The Effect of Digital Competency on Entrepreneurial Intention Through Entrepreneurial Orientation and Entrepreneurial Self-Efficacy

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Abstract. This study thoroughly examines the crucial issue of low entrepreneurial interest among undergraduate students in Indonesia, where the ratio is still below the ideal threshold of 5% to spur national economic growth. The main objective of this quantitative study is to analyze the direct and indirect effects of Digital Competence (DC) on Entrepreneurial Intention (EI), through the dual mediating role of Individual Entrepreneurial Orientation (IEO) and Entrepreneurial Self-Efficacy (ESE). The method used is Structural Equation Modeling (SEM) based on Partial Least Square (PLS) with SmartPLS software. The research subjects involved 175 active undergraduate students in their fifth semester or above from the Faculty of Business/Economics in Surabaya who were involved in entrepreneurial activities, selected through purposive sampling. Primary data was collected using a Likert scale questionnaire. The results of data analysis showed significant findings: Increased Digital Competence positively and significantly increased Entrepreneurial Intent. This positive effect was proven to apply both directly and indirectly, with ESE and IEO acting as effective mediators. The practical implications of these findings provide strategic recommendations for higher education institutions. Universities are advised to develop entrepreneurship curricula that are closely integrated with digital technology. In addition, increasing students' awareness of the importance of digital mastery, increasing self-efficacy, and adopting a proactive attitude (entrepreneurial orientation) are essential as the main provisions for transforming into relevant value creators in the modern business ecosystem.

Keywords: *Digital competency*, *Entrepreneurial Intention*, *Entrepreneurial Self-Efficacy*, *Individual Entrepreneurial Orientation*.

1. Introduction

Entrepreneurship plays an important role in driving economic growth, creating jobs, and increasing national competitiveness. However, Indonesia still faces serious challenges in fostering entrepreneurial interest, especially among the younger generation. Data from Putra (2024) shows that the number of entrepreneurs in Indonesia

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has only reached 3.47% of the total population, still far below the ideal threshold of 5%, which is considered capable of supporting sustainable national economic development. In the *Global Entrepreneurship Index (GEI)* report, Indonesia ranks 75th out of 137 countries, lagging far behind Singapore, Malaysia, and Thailand. The government, through the Financial Services Authority (OJK) Institute (2022), has targeted to improve Indonesia's position to the top 60 in the world. However, low entrepreneurial competence, limited innovation, and minimal access to financing remain major obstacles in producing new competitive entrepreneurs.

The phenomenon of low entrepreneurial activity is increasingly apparent among students. Setyanti (2021) found that of the 60,995 higher education graduates in Indonesia, only about 15% chose a career path as entrepreneurs, while about 85% preferred non-entrepreneurial jobs such as becoming employees or freelancers. According to Liñán and Fayolle (2015), low *entrepreneurial intention (EI)* is influenced by various factors, including attitudes toward entrepreneurship, prevailing social norms, and perceptions of risk. Prameka and Kurniawan (2023) add that even though digital business opportunities are wide open, many students are reluctant to start a business due to a lack of entrepreneurial spirit and weak digital competencies. The results of a survey by McKinsey & Company (2022) also reveal that most of Indonesia's younger generation still prioritize income stability and social security over facing the risks of entrepreneurship. This condition indicates a fundamental problem in the readiness and orientation of the younger generation towards the business world.

According to Rachmawati (2023, October 5), when compared to neighboring countries, the gap is even more apparent. The entrepreneurship ratio in Singapore reaches 8.6%, more than double that of Indonesia, while Malaysia and Thailand are already above 4%. In fact, with a vast domestic market potential and the development of digital technology, great opportunities should be open to the younger generation. The Central Statistics Agency (BPS, 2024) reports that Indonesia's entrepreneurship ratio is only 3.35% or around 5.01 million people, still below the ideal standard. The government is targeting an increase to 3.95% by 2024 (Presidential Regulation No. 2 of 2022), equivalent to an additional one million new entrepreneurs.

