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# EC-education, gender disparity, and digital entrepreneurship intention: The moderating role of attitude components; a competitive advantage of the Ha'il region

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ABSTRACT

This research made the case that e-commerce education levels influenced attitudes related components of people's views about e-entrepreneurship intention, all of which influenced their intention to start an e-commerce firm. The study also showed that people's desire to launch an internet company was substantially connected with its behavioral, cognitive, and emotional components. The major method used to verify the validity of the suggested model was the application of the theory of planned behavior together with the analysis of data collected from 338 young Saudi students at the college of business administration at the University of Ha'il. The results of the SMARTPLS partial least square program show that e-commerce education and attitude components are predictors of e-entrepreneurship intention, although disparities between men and women are not connected to this intention.

## 1. Introduction

To stimulate economic growth, governments throughout the world are competing to disseminate information about the potential benefits of entrepreneurship to the general population. As a result, there is a wealth of literature on the topic of entrepreneurial that draws on a wide variety of theoretical perspectives and methodological approaches. In contrast, the high cost of beginning a firm and the high risk of formation in certain nations have steered many entrepreneurs into e-commerce enterprises.

In Saudi Arabia, online sales accounts for 6% of the total retail sales with a great chance of growing (AL-TAYYAR et al., 2021). Online sales in Saudi Arabia surged by over 60% year over year, with the media items, clothes, and footwear categories seeing the greatest growth. The average amount spent by Saudi Arabians who shop online has grown by more than 50% in the previous three years (Arrafi & Ghabban, 2021). The online shopping market in Saudi Arabia is well positioned for future expansion. It is anticipated that the number of internet users in Saudi Arabia for the purpose of e-commerce would reach 33.6 million by 2024, representing a rise of 42 percent from 2019 (Al-Ghaith et al., 2010; Garatli, 2014; Rehman, 2019). Even though e-entrepreneurship is important in Saudia Arabia, and even though some people have trouble finding jobs, not all students at the university level are prepared to embrace and use e-learning methods, the development of Mobile-learning systems should be based on students' expectations and requirements (Alfalah, 2023). online entrepreneurship offers good chances to start a business from home. So, there aren't enough studies in this area. Furthermore, Saudi policy makers are concerned about the determinants of intention among Saudi young graduates as well as Saudi unemployed individuals, primarily the intention related to the online business sector. This concern could be alleviated by conducting research on the determinants of intention toward electronic entrepreneurship (Almani, 2019; Siswanto & Riefky Sungkar, 2019; Alzamel, 2021a, 2021b; Zamzami, 2021).

The issue is that the majority of local internet businesses cannot compete with multinational giants such as Amazon, Alibaba, Walmart, and Apple. In addition, the internet business pie is anticipated to increase by $20.16 billion by 2027, with the majority of this growth occurring in major cities like as Riyadh, Damam, and Jeddah (Elnadi & Gheith, 2023). Youth generation in Saudi Arabia are diverting away from digital entrepreneurship due to low level of intention (Alferaih, 2022). Inconsistent findings demonstrate an incomplete grasp of the causes underlying the youth's desire to engage in digital entrepreneurship in Saudi Arabia (McAdam et al., 2018), particularly in the Ha'il area, Understanding the factors of digital entrepreneurship in the Ha'il area would facilitate the region's ability to attract investments (Alferaih, 2022).

Moreover, electronic entrepreneurial activity is only mentioned briefly in Saudi Arabia's scholastic literature (Zamzami, 2021). In fact, the literature on electronic entrepreneurship was reviewed based on national context as compared to regional or territorial context where the research has demonstrated that people's intentions are different in

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the city, town, and rural levels (Alharbi, 2016). To make urban living more pleasant and cost-effective, the city must be clever and smart. It is achieved primarily via an intelligent decision-making process employing technologies based on artificial intelligence (Herath & Mittal, 2022). Therefore, Hail region which is located in the northern Saudi are experiencing a development plans towards electronic city infrastructure, the city policy makers tends to place Hail a modern hub in E-commerce Saudi industry (Alzamel, 2021a). Thus, an ample room is found to explore the determinants of electronic commerce intention in Hail among young students at university of Hail.

The current study's objectives are to:

1) Predict Saudi students' e-entrepreneurial intention using the theory of planned behavior (TPB);
2) Explore significant relationship between attitude and electronic entrepreneurship
3) Assess the influence of gender differences and e commerce education on attitudes towards intention to start electronic enterprises.

