on the pivotal role of prior knowledge and experience in fostering entrepreneurship through the mechanism of judgement (Gieure et al., 2020; Rogers-Draycott, 2021), a phenomenon identified to be evident in agricultural students (Abdullah & Samah, 2014). Arguably, the most intriguing revelation in Abdullah and Samah, (2014) is the adverse effect of role models on intention in this context, a finding that contradicts a substantial portion of the established literature, particularly that which draws on the Global Entrepreneurship Monitor (GEM). The authors of the article posit that this discrepancy may stem from the nascent entrepreneur's deficiency in skills and experience, which impairs their capacity to critically assess the advice or actions of the role model, culminating in the disincentive effect observed.

Herein, it is the author's intention to combine the notions presented by Omidi Najafabadi et al. (2016), Boissin et al. (2017) and Bozward et al. (2023) into a model of entrepreneurial intention (Fig. 3). We also aspire to incorporate a more nuanced conception of intention as suggested by Boissin et al. (2017) and more contemporaneously examined by Nasar et al. (2019), against which we will evaluate types of experience. Our model (Fig. 3) will embrace an interval range encompassing four potential horizons, each reflecting distinct intention stances:

- Absence of intention—no intention

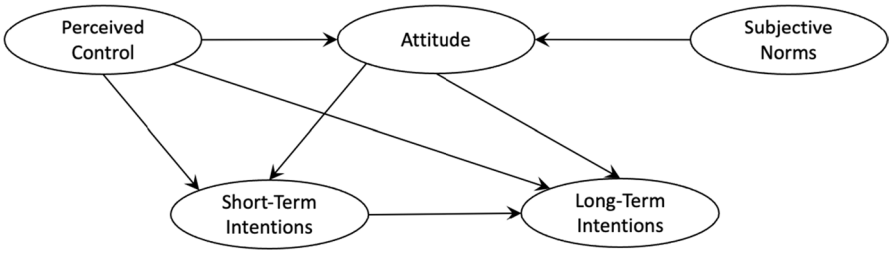

Fig. 2 Internal submodel of entrepreneurial intention (*Source*: Bossin et al., 2017 p. 29)

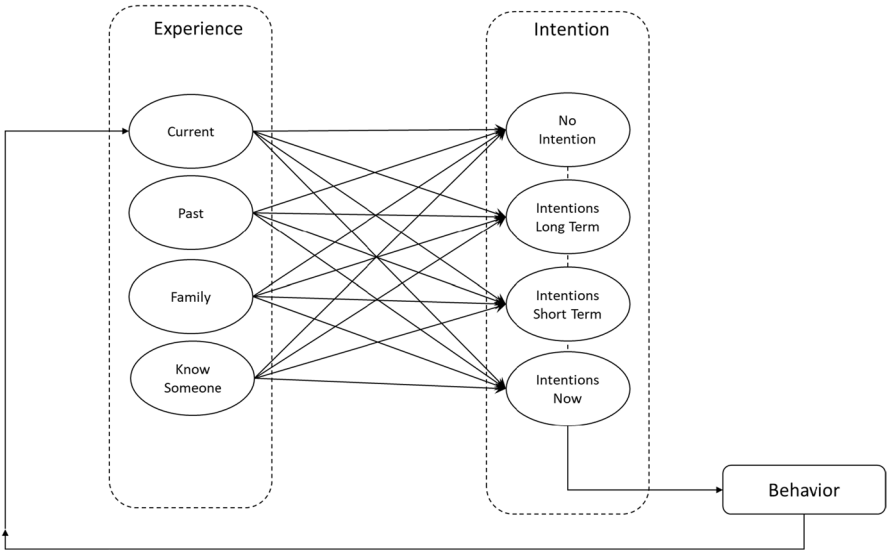

Fig. 3 Entrepreneurial experience intention horizon model

- Long-range intention—envisaged in 2 years or beyond
- Short term intention—projected in 6 months
- Current intentions (now)—developed over the preceding 12 months or presently formulating a business idea

Entrepreneurial experience

A person's level of experience profoundly shapes their belief in their entrepreneurial competencies (Bell et al., 2019; Miralles et al., 2016/7), which subsequently steers entrepreneurial intention and, consequently, behaviour. Experience can be dissected into previous or ongoing direct involvement in the establishment of new ventures (De Wit and van Widen, 1989; Delmar & Shane, 2006; Uusitalo, 2001) or indirect experiences procured through familial or personal connections or immersion within an entrepreneurial ecosystem (Audretsch & Belitski, 2017; Litzky et al., 2020; Rogers-Draycott, 2021; Santoro et al., 2020).