The phenomenon of low interest in entrepreneurship is often explained through the concept *of Entrepreneurial Intention (EI)*. In a theoretical context,

entrepreneurial intention (EI) is defined as a conscious and purposeful state of mind, which forms the basis for entrepreneurial behavior (Jena, 2020; Twum et al., 2021). With its predictive nature, EI is an early indicator of the emergence of concrete actions in entrepreneurship. Therefore, understanding the factors that influence EI is important, especially among students as future entrepreneurs. Previous studies have highlighted that factors such as *digital competency, entrepreneurial self-efficacy (ESE),* and *individual entrepreneurial orientation (IEO)* play a major role in shaping entrepreneurial intention (Liñán & Fayolle, 2015; Bachmann et al., 2024). In the digital age, these three factors are interrelated and determine how students are able to adapt to technological changes while building self-confidence and a proactive entrepreneurial orientation.

Digital competency is an individual's ability to use technology effectively, creatively, and responsibly in academic and professional life (Prayogi & Estetika, 2021; Rubach & Lazarides, 2021). For students, digital competency is not limited to the technical ability to use digital devices, but also includes the ability to search for information, manage data, communicate through digital media, and create economic value through technological innovation. Although Indonesia's younger generation is familiar with technology, several studies show that low digital literacy remains a major obstacle in building entrepreneurial interest (Saputri & Qotrunnada, 2025). This means that digital competence should be understood not as a passive skill, but as a strategic ability that enables students to take advantage of digital-based economic opportunities.

In addition to digital factors, psychological aspects also play an important role, especially the concept *of entrepreneurial self-efficacy (ESE)*. According to Bandura (1997), self-efficacy is a person's belief in their ability to organize and carry out the actions necessary to achieve a specific goal. In the context of entrepreneurship, Zhao et al. (2005) explain that ESE reflects an individual's belief in their ability to face challenges in running a business. Prasetyowati et al. (2025) emphasize that the higher the level of entrepreneurial self-efficacy, the greater a person's tendency to make entrepreneurial decisions. This factor is not innate, but can be developed through learning experiences, entrepreneurial education, communication within the family, and support from mentors or coaches (Staniewski et al., 2024; Ndlovu, 2025; Cronje et al., 2022).

In addition to ESE, *individual entrepreneurial orientation (IEO)* is also a relevant factor in explaining entrepreneurial intent. IEO describes the extent to which individuals have innovative, proactive, and risk-taking attitudes when faced with business opportunities (Bolton & Lane, 2015; Kollmann et al., 2017). Research by Efrata et al. (2021) and Stam and Elfring (2008) shows that entrepreneurial education and extensive social networks can strengthen individual entrepreneurial orientation. In the digital context, IEO serves as an important mechanism that connects technological capabilities with psychological readiness for entrepreneurship. Students with innovative orientations and a willingness to take risks are more likely to leverage digital competencies to develop new business ideas.

Several previous studies have examined the relationship between digital competence and entrepreneurial intention (Sutiadiningsih et al., 2025; Sobaih & Elshaer, 2022; Bachmann et al., 2024), but the results show inconsistencies. Some studies found a significant direct effect, while others showed that the effect occurred indirectly through psychological mediating variables such as ESE or entrepreneurial orientation. This indicates that there is still a research gap, particularly in simultaneously testing the dual mediating role of ESE and IEO in the relationship between digital competence and entrepreneurial intention among Indonesian students. Given the importance of understanding how students convert digital skills into entrepreneurial actions, this study attempts to fill this gap.

This study aims to analyze the influence of digital competence on students' entrepreneurial intention, with entrepreneurial self-efficacy (ESE) and individual entrepreneurial orientation (IEO) as mediating variables. Conceptually, this study assumes that digital competence not only improves students' technological abilities but also strengthens self-confidence and behavioral orientation that support entrepreneurial activities. Thus, digital competence is expected to have a direct and indirect influence on entrepreneurial intention through psychological and behavioral mechanisms.