The remainder of the study is organized as follows. First, a review of the literature on e-entrepreneurship, TPB, and the assumptions is provided. The procedure is then explained, followed by the findings and a debate. Academic and practical ramifications, as well as the study's shortcomings, are discussed in the paper's conclusion.

## 2. Literature review and hypothesis development

### 2.1. Underlining theory

In order to understand the reasons behind individual instating business, scholars have tried to explore the determinants of intention towards entrepreneurship (Ambad & Damit, 2016; Mirjana et al., 2018; Širola, 2020; Kowang et al., 2021). For that purpose, the theory of reasoned action was constructed by Fishbein & Ajzen, 1977, the theory proposed that attitudes of an individual plays and important role in forming the intention (Park, 2000). Attitude is defined by Fishbein and Ajzen (1977) as "a person's favorable emotional response to engaging in a certain behavior"; the theory of reasoned actions' authors added subject norms along with attitudes as an important factor determining intention (Hill et al., 1977), The term "subjective norms" according to Fishbein and Ajzen (1977) is used to describe how people internally conceptualize the degree to which they are expected to engage in a certain behavior (Valois et al., 1988). Furthermore, the theory experienced an extension by Ajzen in 1991; it incorporates perceived behavior control as a factor determining intent and behavior converting it to be named as the theory of planned behavior they theory (Conner & Armitage, 1998). Indeed, it has become one of the most important theories in explaining human intention in social-psychology perspective (Mohammed et al., 2020b).

The present research emphasizes its analysis, variable selection, and interpretation of the idea from theory of planned behavior. This is due to the theory's capacity to define that conduct is a consequence of purpose, which is a result of attitudes and personal qualities; in fact, our study is an expansion of prior research on theory of planned behavior (Mohammed et al., 2022). A number of our authors have contributed to publications in which personality factors, attitudes, subjective norms, and locus of control influence the degree of intention among Saudi Students (Mohammed et al., 2021). Another possibility is that we are focusing on variables pertaining to attitudes-related components, while other theories, such as the entrepreneurial orientation model, focus more on strategy formulation than on attitudes-related components (Mohammed et al., 2021).

As a result, the theory of planned behavior serves as the foundation for our research model in this article (Ajzen, 2002). Our objective is to examine the relationship between attitudes and the intention to become involved in electronic entrepreneurship, with the caveat that e-commerce education and the gender gap in the Saudi student population are taken into consideration.

### 2.2. E-Entrepreneurship

Using the interest to operate a small or medium business is briefly discussed in literature compared with the ordinary entrepreneurship research. The primary ways that e-entrepreneurship varies from conventional entrepreneurial activities are in the operational and communication strategies used to administer and manage the company environment (Millman et al., 2009; Shukla et al., 2021). The former depends completely on digital platforms, such as email, social media platforms, specialized fora, online company growth, e-commerce websites, and relevant information technology-driven commercial endeavors. However, E-entrepreneurship is a realistic option for women to participate in entrepreneurial activities inside the security of their home surroundings for cultures and communities that have not yet accepted the freedom of women to associate freely with males, such as Saudi Arabia. From this standpoint, e-entrepreneurship presents young, educated Saudi women with a fantastic chance to participate in entrepreneurial activity (Alzamel et al., 2020; Alzamel, 2021b; Zamzami, 2021).

### 2.3. Previous studies on e-entrepreneurship intention

Previous studies about e-entrepreneurship have discussed the topic from variety of angles. According to a research by Oumlil and Juiz, (2018); Krishnamurthy et al. (2019) on "acceptance of tourism e-entrepreneurship" the social standing of women is primarily responsible for the most significant part of the rising e-entrepreneurship within the tourist industry. Similar research was conducted by Lai and To, (2020) who examined the plans of young Chinese individuals to participate in e-entrepreneurship, The results show that e-entrepreneurship education is a predicator of adopting attitudes that are impacted by arbitrary criteria and a sense of behavior restriction. On the other hand, it was shown that people's e-entrepreneurship views didn't correlate much with their actual plans to start an online business. Research has shown that access to bank finance is a key factor in women's propensity for launching and maintaining an online business (Mand et al., 2018), others claim that e-entrepreneurship is a productive platform for establishing collaboration between the franchisor and the franchisee (Chen, 2021). In their study on the implementation of e-entrepreneurship in Qatar, (Younis et al., 2020) discovered that perceived barriers had a tight association with perceived behavioral control. The paper by (Ozaralli & Rivenburgh, 2016) explores the results of studying the spread of e-entrepreneurship in Turkey. Findings suggest that the personalities of e-entrepreneurs significantly impact their propensity for innovation and e-entrepreneurship. The research also indicated that e-entrepreneurs are better at developing new goods and services because they are better at seeing opportunities presented by digital developments.