Indirect, or vicarious, experience bears significance for budding entrepreneurs as it may serve as their sole experiential foundation to foster intention. Karimi (2014) discovered that vicarious observational learning preceding hands-on learning augments performance, whilst Baron and Henry (2010) advanced this notion by asserting that vicarious entrepreneurial experiences prove more efficacious than direct experience. Rogers-Draycott (2021) contradicts this, showing that practical experiences were a key factor in catalysing entrepreneurial action in a range of social contexts.

Chereau and Meschi (2022) found this influence to be most effective when intertwined with other learning sources, such as entrepreneurship education. Various scholars have deduced that family role models deliver entrepreneurial motivation, inspiration, and self-identification, which are crucial in cultivating entrepreneurial self-efficacy, intentions, and actions (Bosma et al., 2012; Chlosta et al., 2012; Dyer, 1995; Jayawarna et al., 2014). The literature is replete with discussions on the significance of vicarious experience within agriculture (Ingram & Simons, 1999; McKim & Velez, 2016) and its role in reinforcing agricultural culture, yet there is a comparative scarcity of research on its role in agricultural entrepreneurship (Abraham & Pingali, 2020; Cahill, 2017; Pintor, 2005).

The research cited underscores the multifaceted nature of experience in shaping entrepreneurial intentions and behaviours. This complexity can be visually summarised in Fig. 3 that categorises experience into four distinct but interrelated types: current, past, family, and knowing someone. 'Current' experience encompasses ongoing direct involvement in new ventures, echoing the insights of De Wit and van Widen (1989), Delmar and Shane (2006), and Uusitalo (2001). The 'Past' category reflects previous direct engagements, acknowledging their lasting impact on entrepreneurial competencies. The 'Family' aspect, as discussed by Dyer (1995), Bosma et al. (2012), and others, highlights the role of familial influences in providing motivation and self-identification crucial for entrepreneurial self-efficacy. Lastly, 'Knowing Someone' pertains to indirect or vicarious experiences through personal connections or immersion in entrepreneurial ecosystems, a theme explored by Audretsch and Belitski (2017) and Rogers-Draycott (2021).

Research model & questions

In the development of the theoretical framing of this paper, we are considering entrepreneurship as both contextualised by agriculture as an industrial sector, by the experiences which students have gained either through family connections, by setting up new ventures and running those ventures themselves and also by their long-term ambitions of starting new entrepreneurial ventures; therefore, we propose six research hypnosis to investigate and model shown in Fig. 3, constructed around the research question of does experience of Entrepreneurship influence the horizon of entrepreneurship intention?

H1 Those with no entrepreneurship experience have lower intentions in all horizons than those with experience.

H2 Those with a vicarious experience of entrepreneurship, through knowing someone will have greater entrepreneurial intention than those with direct experience.

H3 Those with direct experience in entrepreneurship will have greater entrepreneurial intentions.

H4 Those who gained experience through their family have longer-term intentions than those with past or current experience.

H5 Those with current direct experience will have a long-term intention horizon.

H6 Those with past direct experience will have a short-term intention horizon.

The development of the hypotheses H1 through H6 in the context of entrepreneurial intention is deeply rooted in the synthesis of various theoretical models and empirical findings presented in the literature review. This review integrates key frameworks like the Theory of Planned Behaviour (TPB) and Shapero's Model of the Entrepreneurial Event (SEE), alongside contemporary research findings of Bozward et al. (2023).

Hypothesis H1 emerges from the basic premise of TPB and SEE, suggesting that entrepreneurial experience influences one's attitudes, subjective norms, and perceived behavioural control, thereby affecting entrepreneurial intentions. The absence of experience is posited to lead to lower intentions across all horizons.