Theoretically, this study is expected to expand the literature on digital entrepreneurship by integrating three important dimensions—digital competence, self-efficacy, and entrepreneurial orientation—into a single integrated empirical model. Meanwhile, in practical terms, this study is expected to contribute to universities in designing a digital-based entrepreneurship curriculum that is relevant to the needs of

future industries. The results of this study are also expected to be taken into consideration by the government in formulating strategic policies to strengthen an innovative, adaptive, and highly competitive digital entrepreneurship ecosystem among Indonesia's younger generation.

2. LITERATURE REVIEW

Research on *entrepreneurial intention* (EI) is increasingly important in the context of the ever-changing digital economy. In Indonesia, the low level of entrepreneurial intention among students indicates a gap between digital competence and psychological readiness to take advantage of business opportunities. Theoretically, this study is rooted in *the Theory of Planned Behavior (TPB)* (Ajzen, 1991), but expands on it by integrating *the concepts of Digital Competency (DC),* Entrepreneurial Self-Efficacy (ESE), and Individual *Entrepreneurial Orientation (IEO)* as determinants of modern entrepreneurial behavior. This theoretical framework highlights how digital competence is not only a technical instrument but also a psychological driver that shapes entrepreneurial intention and behavior. This approach fills a gap in previous research that still separates digital competence from personality variables and individual entrepreneurial orientation.

Entrepreneurial intention is defined as an individual's conscious intention to start a new business, which serves as the strongest predictor of actual entrepreneurial behavior (Krueger et al., 2000; Liñán & Chen, 2009). Within the TPB framework, intention is influenced by three main factors: attitudes toward behavior, subjective norms, and perceived behavioral control. However, several recent studies have expanded this view. Esfandiar et al. (2019) and Doanh & Bernat (2019) emphasize that entrepreneurial intention is also influenced by the environmental context and advances in digital technology, which can either strengthen or suppress that intention. The study by von Graevenitz et al. (2010 in Bachmann et al. 2024) developed an EI measurement based on *goal intention* and *implementation intention,* which is now widely adopted in empirical research because it assesses intentions at two levels: aspiration and readiness to act. In the context of Indonesian students, this indicator is relevant for assessing the

extent to which the drive to become an entrepreneur has gone beyond mere desire to become a reality.

2.1 Digital Competency

The concept of *digital competency* (DC) is defined by the European Commission in the DigComp framework as an individual's ability to use digital technology confidently, critically, and responsibly in the context of learning, working, and participating in society (Ilomäki et al., 2022). Rubach and Lazarides (2021) define DC as the ability to use technology effectively, creatively, and responsibly, which includes information literacy, communication, problem solving, and data security. Oberländer et al. (2020) describe DC as a set of skills, knowledge, and attitudes that include strategic awareness in selecting, evaluating, and utilizing digital technology to support active participation in digital culture. Van Laar et al. (2024) also define digital competence as a combination of knowledge, skills, and attitudes that enable individuals to interact independently, collaboratively, and ethically in a digital environment, including communication skills, data management, privacy protection, and the use of technology for innovation.

According to Saputri and Qotrunnada (2025), there is still a digital literacy gap among Generation Z that has an impact on low interest in entrepreneurship. This confirms that digital competence must be seen as a strategic asset to differentiate individuals who are only technology consumers from those who are able to transform themselves into value creators in the digital entrepreneurship ecosystem. From the several definitions of *digital competency* presented above, this study uses the definition of DC according to Rubach and Lazarides (2021) because it is more operational, measurable through relevant key indicators, and has been adopted in various international studies related to education and 21st-century skills.