However, there has been a dearth of research in Saudi Arabia examining the factors that contribute to an individual's decision to pursue an electronic entrepreneurship (Alzamel et al., 2019, 2020; Alzamel, 2021a; Zamzami, 2021). Existing research often conflates online startups with more conventional forms of enterprise. The majority of the researches are mostly descriptive. By looking at the literature on this issue, we were able to identify a hole in the micro-scoping of factors like gender inequality and e-commerce education's effect on the way people feel about e-entrepreneurship (Almani PhD, 2019). Furthermore, several scholars have given careful thought to the aspects influencing digital entrepreneurial ambition while reviewing the literature (Mohammed et al., 2021). Several researches have shown how important personality qualities are in the emergence of online entrepreneurial motivation. The five-factor model of personality has been used in several of these investigations (Elnadi & Gheith, 2023). It is hypothesized that

extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience are the five broad personality qualities that best predict a person's desire to start a business (Elnadi & Gheith, 2023). Nevertheless, other researchers have suggested that the five general personality qualities are insufficient for predicting entrepreneurial intention (Elnadi & Gheith, 2023). Individual performance is found to be influenced by the behavioral intention to adopt e-portfolio management system among Saudi students in technical and vocational training corporation (Alshahrani et al., 2023).

It is important to highlight that our focus on attitudes alone is a result of the limits shown by prior research and those additional characteristics may be investigated as predictors of entrepreneurial ambition. As such, the purposes of this research were to survey present college students and learn about their attitudes on future digital business ventures.

### 2.4. Hypothesis development

#### 2.4.1. Attitudes and e-entrepreneurship

The positive feeling about the business a person intends to start play a vital role in accelerating the intention, this is translated in definition provided by Liñán et al. (2013). According to a meta-analysis research done by alferiah (2017), attitude is relevant in entrepreneurship literature by 65%, which has already been verified by Schlaegel and Koenig (2014) meta-analysis. Moreover, (Acikgoz et al., 2023) demonstrated that both psychological and technical qualities play a significant role in influencing customers' behavioral intentions, with attitude mediating this link. However, despite the fact that academic discussions on this issue are developing, there has been very little attention dedicated to the methods in which propensity for this specific work path is developed and influenced (Kraus et al., 2018). Therefore, attitudes towards E entrepreneurship intention is positive if considered based on the traditional entrepreneurship results (Singh et al., 2022), this research hypothesizes that the more favorable thoughts students have about establishing a new e-firm, the more entrepreneurial they will be.

**H1**: *Attitudes have as significant positive relationship with electronic entrepreneurship intention*.

**H1a**: Behavioral Component (BC) of attitude towards electronic entrepreneurship significantly influences the E-entrepreneurial Intention.

**H2b**: Cognitive Component (CC) of attitude towards electronic entrepreneurship significantly influences the E-entrepreneurial Intention.

**H3c**: Affective Component (AC) of attitude towards electronic entrepreneurship significantly influences the E-entrepreneurial Intention.

#### 2.4.2. Gender disparities e entrepreneurship

The difference between male and female discrepancy on attitudes towards electronic entrepreneurship is not extensively documented in the literature, in contrast to the substantial documentation of the significance of gender differences in conventional forms of entrepreneurship (Li et al., 2021). Furthermore, Because of institutional constraints and discriminatory attitudes that may be seen inside businesses and nations, the proportion of women and men that participate in corporate entrepreneurship is not equal (Fischer et al., 1993). Individual variations in risk-taking propensity and self-confidence, for example, account for the vast entrepreneurship gap between the genders (Adachi & Hisada, 2017). As a result, women are seen as being less entrepreneurial than males. In fact, automotive engineering, welding engineering, electrical engineering, construction engineering, energy engineering, nautical, forestry, computer engineering, and building design engineering all had disproportionately large enrollments of male students. On the other side, beauty, fashion, nursing, pharmacy, office administration, dental assisting, hospitality, and internet business and marketing are all sectors where female students outnumber their male counterparts. This research hypothesizes that

**H2**: *There is significant positive relationship between gender disparity and attitudes towards electronic entrepreneurship intention*

#### 2.4.3. Electronic commerce education and E entrepreneurship

Basic knowledge about online business could play a vital role in student attitudes towards electronic entrepreneurship intention. However, the type of self-perception about starting an e-business may reduce the risk-taking speed in the process (Ke et al., 2011). Lüthje and Franke (2002) argue that it's possible that an entrepreneurial education that doesn't match up with the actual world might be a major barrier to new graduates trying to put their ideas into genuine company implementation plans.