Hypothesis H2 and H3 are formulated based on the findings of Karimi (2014) and Baron and Henry (2010), indicating the efficacy of vicarious experiences over direct experiences in fostering entrepreneurial intentions.

Hypothesis H4 is inspired by the work of Dyer (1995) and others, highlighting the long-term impact of family-influenced entrepreneurial experiences.

Hypothesis H5 and H6 reflect the nuanced understanding of intention horizons as discussed by Boissin et al. (2017), and the dynamic nature of entrepreneurial intentions explored by Bozward et al. (2023). These hypotheses propose that the temporal nature of direct experience (current or past) influences the horizon of entrepreneurial intentions.

In summary, these hypotheses are an amalgamation of theoretical insights and empirical evidence, aiming to explore the multifaceted nature of entrepreneurial intentions across different experiential backgrounds and time horizons.

Research method

The survey from the Global Entrepreneurship Monitor, originally in English, underwent translation into Chinese. Post-translation, the survey was rigorously tested to confirm 'functional equivalence for analysis' as outlined by Scheuch (1989). This process was essential to ensure that the responses obtained are consistent in representing the intended concepts across diverse cultural and multinational groups, as emphasised by Harkness et al. (2010). The quantitative data were gathered from students through a self-administered anonymous paper-based survey in the language of the tuition of that University.

The data were collected from four universities, three in China and one in the UK, all of which specialise in agricultural higher education. These were the University1 which is based in Zhengzhou, Henan, China, the Northwest Agriculture and

University2 which is based in Xianyang, the Shaanxi province, China, University3 which is based in Shandong province, and the China and University4 which is based in UK. The data were collected over three academic years, 2018, 2019 and 2020 before the Covid-19 restriction took place. The survey consisted of 22 items, and the value for Cronbach's Alpha for the survey was $\alpha = 0.768$.

The survey was completed by 679 (Second year in China and First year in the UK, who were studying at the same academic level) Bachelors Undergraduate students, 201 from University1, 162 from University2, 197 from University3 and 119 from University4. The average age of the students was 20.9 years old, with HUA at 19.9, University2 at 21.4, University3 at 20.2 and University4 at 20.9 average age of the students who completed the survey. All students except 2 were in the age range from 18 to 24. Across this student group, 62% of students were female, with University1 having 60%, University2 having 51%, University3 having 75% and University4 having 61% female student respondents.

Analysis and results

In this section, we shall first compare our data with those from the national statistics, then present the descriptive statistics to get a further perspective on the data, following this by looking at the relationship between experience and intention.

Review of national GEM data

The Global Entrepreneurship Monitor (GEM) survey, a key resource in understanding worldwide entrepreneurial trends, offers detailed insights into national and global entrepreneurial activities (Bosma et al., 2021; GEM, 2022; Hill et al., 2022). For this analysis, we utilise the 2019 GEM report for China (GEM, 2019) to compare entrepreneurial tendencies in the UK and China during the same period, notably before the onset of the Covid-19 pandemic.

A key metric in the GEM survey is 'Knowing Someone who has started a new business (KSN)', which reflects the degree of entrepreneurial influence within an individual's social network. In the UK, the KSN rate amongst students stands at 85.7%, significantly above the national average of 49.1%. Conversely, in China, the student KSN rate is 50.7%, lower than the national figure of 66.2%. These statistics suggest that UK students are more likely to be influenced by entrepreneurial peers compared to the general population, theoretically fostering a higher inclination towards entrepreneurship.