According to Rubach and Lazarides (2021 in Bachmann et al., 2024), *digital competency* consists of four main dimensions, namely *information and data literacy*, *communication and collaboration*, *safety and security*, and *problem solving*. *Information and data literacy* reflects an individual's ability to search for, filter, manage, and store information securely. *Communication and collaboration* emphasizes

the ability to communicate and collaborate through digital media effectively, ethically, and productively. *Safety and security* refers to the ability to protect devices, data, and digital identities from various risks, while managing the use of technology in a healthy manner. Meanwhile, *problem solving* describes the ability to use and adapt digital technology to solve problems, learn independently, and organize digital learning resources. These four dimensions show that digital competence encompasses technical, ethical, and adaptive skills that are important in supporting the readiness of individuals, including students, to take advantage of entrepreneurial opportunities in the digital age.

2.2 Entrepreneurial Self-Efficacy

In a psychological context, *self-efficacy* is defined by Bandura (1997) as an individual's belief in their ability to organize and carry out actions to achieve goals. According to Zhao et al. (2005), ESE is a form of self-confidence specific to the entrepreneurial context, distinct from general *self-efficacy*, and functions as an important mediator in shaping entrepreneurial intentions. Prasetyowati et al. (2025) emphasize that the higher *the ESE,* the greater the individual's tendency to become an entrepreneur. This demonstrates the crucial role of *ESE* in shaping entrepreneurial intention.

ESE is not a static trait, but can be developed through environmental support and social interaction. Staniewski *et al.* (2024) found that family communication can support entrepreneurial success by increasing *ESE.* In addition, Ndlovu (2025) emphasizes that entrepreneurship education has a significant effect on *ESE,* and *mentoring* and *coaching* can strengthen students' self-efficacy. Research by Rauch and Hulsink (2015) shows that practical experience and entrepreneurial learning increase individuals' confidence in running a business. Meanwhile, Newman et al. (2019) assert that ESE plays an important role in bridging the relationship between personality factors, environment, and entrepreneurial intention.

According to Zhao et al. (2019), *Entrepreneurial Self-Efficacy (ESE)* is the belief in one's ability to successfully start an entrepreneurial venture and is considered one of the main factors influencing entrepreneurial intention. Liu et al. (2019) also emphasize that *Entrepreneurial Self-Efficacy* is an entrepreneur's confidence in their ability to start a business and their belief that they have the necessary skills to do so,

namely the entrepreneur's confidence that they are capable of completing certain tasks related to entrepreneurship. This study uses the definition of ESE according to Zhao et al. (2005) because it is more operational, clearly measurable through indicators of entrepreneurial learning, previous experience, and risk-taking tendencies, and has been widely adopted in various international studies.

According to Zhao et al. (2005 in Bachmann et al., 2024), *entrepreneurial self-efficacy* is measured through five indicators that reflect an individual's confidence in carrying out entrepreneurial activities. These indicators include confidence in identifying business opportunities, creating new products or services, and carrying out various tasks required in the entrepreneurial process. In addition, ESE is also reflected in an individual's confidence in commercializing innovative ideas and creative thinking skills as the basis for developing business opportunities. Overall, these five indicators describe an individual's psychological readiness to engage in the process of creating and managing a business.

2.3 Individual Entrepreneurial Orientation

Individual Entrepreneurial Orientation (IEO) is defined as an individual's tendency to be innovative, proactive, and willing to take risks in entrepreneurial activities (Bolton & Lane, 2015). Kollmann et al. (2017) emphasize that IEO focuses on the individual level, unlike organizational entrepreneurial orientation. In line with this, Santos et al. (2020) define IEO as an individual psychological orientation that reflects a tendency to innovate, take initiative, and face uncertainty with the courage to take risks in the context of entrepreneurial opportunities. This definition emphasizes that IEO is not only based on behavior but also on mental attitudes and mindsets that encourage individuals to continue creating new value.

Recent research further reinforces the important role of IEO. Covin and Wales (2019) explain that IEO is a multidimensional construct that has been proven to influence entrepreneurial performance at the individual level. Wach et al. (2021) add that IEO has a close relationship with entrepreneurial intention,

especially among the younger generation in the digital era. Furthermore, Kreiser et al. (2023) assert that IEO can be viewed as an individual's adaptive ability in facing the dynamics of an uncertain business environment, thereby encouraging the courage to take calculated risks.