**H3**: *There is significant positive relationship between e commerce education and attitudes towards electronic entrepreneurship intention*

### 2.5. The moderation role of attitudes related components

To investigate the moderating influence of attitude-related components between gender inequality, electronic commerce education on one side, and digital entrepreneurial intention on the other, we analyzed the relationship between these variables. We based our hypotheses on the link between attitudes-related components and the intention to engage in digital entrepreneurship (H1), and next, we constructed a suggested hypothesis to examine the association between gender discrepancies (H2) e-commerce education (H3), and attitude-related variables, the study used the SMARTPLS model to examine the interaction between e-commerce education, gender inequalities, and attitudes-related components towards digital entrepreneurial intention. The conclusion of the suggested model should indicate whether or not a moderating role exists, see Fig. 1.

## 3. The study model

The objective of this study is to explore the influence of gender disparity and electronic commerce education on attitudes towards electronic entrepreneurship intention, the study's underling is derived from the theory of planned behaviors. Fig. 1 explains the relationship between variables.

## 4. Methodology

We have used the questionnaire method to collect data about the student electronic entrepreneurship intention, attitudes, gender disparity and e commerce knowledge. The measurements are adopted from previous studies. The Likert scale is used to evaluate each indication, and twenty-nine different items are used to evaluate each variable in the TPB. Electronic entrepreneurship intention is measured using five items adopted from Lai and To, (2020). Furthermore, attitudes are broken down into three categories as per the study of (Miralles et al., 2016; Jena, 2020), measuring the behavioral component with seven items, the cognitive component with eight things, and the emotional component with four items, *See appendix*. Worth noting, that gender disparity is measured based on male/female dummy variable and Electronic entrepreneurship is measured using items from Solesvik, (2013); Lai and To, (2020). The proposed relationship is tested using the PLS-SEM software. We have built the survey using google form; the link is distributed to all students at the business college in university of Ha'il, Saudi Arabia.

### 4.1. Measures

We have constructed the questionnaire based on previous studies recommendations. The questionnaire consists of six sections representing digital entrepreneurship intention, attitudes components (Behavioral component, Cognitive component and Affective component), electronic entrepreneurship education and gender type. The six sections and 30