However, when examining the 'Total early-stage Entrepreneurial Activity (TEA)'—a measure of active engagement in entrepreneurial endeavours—the trend diverges. Despite the higher KSN rate in the UK, TEA values amongst UK students do not surpass those of their Chinese counterparts. This discrepancy is striking and raises important questions about the multifaceted influences on TEA beyond the social. Several factors might contribute to this discrepancy:

- *Cultural influences* Cultural norms and values significantly impact entrepreneurial intentions and activities. Whilst a high KSN rate in the UK indicates a strong entrepreneurial influence within social networks, cultural factors such as risk aversion, fear of failure, or societal attitudes towards entrepreneurship might inhibit individuals from starting new ventures, even when they know other entrepreneurs.
- *Educational systems* The educational environment can play a crucial role in shaping entrepreneurial intentions. In some contexts, education may emphasise traditional employment paths over entrepreneurship, or there might be a lack of entrepreneurial education, which could explain why a high KSN rate does not translate into actual entrepreneurial engagement.
- *Economic conditions* The state of the economy can influence TEA rates. For instance, in a robust economy, individuals might prefer secure employment over starting new ventures, despite knowing entrepreneurs. Conversely, in economies with fewer job opportunities, individuals might be more inclined to start their own businesses, irrespective of their social networks.
- *Regulatory and supportive frameworks* The ease of doing business, availability of start-up capital, government policies, and supportive infrastructure can vary significantly between regions. Even if individuals are surrounded by entrepreneurs (high KSN), the lack of supportive frameworks or bureaucratic hurdles can deter them from engaging in entrepreneurship (low TEA).
- *Individual traits and ambitions* Personal characteristics, such as risk tolerance, self-efficacy, and entrepreneurial ambition, can influence the decision to engage in entrepreneurial activities. Individuals in the UK might be well-connected to entrepreneurs but may not possess the personal drive or see entrepreneurship as a feasible or desirable career path for themselves.
- *Market saturation and opportunity recognition* The discrepancy might also stem from differences in market opportunities and the individuals' ability to recognise them. The UK students might have a high KSN but perhaps perceive fewer viable opportunities or feel that the market is too saturated or competitive, discouraging them from pursuing their entrepreneurial ventures.

Understanding why KSN does not necessarily translate into higher TEA rates requires a multi-dimensional analysis, considering the interplay of these factors. Further research could provide valuable insights into these dynamics, potentially informing policy and educational strategies to better support aspiring entrepreneurs.

The analysis extends to 'Established Business Ownership (EBO)' rates, where UK student figures, although higher relative to the national levels, are eclipsed by those of their Chinese counterparts. In China, EBO rates among students are more than triple the national level. This disparity underscores the complex interplay of factors influencing entrepreneurial activity. It suggests that whilst KSN has a notable impact in the UK, other elements, possibly including access to resources, entrepreneurial education, and market conditions likely play a significant role in determining TEA and EBO rates (Table 1).

Table 1 Comparing national GEM data

	UK (Hart et al., 2020)	UK students (%)	China (GEM, 2019)	China Students (%)
Know someone who has started a new business (KSN)	49.1% (34th)	85.7	66.2% (7th)	50.7
Total early-stage entrepreneurial activity (TEA)	9.3% (32rd)	23.5	8.7% (35th)	29.1
Established business ownership rate (EBO)	8.2% (20th)	16.6	9.3% (18th)	29.9

Table 2 Entrepreneurial experience

Type of experience	*N*	Percentage (%)
No experience	43	6
Experience	636	94
Know someone	386	57
Family experience	560	82
Current experience	503	74
Past experience	598	88

Table 3 Entrepreneurial intention

Type of intention	*N*	Percentage (%)
No intention	312	46
Intention now	141	21
Recently/short term	230	34
Long term	98	14

Descriptive statistics

This section explores the data collected to understand the underlying experiences and intentions using descriptive statistics. Table 2, below, provides a descriptive analysis of the data from the type of entrepreneurial experience. As the 679 students have more than one type of experience, the sum is, therefore, greater than 679 and 100%. If we look at those who have direct experience, we find that 601 or 88.5% have, vicarious is 633 or 93.2%, with 587 or 86.5% having both.

The analysis of the student sample reveals a high degree of familial and personal exposure to entrepreneurship. A significant majority, 82%, report having some form of 'Family experience' in entrepreneurship, whilst an even higher proportion, 88%, indicate 'Past experience' in entrepreneurial activities. This combination of direct and vicarious experiences is noteworthy and aligns with findings from national GEM studies. The 'Knowing Someone who has started a new business (KSN)' rate for the UK stands at 49.1% and for China at 66.2%, whilst the rate for students in the sample is 57%, positioning them between these national averages.