This attitude is very important in fostering entrepreneurial intent, because without an innovative, proactive, and risk-taking attitude, high digital competence will not automatically result in entrepreneurial intent. Research also shows that entrepreneurship education (Efrata, Radianto, & Effendy, 2021) as well as social networks and mentoring (Stam & Elfring, 2008) can strengthen students'. Thus, the role of IEO as a mediator is key in connecting digital mastery with students' readiness to become entrepreneurs. Based on these various definitions and findings, this study uses the definition IEO of IEO according to Santos et al. (2020) because it is more operational, emphasizes individual psychological aspects, and is relevant for measuring tendencies toward innovation, proactivity, and risk-taking, which directly contribute to the formation of entrepreneurial intent.

According to Santos et al. (2020 in Bachmann et al., 2024), individual entrepreneurial orientation consists of five main dimensions, namely risk taking, innovativeness, proactiveness, passion, and perseverance, which collectively reflect an individual's tendency to engage in entrepreneurial behavior. The dimension of risk taking describes an individual's courage to make decisions and take actions that involve risk even though the outcome is uncertain. Innovativeness shows an individual's tendency to develop new ideas, approaches, or solutions through openness to change and experimentation. Proactiveness refers to an individual's initiative to act first and anticipate opportunities or challenges before others. Furthermore, passion reflects a strong emotional drive towards entrepreneurial activities, including a desire to seek new opportunities and develop businesses. Finally, perseverance describes an individual's persistence and resilience in the face of obstacles, as well as their

tenacity in achieving goals despite experiencing failure. These five dimensions explain the entrepreneurial orientation at the individual level that plays an important role in encouraging entrepreneurial intentions and behavior.

3. RESEARCH METHODS

This study uses a quantitative approach to examine the relationship between *digital competency*, *entrepreneurial self-efficacy*, *individual entrepreneurial orientation*, and *entrepreneurial intention*. A quantitative approach was used because it is suitable for testing theories objectively through the measurement of variables that can be quantified and analyzed using statistical procedures (Rana et al., 2022; Bhandari, 2023; Sugiyono, 2019).

The population in this study was undergraduate students from the Faculty of Business and Management or Economics at universities located in Surabaya. The sampling technique used was non-probability sampling with the purposive sampling method, because respondents were selected based on certain criteria relevant to the research objectives (Sekaran & Bougie, 2016). The sample criteria were: (1) active undergraduate students from the Faculty of Business and Management or Economics in Surabaya; (2) at least in their fifth semester; and (3) having experience or involvement in entrepreneurial activities, such as business projects, entrepreneurial competitions, internships at startups, or participation in entrepreneurial SMEs. Referring to the guidelines of Hair et al. (2019), the minimum sample size is set at five times the number of indicators. With a total of 35 indicators, the minimum number of respondents required is 175 people, so the sample is eligible for analysis using the multivariate statistical techniques used.

The data used in this study is primary data obtained through an online questionnaire (Google Form) distributed to respondents who met the criteria. All items were measured using a five-point Likert scale ranging 1 = fromto 5 = *Strongly Disagree Strongly Agree*, to capture the respondents' level of agreement with the statements presented.

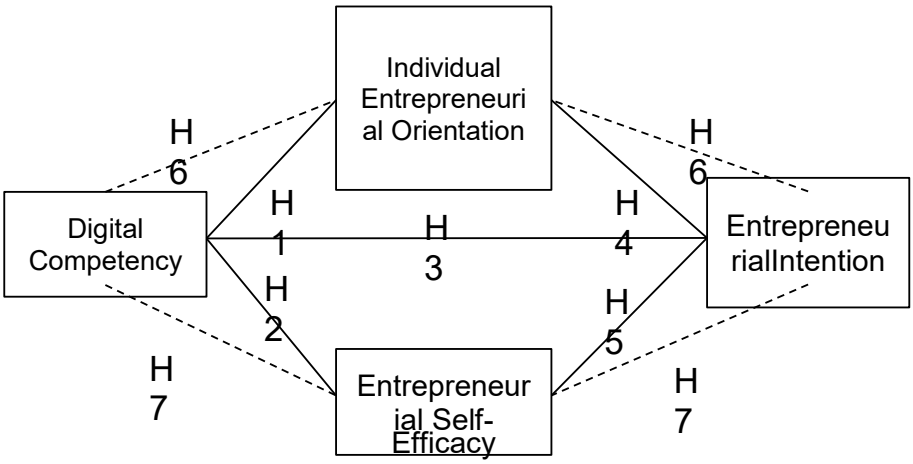
The research instrument consisted of four scales adapted from previous studies that had been proven to be valid and reliable. The questionnaire adaptation process was