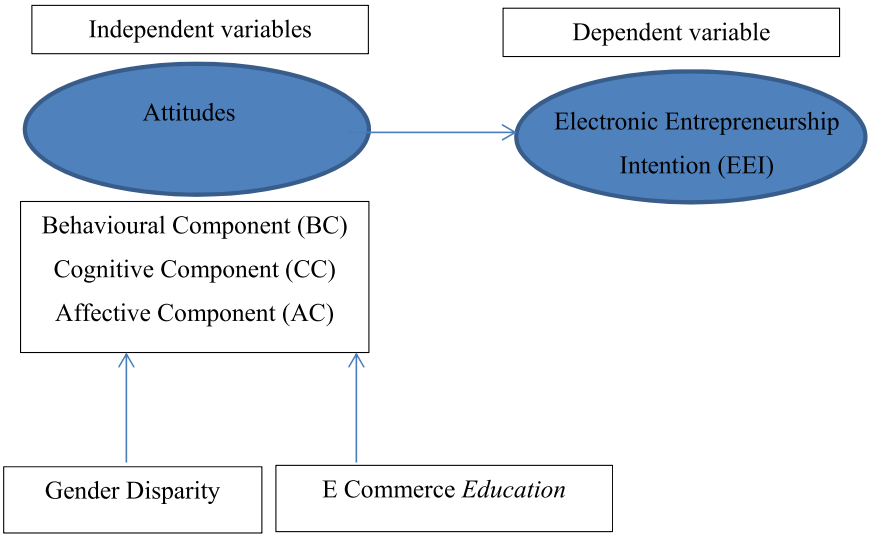



**Fig. 1.** Research Framework.

items are shown in Appendix. E-entrepreneurship education is related to software, classes, and events designed to teach people about starting and running a business online (Heinonen & Poikkijoki, 2006). Five items were developed to measure the extent of the e-entrepreneurship education offered by Macao organizations. Five items were developed based on the ideas of Lai & To, (2020). An individual's favorable assessment of starting an online business is referred to as their attitude toward e-entrepreneurship. 19 items were adopted to represent the three components of attitudes (Behavioral component, Cognitive component and Affective component); they were developed based on the suggestions from Miralles et al. (2016). An individual's ambition to launch an online business is referred to as their e-entrepreneurial intention. Five measurement items were adapted from Solesvik, (2013). Items were rated using a five-point Likert scale with 1 representing 'strongly disagree' and 5 representing 'strongly agree'. The Cronbach's alpha values were 0.92, 0.94, 0.82, 0.86, 0.77, and 0.91 for e-entrepreneurship education, and attitude towards e-entrepreneurial intention.

## 5. Result

### 5.1. Demographics

The study explores the intention of undergraduate students at college of business administration in university of Ha'il towards digital entrepreneurship; the study concentrated more on the electronic knowledge of students, gender and attitudes towards starting an online business. However, previous studies overlooked measuring attitudes by components such as behavioral component, cognitive component and affective component. We have distributed to the questionnaire to all population of undergraduate students at college of business administration in University of Ha'il, Male and Female sections. We have managed to collect 338 responses where 47% came from Female side and the remaining 53% came from the male side, See Table 3. The collection of survey results is disturbed by mid-exam time and formalities to distribute the questionnaire. The result of proposed hypothesis showed that digital entrepreneurship intention in Ha'il in influenced by attitudes and e-education.

On contrary to other studies, gender differences have not appeared to play significant role in determining digital entrepreneurship intention. Worth noting, due to the applications of attitude components represented in behavioral component, cognitive component and affective component the result of study contradicted the previous study results as they found that attitudes had no significant effect of digital entrepreneurship.

### 5.2. Data analysis procedures

Students at the college of business administration on both the male and female campuses are given the link to a Google form that will be used to gather the data. Data is downloaded in excel CSV format, and it is then entered into the SMARTPLS program. By looking at standardized factor loadings from latent variables to indicator variables and fit indices, the measurement model's fit was assessed. Greater than 0.5 was the requirement for standardized factor loadings (Nunnally, 1978). Fit indices have to meet the following requirements: 2/df 3, TLI and CFI 0.90, and RMSEA 0.08 (Hair et al., 2010). The structural model's fit to the gathered data was also assessed using this set of criteria. Furthermore. In SMARTPLS, we are assessing the data based on the software's stages and characteristics Fig. 2; first, we are verifying that variable measurements are implemented effectively; next, we ran an extra analysis to ensure that the model structure is accurate.

#### 5.2.1. Assessment of measurement model

Firstly, Individual item reliability, composite reliability and average variance extracted are three determinants of convergent validity in measurement model in SMARTPLS software, Individual item reliability had better to be more than 0.70, composite reliability had better to be more than 0.70 and average variance extracted had better to be more than 0.50.

Secondly, cross loading and variable correlation are the two determinants of discriminate validity in measurement model in SMARTPLS. The proposed variable had to present no correlation and enough factors loading in order to perform the analysis. The result showed that the loading number when compared using the Fornell-Larcker criteria that correlation is higher among oneself variable than other variables which fulfill the condition of discriminate validity, this result is consistent when cross loading techniques is applied.

#### 5.2.2. Assessment of structural model

To full the requirements related to assessment of structural model, we have implemented the path coefficient analysis, coefficient of determinations, effect on size, predictive relevance and goodness of fit. In the path coefficient, the results showed that attitudes and e-education influenced positively the digital entrepreneurship intention among undergraduate students at 95% significant level see Table 2. In regard to R square values, the result showed that it's above 56% for digital entrepreneurship intention which is acceptable but moderate where as its 64% for attitudes which is acceptable and strong. However, Millar, (1992) suggested that 10% minimum R square level is accept-