A striking aspect of our findings is that 74% of these students are currently engaged in some form of entrepreneurial activity. This rate is substantially higher than the national averages in the UK (9.2%) and China (8.7%), indicating that the student sample is markedly more entrepreneurial than their respective national cohorts.

However, when considering their future entrepreneurial intentions, the data presents a nuanced picture. According to our survey, 46% of students expressed 'No Intention of starting a business'. Conversely, the remaining 54% indicated some degree of intention to engage in entrepreneurial ventures, spanning one or more of the three defined intention horizons (as detailed in Table 3). This distribution is

intriguing, particularly in the light of the high levels of entrepreneurial experience within the sample (as shown in Table 2).

The apparent disconnect between high levels of entrepreneurial experience and varied entrepreneurial intentions suggests a complex relationship between these factors. The data implies that experience in entrepreneurship might play a mitigating role in shaping future entrepreneurial intentions, echoing findings in the existing literature, though the exact mechanisms underlying this phenomenon remains elusive and warrants further investigation.

In Table 4, we bring these data sets together to look at the relationship between experience and intention. From this, we can see that 84% (36/43) of those that have 'No Experience' in entrepreneurship have 'No Intention', whereas only 43% (273/636) of those that have vicarious experience and 44% (263/601) of direct experience have 'No intention', demonstrating that those with experience have a greater intention to start a business.

In examining the intention statistics across various types of 'Experience' as presented in Table 4, a consistent pattern emerges. Amongst those with 'No Intention' of starting a business, irrespective of their experience type, the percentage ranges narrowly between 41 and 44%. This uniformity suggests that the nature of the experience, whether direct or vicarious, does not significantly impact the lack of entrepreneurial intention.

Conversely, for those expressing a 'Now Intention' to engage in entrepreneurship, the percentage fluctuates slightly, generally around 21–22%, but reaching as high as 25% in one instance. This variation implies that having direct knowledge of someone who has started a business, a form of vicarious experience, may foster a more immediate intention to embark on entrepreneurial endeavours than other types of experiences. In contrast, 'Short Term Intention' appears to be less influenced by the type of experience, with figures consistently between 34 and 38%. Similarly, 'Long Term Intention' remains steady at around 15–16%, further indicating that different experiences do not markedly sway this longer-term entrepreneurial outlook.

The similarity in statistics across various intention horizons, as shown in Table 4, underscores that the type of experience, whether vicarious or direct, does not significantly alter these rates. For instance, the 'Short Term' intention averages around 34–38%, whilst the 'Long Term' intention is about 15–16%. These observations lead us to a crucial next step: Delving deeper into the nuanced relationship between types of entrepreneurial experience and the corresponding intentions. This deeper analysis is essential to uncover more detailed insights into how different experiences shape entrepreneurial aspirations and goals.

The relationship between experience and intention

A Spearman's rho correlation was conducted on Intention horizons with the experience values. In Table 5, we investigate the strength of the relationship between two sets of variables, intention and experience. It should be noted that the correlation shows that the two variables are associated, but no further inference can be drawn

Table 4 Selected intention by types of experience

Intention horizon	Experience		Vicarious experience			Direct experience		
	No	All others	All	Know someone	Family	All	Current	Past
No intention	36 (84%)	276 (43%)	273 (43%)	157 (41%)	243 (43%)	263 (44%)	222 (44%)	247 (41%)
Now intention	6 (14%)	135 (21%)	135 (21%)	97 (25%)	123 (22%)	129 (21%)	113 (22%)	131 (22%)
Short term	1 (2%)	229 (36%)	229 (36%)	147 (38%)	199 (36%)	213 (35%)	172 (34%)	226 (38%)
Long term	6 (14%)	92 (14%)	92 (15%)	60 (16%)	88 (16%)	94 (16%)	76 (15%)	89 (15%)
Total in this group	43	636	633	386	560	601	503	598