carried out using the back translation technique (Beaton et al., 2000). The original instrument in English was translated into Indonesian, then translated back into English by a different translator to identify differences in meaning and ensure conceptual equivalence. This step was taken to ensure that the instrument was appropriate for the cultural and academic context of the respondents, without losing the original meaning of the construct being measured.

Digital competency was measured using a questionnaire from Rubach and Lazarides (2021), which was also used by Bachmann et al. (2024). This scale consists of 16 items covering four dimensions: *information and data literacy* (4 items), *communication and collaboration* (5 items), *safety and security* (4 items), and *problem solving* (4 items). Entrepreneurial intention was measured using two items adapted from von Graevenitz et al. (2010). Entrepreneurial self-efficacy was measured using five items adapted from Zhao et al. (2005). Meanwhile, individual entrepreneurial orientation was measured using 11 items adapted from Santos et al. (2020).

Data analysis was performed using Partial Least Squares-based Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS software. PLS-SEM was chosen because it is capable of estimating path models with complex latent variables and is suitable for prediction-oriented research (Hair et al., 2019). The analysis was conducted in two main stages, namely testing the measurement model (outer model) and the structural model (inner model).

Figure 1. Research Framework



H1: Digital competency influences individual entrepreneurial orientation

H2: Digital competency influences entrepreneurial self-efficacy

H3: Digital competency influences entrepreneurial intention

H4: Individual entrepreneurial orientation influences entrepreneurial intention

H5: Entrepreneurial self-efficacy influences entrepreneurial intention

H6: Individual entrepreneurial orientation mediates the relationship between digital competency and entrepreneurial intention

H7: Entrepreneurial self-efficacy mediates the relationship between digital competency and entrepreneurial intention

4. RESULT AND DISCUSSIONS

This study involved a total of 186 respondents from various universities and different semesters. The distribution based on university origin shows that most respondents came from Petra Christian University (UKP) with 51 people, representing 27.4% of the total sample. The next largest group came from Surabaya University (UBAYA) with 18 respondents (9.7%), followed by Ciputra University (UC) and Widya Mandala University (UKWMS), each contributing 15 respondents (8.1%). In addition, the Sepuluh Nopember Institute of Technology (ITS) and Widya Mandala Catholic University Surabaya (UKWMS) also made significant contributions, each with 12 respondents (6.5%). Various other institutions, such as colleges of economics, health, administration, religion, and technology, contributed between 1 and 5 respondents (ranging from 0.5% to 2.7%), and there was also an "Others" category with 3 respondents (1.6%).

In terms of semester, 178 respondents (95.7%) provided complete information about the semester they were taking, while 8 respondents (4.3%) did not provide any information. From the valid data, the majority of respondents were in Semester 7, namely 88 people, which included 47.3% of the total respondents and 49.4% of the valid data. The next largest group was Semester 6 students, with 60 respondents (32.3%, *valid percent* = 33.7%), followed by Semester 8 students, with 26 respondents (14.0%, *valid percent* = 14.6%). Meanwhile, 4 respondents (2.2%) were from Semester 9, bringing *the cumulative percent* of valid data to 100%. Overall, this distribution

shows that most respondents were final-year students, especially those in Semesters 6 and 7.