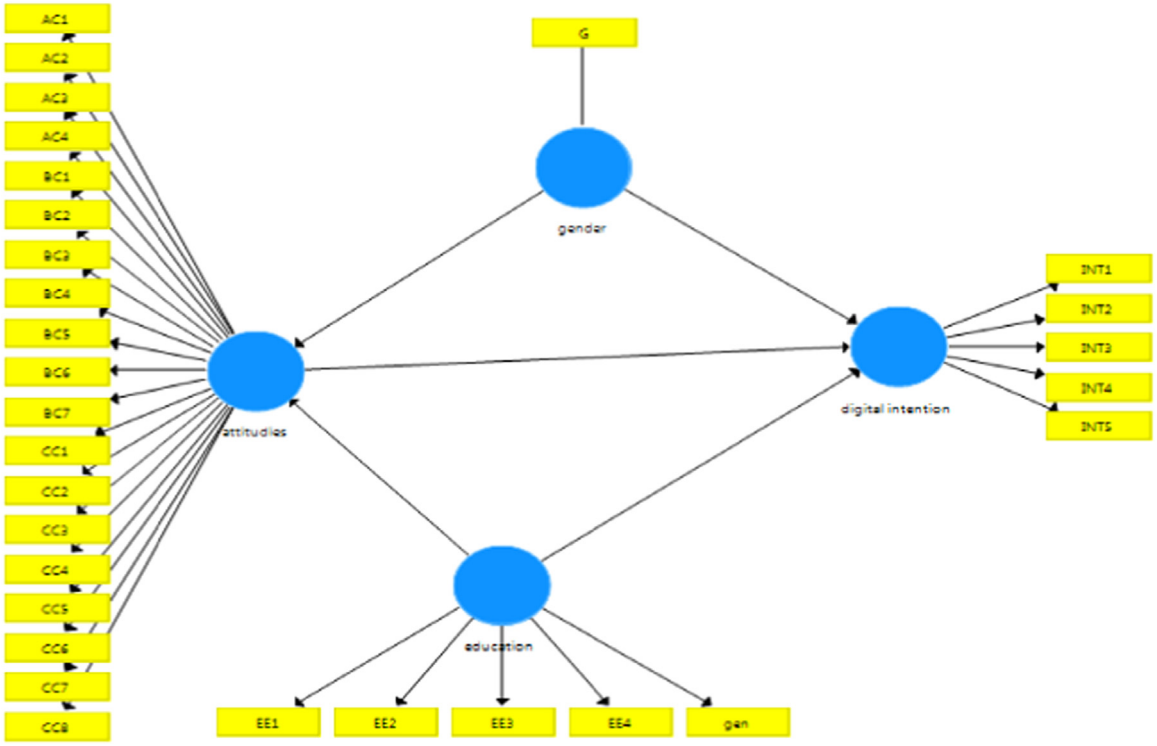



**Fig. 2.** Research frame-work.

able to approve the structural model. I regard to effect size analysis we have found that digital entrepreneurship intention is medium effect size as it ranges from 0.15 to 0.35 whereas attitudes is having a large effect size as it ranges above 0.35 (Cohen, 1988). Predictive relevance Q square is above zero and goodness of fit is within the range which is greater than 0.36 (Table 1).

## 6. Discussion

Ha'il region is part of the whole technology development plan and 2030 vison in Saudi Arabia, the authority in the region place an extensive importance on competitive advantage, one of the key merits for Ha'il region could be the race towards online business- hub construction. Therefore, studying the students' digital entrepreneurship intention enhances the understanding about the fundamentals towards establishing an online-business hub in Ha'il region. Therefore, we have decided to concentrate on college of business administration students due to their nature of study and courses offered related to online business. Thus, we have examined the influence of attitudes, e-education and gender differences on students' digital entrepreneurship intention.

### *6.1. Attitudes and students' digital entrepreneurship intention*

According to this research, undergraduate students' intentions to engage in digital entrepreneurship are significantly positively influenced by attitudes which are consistent with previous studies' results of (Singh et al., 2022). Furthermore, attitudes related components proved to moderate the relationship towards intention which is consistent with (Acikgoz et al., 2023) studies in which users' attitudes influences intention to purchase smartwatche.The findings indicated that our hypothesis is 95% supported. This is a remarkable finding since other previous research found no relationship between attitudes and intentions for doing online commerce. The distinct cultures of Saudi Arabia in general and the Ha'il area in particular, may be to credit for this outcome. Indeed, another explanation could be related to the dimensions representing attitudes variables, this study adopted dimensions which is not popular in previous research.