Table 5 Correlation of experience to intention horizons

	No experience	All experience	Vicarious experience	Direct experience	Experience variable
No intention	0.197**	−0.197**	−0.210**	−0.122**	−0.141**
Intention now	−0.044	0.044	0.051	0.048	0.093*
Short term	−0.173**	173**	0.181**	0.092*	0.090*
Long term	−0.004	0.004	0.011	0.095*	0.057
Intention variable	−0.145**	0.145**	157**	0.113**	0.123**

** = correlation is significant at 0.01 level

* = correlation is significant at 0.05 level

from this. There may be a third variable, a confounding variable that is related to both of them, however, this is beyond the scope of this paper to explore.

In the previous analysis, it was highlighted that students have more than one type of experience and also more than one type of intention horizon. Therefore, in this analysis, we have introduced two new variables, Experience Variable and Intention Variable which are the summation of these (Experience and Intention) binary variables.

As would be expected for all types of vicarious and direct experience there is a negative relationship with 'No Intention', meaning that these experiences negatively influence 'No Intention' as would be expected. Those with no experience, they:

- Have a positive significant correlation with no intention to start a business.
- Have a negative significant correlation with intention short term
- All have negative intentions

Intention now is not related to any of these variables, and therefore, further research needs to occur in this area.

The components of the vicarious and direct experience are now evaluated in Table 6.

Table 6 Correlation of types of experience to intention horizons

	Vicarious experience		Direct experience	
	Know Someone	Family	Current	Past
No intention	−0.122**	−0.111**	−0.062	−0.253**
Intention now	0.123**	0.064	0.071	0.076*
Short term intention	0.102**	0.076*	0.011	0.225**
Long term intention	0.036	079*	0.033	0.035

** = correlation is significant at 0.01 level

*is to 0.05

The data in Table 6 shows correlations between various types of experiences and entrepreneurial intentions. Notably, past experiences demonstrate a strong negative correlation with the 'no intention' category. This suggests that individuals with past entrepreneurial experiences are less likely to lack entrepreneurial intentions. Additionally, these past experiences exhibit a slight to moderate positive correlation with both 'current' and 'future' entrepreneurial intentions, indicating their potential role in fostering an entrepreneurial mindset.

'Knowing Someone who has started a new business (KSN)' exhibits a positive correlation with both current and future entrepreneurial intentions. However, the strength of this correlation varies, implying that whilst KSN is a factor in shaping entrepreneurial aspirations, its impact is not uniformly strong across different contexts.

Family experiences, on the other hand, show a slight to moderate positive correlation with future intentions but a negative correlation with the 'no intention' category. This pattern suggests that family involvement in business does not typically lead to a lack of entrepreneurial ambition. In contrast, current experiences do not exhibit a strong correlation with any specific type of intention, except for a marginal positive association with immediate ('now') entrepreneurial intentions.

This analysis aligns with the findings of Wang et al. (2018), who reported a correlation of approximately 0.29** between family business involvement and entrepreneurial intention. This figure is notably higher than our observed correlations of 0.076/0.079*, indicating that whilst family experiences influence entrepreneurial intentions, the extent of this impact can vary considerably based on individual circumstances and contexts.

Discussion

The paper will now discuss each of the hypotheses in turn.

H1 Those with no entrepreneurship experience have lower intentions in all horizons than those with experience.

Those with 'No Experience' demonstrated extremely high rates of 'No Intention' 84% (36/43) (see Table 4) to start a business. The finding also indicate that with 'No Experience' the level of intention is low (i.e. for 'Now Intention' at 14%, 'Short Term' at 1%, and 'Long Term' at 6%) compared to the other level of experience (i.e. Vicarious and Direct). Additionally, Table 5 indicates that the correlation coefficient of the relationship between 'No Experience' and 'No Intention' is significant and positively related at 0.197 at 0.01. Hence with this, we can conclude there exists a strong, significant, and positive association between the two constructs and confirm the hypothesis is true. This finding aligns with research that entrepreneurial intentions are positively correlated with social learning (i.e. experience and family upbringing) (Tateh, et al., 2014).