This analysis explains the relationship between digital competency (DC), entrepreneurial self-efficacy (ESE), individual entrepreneurial orientation (IEO), and entrepreneurial intention (EI) among undergraduate students in Indonesia. The study used a quantitative approach with PLS-SEM through SmartPLS to test the multiple mediation model, thereby analyzing the direct and indirect effects of DC on EI.

The results of the measurement model evaluation show that all research instruments have met the validity and reliability criteria required in PLS-SEM analysis. Based on the data processing results, all *outer loading* values of the indicators are above 0.60, indicating that each indicator has an adequate level of correlation with the construct being measured. Although there were indicators with values between 0.60 and 0.70, these values are still acceptable in exploratory studies such as this, as suggested by Hair et al. (2021). Furthermore, construct reliability was assessed using Cronbach's Alpha and Composite Reliability (CR). All variables had Cronbach's Alpha values between 0.63 and 0.81 and CR values greater than 0.70, so it can be concluded that all constructs had good internal consistency.

Convergent validity was also fulfilled because all constructs had *Average Variance Extracted* (AVE) values greater than 0.50. Digital Competency (DC) obtained a Cronbach's Alpha of 0.810, Composite Reliability of 0.864, and AVE of 0.515, indicating that more than 51% of the indicator variance could be explained by the latent construct. Entrepreneurial Self-Efficacy (ESE) showed a CR value of 0.805 and an AVE of 0.580, indicating strong convergent validity. Individual Entrepreneurial Orientation (IEO) consistently showed a CR value of 0.827 and an AVE of 0.547. Meanwhile, Entrepreneurial Intention (EI) obtained a CR of 0.809 and an AVE of 0.679, making it one of the constructs with the strongest convergent validity. Overall, these results indicate that the research instrument adapted from international literature has been successfully replicated in the context of this study.

After the measurement model was declared valid and reliable, the analysis continued with the evaluation of the structural model (*inner model*). The coefficient of determination (R^2) value indicates the predictive ability of exogenous variables on endogenous variables. The R^2 value for Individual Entrepreneurial Orientation was

0.647, indicating that Digital Competency was able to explain 64.7% of the variation in individual entrepreneurial orientation. The R^2 value for Entrepreneurial Self-Efficacy is 0.519, while the R^2 for Entrepreneurial Intention is 0.546. Based on Chin's (1998) criteria, an R^2 value above 0.50 is classified as moderate to strong, indicating that this structural model has adequate predictive power.

Path coefficient analysis shows that most of the hypotheses in this study are accepted. Digital Competency has a positive and significant effect on Entrepreneurial Intention ($\beta = 0.250$; $t = 2.982$; $p = 0.003$), on Entrepreneurial Self-Efficacy ($\beta = 0.519$; $t = 6.702$; $p = 0.000$), and Individual Entrepreneurial Orientation ($\beta = 0.647$; $t = 12.172$; $p = 0.000$). Individual Entrepreneurial Orientation has a positive effect on Entrepreneurial Intention ($\beta = 0.305$; $t = 3.847$; $p = 0.000$), as does Entrepreneurial Self-Efficacy ($\beta = 0.191$; $t = 2.920$; $p = 0.004$). The mediating effect is also significant, where Digital Competency influences Entrepreneurial Intention through ESE ($\beta = 0.099$; $t = 2.369$; $p = 0.018$) and through IEO ($\beta = 0.197$; $t = 3.407$; $p = 0.001$). Thus, all hypotheses are accepted.

The results of this study confirm that Digital Competency plays a very important role in shaping students' readiness and tendency to engage in entrepreneurship. The first finding shows that Digital Competency has a direct and significant effect on Entrepreneurial Intention. This means that the higher the students' ability to access, use, and manage digital technology, the greater their tendency to intend to start a business. This result differs from several previous findings that showed an indirect effect, such as the study by Sutiadiningsih et al. (2025). However, in the context of business students in big cities who are very familiar with digital technology, digital competence seems to provide enough confidence to directly foster entrepreneurial intention. Students who are already familiar with digital analysis, online marketing, or digital business platforms perceive that entrepreneurship is now easier and more affordable with the support of technology.