### *6.2. E-Education and attitudes*

The current vision of 2030 has been placing a great consideration for young individual in Saudi towards entrepreneurship where Ha'il region is never an exception. The current education system reforms in Saudi included entrepreneurship colloquium in different study levels, the sector of online business possess great opportunities for employments in Saudi; the students are encouraged to come up with innovative ideas related to business. Therefore, we have proposed that electronic commerce education knowledge plays an important role in diverting attitudes towards digital entrepreneurship. The result supported our hypothesis by 95% confidence level which is consistent with the result from Lai and To (2020). Those attended by any sort of means an electronic commerce lessons showed that these lessons have been reflected in the answers towards digital entrepreneurship. The promotion of digital entrepreneurial activity by universities could enhance the ability of students, students would have the opportunity to learn more about the possibilities via the classes, be actively engaged in the learning process to improve their entrepreneurial skills.

### *6.3. Gender and attitudes*

Several academics have noted that gender differences are of concern, especially when utilizing digital technology (Di Vaio et al., 2023). The present study argued that gender has a significant influence in deciding digital entrepreneurship; we built our hypothesis on earlier research that favored working women in the family who contribute to poverty alleviation (Li et al., 2021). However, the results were concerning since gender had no substantial effect on views or digital entrepreneurial intention. This were inconsistent with previous studies of (Li et al., 2021) which indicates that for females, local ability and personalization are more essential in predicting their information disclosure intention, but for men,

**Table 1**
Result of measurement model – convergent validity.

| Constructs | Items | Loading | AVE | CR |
|---|---|---|---|---|
| **Digital entrepreneurship** | INT1 | 0.938 | 0.770 | 0.943 |
| | INT2 | 0.791 | | |
| | INT3 | 0.847 | | |
| | INT4 | 0.900 | | |
| | INT5 | 0.903 | | |
| **Attitudes** | | | 0.630 | 0.970 |
| Behavioral component; | BC1 | 0.655 | | |
| | BC2 | 0.791 | | |
| | BC3 | 0.765 | | |
| | BC4 | 0.714 | | |
| | BC5 | 0.770 | | |
| | BC6 | 0.879 | | |
| | BC7 | 0.694 | | |
| Cognitive component; | CC1 | 0.907 | | |
| | CC2 | 0.837 | | |
| | CC3 | 0.883 | | |
| | CC4 | 0.880 | | |
| | CC5 | 0.823 | | |
| | CC6 | 0.800 | | |
| | CC7 | 0.846 | | |
| | CC8 | 0.891 | | |
| Affective component; | AC1 | 0.618 | | |
| | AC2 | 0.619 | | |
| | AC3 | 0.756 | | |
| | AC4 | 0.854 | | |
| **E- entrepreneurship education** | EE1 | | 0.887 | 0.975 |
| | EE2 | | | |
| | EE3 | | | |
| | EE4 | | | |
| | EE5 | | | |

**Table 2**
Path Coefficient of the research hypothesis.

| Hypo | Relationship | Std -deviation | T-value | P-value | Decision |
|---|---|---|---|---|---|
| H1 | Attitudes—→Digital-entrepreneurship intention | 0.160 | 3.507 | 0.000 | *Supported |
| H3 | Gender–→ Attitudes | 0.083 | 0.009 | 0.991 | Not supported |
| H2 | E-education—-→ Attitudes | 0.072 | 11.184 | 0.000 | *Supported |

Significant at P**=<0.01, P*<0.05.

**Table 3**
Demographic profiles.

| Empty Cell | Empty Cell | Frequency | Percent |
|---|---|---|---|
| **Gender** | Male | **179** | **53%** |
| | Female | **158** | **47%** |
| **Programs** | MIS | **75** | **33.1%** |
| | Management | **102** | **32.3%** |
| | Accounting | **79** | **18.1%** |
| | Finance | **82** | **16.5%** |

the social benefit has a greater influence on information disclosure intention. In addition, the reasons of contradiction with (Li et al., 2021) could be attributed to the factor that actions of men and females may adhere to the roles assigned within a society of the information age rather than to the individuals' personalities. Another reason could be related to the sample data and technique.

### 6.4. Practical implications

The study's results were of immediate relevance since they looked at the level of e-entrepreneurship intention in the Ha'il region, which is a factor that affects young people's expectations for engaging in entrepreneurial activities. E-entrepreneurship is essential to the development of Saudi Arabia's economy and the implementation of the 2030 vision's guiding principles. E-entrepreneurship encourages the launch of fresh businesses and ground-breaking new products. As a result, it is imperative that individuals responsible for creating public policy understand the factors that motivate young people in Saudi Arabia to participate in e-entrepreneurship.