H2 Those with a vicarious experience of entrepreneurship, through knowing someone will have greater entrepreneurial intention than those with past direct experience.

This hypothesis is based on the general indication that knowing someone will have a greater entrepreneurial intention compared with direct experience. We review whether role models create greater intention than direct previous experience. For this hypothesis, we need to isolated those with 'Vicarious Experience' versus those with 'Past Experience' in Table 4 to create Table 7 and focus on 'Intention Now' and 'Short-term Intention'. Comparing the constructs of 'Past Experience' and 'Knowing Someone', there is a 3.2% increase whilst 'Family Member' was 0.1% higher with regards to the 'Now Intention'. For 'Short-Term' intentions, 'Knowing Someone' was 0.3% higher, and 'Family Member' indicated a downward trend of −2.3%. The correlation coefficient matrix (Table 6) provides clarity based on the relationship and association between 'Intention' and 'Experiences'. The result indicates that whilst the association between 'Intention Now' and 'Past Experience' is strong, significant, and positive at 0.76 ($p < 0.05$), the association between 'Knowing Someone' is also positive but stronger and significant at 0.123 ($p < 0.01$). Additionally, whilst the association of the 'Short-Term Intention' with 'Past Experiences' is positive, strong, and significant at 0.225 ($p < 0.01$), its association with 'Knowing Someone' is also positive and significant but mildly strong at 0.102 ($p < 0.01$). Based on these results, we conclude that the hypothesis is true, as is the association of 'Vicarious Experience', 'Knowing Someone' with both 'Intention Now' and 'Short-term Intention' is positive, significant and stronger compared to 'Past Experience' association with both 'Intention Now' and 'Short-term Intention'. This finding aligns with research that found that exposure to entrepreneurs (i.e. 'Knowing Someone') increases the likelihood of becoming an entrepreneur (Bosma et al., 2012, 2021; Nanda & Sorensen, 2010).

H3 Those with direct experience in entrepreneurship will have greater entrepreneurial intentions.

Previous start-up experience (Quan, 2012) can provide entrepreneurs with expertise in running new businesses as well as benchmarks for identifying and judging new opportunities. As mentioned earlier, it is a relatively good predictor for starting subsequent businesses (Davidsson & Honig, 2003; Wright et al., 1997).

Table 7 Types of experience for each positive intention horizon

Horizon	Vicarious experience		Direct experience
	Know someone	Family	Past
Intention now	97 (25.1%)	123 (22.0%)	131 (21.9%)
Short term	147 (38.1%)	199 (35.5%)	226 (37.8%)
Long term	60 (15.5%)	88 (15.7%)	89 (14.9%)
Total in this group	386	560	598

However, as we can see in Table 4, this hypothesis is not supported by our data. People with 'Direct Experience' have similar rates than those with 'Vicarious Experience' for all intention horizons. For all types of 'Direct Experience', 'Intention Now' is 21% whilst 'Vicarious Experience' is also 21%, this is followed by 'Short Term' and 'Long Term' which only have one percentage point difference.

H4 Those who gained experience through their family have longer-term intentions than those with past or current experience.

Based on the correlation coefficient matrix result (Table 6)**,** experience gained through family has a significant and positive association with 'Long Term Intention' at 0.079 ($p < 0.05$). This study's finding aligns with research (Abbasianchavari and Moritz, 2021; Lee et al., 2006) which found that exposure to entrepreneurs (i.e. 'Knowing Someone') increases the likelihood of an individual becoming an entrepreneur themselves (Bosma et al., 2021).

H5 Those with current direct experience will have a long-term intention horizon.

Unlike the previous hypothesis H4, H5 is false. As indicated in the correlation coefficient matrix (Table 6)**,** 'Current Direct Experience' has no significant association with 'Long-Term Intention'.

H6 Those with past direct experience will have a short-term intention horizon.

Lastly, this study's final hypothesis is true. The results (Table 6) indicate that the association between 'Past Direct Experience' and 'Short-Term Intention' is strong, positive, and significant.