### 6.5. Limitation of the study

However, the study had limitations that future researchers may find useful. First, the research focuses on the case of students headquartered in northern Saudi Arabia, namely in the Ha'il area. As the study is expanded, cultural variations across cities may indeed be taken into account. Consequently, precaution should be exercised when drawing conclusions' research to a larger scope. Second, some students may enter data quickly without regard for the content; future study should explore using qualitative interviews to examine the findings despite the SMARTPLS verification procedure.

## 7. Conclusion

The rise of digital entrepreneurship in Saudi Arabia necessitates the increase of intention-influencing elements. Ha'il is a region with the potential to become a center for internet commerce (Mohammed et al., 2020a). Meanwhile, in the process of promoting internet business in Ha'il, with an emphasis on its competitive advantages, a survey of business administration undergraduates, attitudes and e-education have a strong favorable effect on their willingness to engage in digital entrepreneurship. However, the findings of the research indicated that gender disparities had no effect on the degree of digital entrepreneurial

intention (Di Vaio & Varriale, 2020). However, the study suggested that young individuals in the Hail area had yet to embrace digital business. Future strategies and regulations should focus more emphasis on digital business knowledge and incentives. Our suggested model gives a more complete knowledge of the channels through which the digitization of the economy and more specifically Students' education influences their entrepreneurial drive. Universities regardless of providing entrepreneurship classes, they may not be adequate to encourage pupils' entrepreneurial spirit. The absence of an extensive analysis of the relationship between education and entrepreneurial intent; the purpose of this work is to address this gap.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Appendix

**Intention to start an e-business [INT]**
I plan to start an e-business in the future. [INT1]
I am determined to create my own e-business even though I will encounter difficulties. [INT2]
I intend to start an e-business in the next five years. [INT3]
I have very seriously thought about starting an e-business. [INT4]
I am ready to do anything to be an e-entrepreneur. [INT5]
**Attitudes Behavioral Component (BC)**
BC1 I enjoyed lectures on entrepreneurship as offered in the university/colleges.
BC2 Lectures on entrepreneurship I received in University/colleges have increased my interest to pursue an entrepreneurial career
BC4 Entrepreneurship education courses I have undergone in the university/college have prepared me to make informed decisions on Entrepreneurial career choices.
BC4 I am happy to have had entrepreneurship education in my university/college
BC5 I sincerely consider entrepreneurship a desired career option
BC6 Entrepreneurship education I received in university/college has encouraged me to venture into entrepreneurship after graduation
BC7 My entrepreneurship lecturers have helped me to meet and interact with successful entrepreneurs
**Attitudes Cognitive Component(CC)**
CC1 University/college entrepreneurship courses have enabled me to identify business related opportunities
CC2 Entrepreneurship courses I took in the university have taught me to create services and/or products that can satisfy the needs of customers.
CC3 University/college entrepreneurship courses have taught me to develop business plans successfully
CC4 Due to the university's/college's entrepreneurship education program, I now have skills to can create a new business
CC5 Entrepreneurship education program of the university/college has taught me to perform feasibility studies
CC6 The university's/college's entrepreneurship courses have stimulated my interest in entrepreneurship
CC7 Through the university's/college's entrepreneurship program, my skills, knowledge and interest in entrepreneurship have all improved
CC8 Overall, I am very satisfied with how entrepreneurship education program is being taught in my university/college
**Attitudes Affective Component(AC)**
AC1 I would want to be an entrepreneur after my study
AC2 The idea to become an entrepreneur and work for my self is appealing to me
AC3 I really consider self-employment as something very important
AC4 The entrepreneurship programs in university/college has effectively prepared me to establish a career in entrepreneurship
**E-entrepreneurship education [EE]**
My organization has created enough e-entrepreneurship courses and programs. [EE1]

(*continued on next page*)

My organizations often invite entrepreneurs to talk about e-entrepreneurship. [EE2]
My organization regularly organizes young people to participate in entrepreneurship training. [EE3]
My organization frequently organizes e-entrepreneurship competitions. [EE4]
My organization has comprehensive facilities and centers for e-entrepreneurship training. [EE5]
**Gender Type [GE]**
Male
Female

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