In summary, the study examines the relationship between entrepreneurial experience and intentions across various time horizons. Hypothesis 1 states that individuals with no entrepreneurship experience have lower intentions compared to those with experience. The findings support this hypothesis, showing that individuals with no experience exhibit significantly lower intention levels across all time horizons. Hypothesis 2 suggests that individuals with vicarious experience, such as knowing someone involved in entrepreneurship, have greater entrepreneurial intentions compared to those with direct experience. The results confirm this hypothesis, indicating that knowing someone is associated with higher intention levels, especially in the short term. Hypothesis 3 states that individuals with direct experience in entrepreneurship will have greater entrepreneurial intentions. The study provides support for this hypothesis, finding a strong positive influence of direct experience on entrepreneurial intentions, both in terms of starting subsequent businesses and increasing perceived feasibility. Hypothesis 4 suggests that individuals who gained experience through their family have longer-term intentions compared to those with past or current experience. The results show a significant and positive association between family experience and long-term intention, supporting this hypothesis. Hypothesis 5 states that individuals with current direct experience will have a long-term intention horizon. However, the results indicate no significant association between current direct experience and long-term intention, contradicting this hypothesis. Hypothesis

6 suggests that individuals with past direct experience will have a short-term intention horizon. The findings support this hypothesis, demonstrating a strong, positive, and significant association between past direct experience and short-term intention.

Conclusion

The study's conclusions align with existing literature on entrepreneurial intentions and the impact of experience on entrepreneurial behaviour. Consistent with prior research, the findings support the notion that individuals with entrepreneurial experience, whether direct or vicarious, tend to exhibit higher levels of entrepreneurial intention. This suggests that exposure to entrepreneurship through personal involvement or knowing someone involved in entrepreneurship can positively influence individuals' intention to start a business (Bosma et al., 2012; Chlosta et al., 2012; Dyer, 1995; Jayawarna et al., 2014).

Furthermore, the study's results reinforce the relationship between family experience and long-term intentions which supports the notion that familial exposure to entrepreneurship can shape individuals' long-term entrepreneurial aspirations (Bosma et al., 2021; Rogers-Draycott, 2021).

This relationship between the types of experience and the intention horizon is an important new insight for entrepreneurship educators. Those who know someone are more likely to have shorter-term horizons whilst family relationships are related to longer-term venture creation horizons. Research by Duong et al. (2021) and Yousaf et al. (2021) demonstrates that an individual's entrepreneurial intentions are heightened when their reference group holds a positive view of entrepreneurship, this positive perception leads to increased support from the group, thereby boosting the individual's inclination to initiate a business venture by various levels.

However, the lack of a significant association between current direct experience and long-term intentions deviates from previous research. This discrepancy may be attributed to other factors influencing individuals' long-term intentions, such as changing circumstances or evolving entrepreneurial opportunities. It may also be that, as these are first year students, completing their studies may be their primary long-term objective.

For Entrepreneurship Educators, these findings underscore the importance of considering both personal experiences and social influences in understanding entrepreneurial intentions, and it adds nuance to our understanding of the complex interplay between experience, intentions, and entrepreneurial behaviour, highlighting the importance of both personal experiences and social influences, such as knowing someone involved in entrepreneurship, when examining entrepreneurial intentions. Overall, the study provides evidence that different types of entrepreneurial experiences have varying effects on entrepreneurial intentions in different time horizons. These entrepreneurial experiences should be taken into account when designing entrepreneurial programmes and interventions within a university context (Bozward el at., 2023).

Entrepreneurship programmes should also integrate past and current exposure to role models to foster an entrepreneurial mindset in students, noting that role models

may have a positive, neutral or negative effect especially with those students who have a deficiency in skills and experience. The evidence suggests that family experience and knowing someone in the entrepreneurial field are particularly influential. Therefore, educators should leverage these insights to design curricula that not only impart theoretical knowledge but also connect students with current industry role models and promote direct engagement with the business community.

Future work based on this paper could look at other nascent entrepreneurial demographics, for example migrant entrepreneurs and the newly retired, as well as gaining deeper insights into how these intentions evolve within other contexts.

Limitations

The authors of this paper were limited in the cohorts available as participants, and the self-reported experiences gained.

Declarations

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

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