In addition, the results of the study indicate that Digital Competency also has a significant influence on Entrepreneurial Self-Efficacy and Individual Entrepreneurial Orientation. These findings indicate that mastery of digital technology not only functions as a technical skill but also contributes to psychological aspects that are important in the process of forming entrepreneurial intent. Individuals with high digital

competence tend to be more confident (Bandura, 1997) and show a stronger tendency to think innovatively, be proactive, and take risks. In the context of the digital economy, the ability to use digital tools to solve problems, design products, or validate business ideas gives students a sense of personal competence that strengthens their belief that they are capable of starting a business.

Furthermore, the significant influence of Individual Entrepreneurial Orientation and Entrepreneurial Self-Efficacy on Entrepreneurial Intention shows that these two constructs play a key role in the formation of entrepreneurial intention. Students with a high entrepreneurial orientation tend to exhibit a responsive, creative, and adaptive mindset towards business opportunities. They are also better prepared to deal with the uncertainty inherent in the world of entrepreneurship. Similarly, students with high self-efficacy are more confident in their ability to start and run a business, thereby increasing their intention to become entrepreneurs. These findings are in line with Rigtering et al. (2024) and Newman et al. (2019), which show that psychological factors play a strategic role in shaping entrepreneurial intention.

The most important finding of this study is the significant mediating role of IEO and ESE in bridging the relationship between Digital Competency and Entrepreneurial Intention. The analysis results show that digital competency encourages students to develop an entrepreneurial orientation and increase self-efficacy, which in turn strengthens their intention to start a business. These findings enrich the theoretical understanding of the mechanisms by which digital competency shapes entrepreneurial intention and provide empirical contributions to the literature, which still shows mixed results regarding the DC–EI relationship. The double mediation model confirmed in this study offers a new perspective that digital competency works through two channels simultaneously: the orientational channel (IEO) and the motivational channel (ESE).

Overall, the results of this study indicate that Digital Competency is an important foundation for the formation of entrepreneurial intention among students, both directly and through the strengthening of entrepreneurial orientation and self-efficacy. These findings contribute theoretically to the integration of the concept of digital competency with psychological theories of entrepreneurship, and provide significant practical implications for educational institutions and policymakers. Higher

education institutions need to develop a digital entrepreneurship curriculum that not only teaches technical skills but also encourages the formation of innovative, proactive, and confident mindsets through digital project-based learning experiences and business incubation. Thus, digital competency can be transformed into real motivation and readiness for entrepreneurship in the era of digital .

From a managerial perspective, program administrators and business faculties need to use these findings as a basis for designing entrepreneurship learning strategies. Strengthening digital competency cannot be achieved through theoretical courses alone, but must be integrated with real business projects based on digital platforms, collaboration with industry players, and the use of digital tools such as e-commerce, social media marketing, and data analytics. University management can also develop policies that encourage students to participate in digital business competitions, internship programs at startups, and mentoring with practitioners, so that entrepreneurial self-efficacy and individual entrepreneurial orientation can be formed more strongly and contextually.

In addition, managers of career centers, campus business incubators, and entrepreneurship development units can utilize the results of this study to design more targeted interventions. Mentoring programs, business clinics, and entrepreneurship workshops should not only focus on business plan development, but also on how students can utilize digital competencies to identify opportunities, test business ideas, and implement online marketing strategies. Managers in educational institutions can establish performance indicators that measure increases in students' entrepreneurial intent and entrepreneurial activities as one of the important outcomes of entrepreneurship development programs. Thus, managerial decisions become more evidence-based and in line with the demands of digital transformation in the business world.

5. CONCLUSIONS

Based on the results of data processing using PLS-SEM, this study concludes that digital competency (DC) has a positive and significant effect, both directly and indirectly, on students' entrepreneurial intention (EI). DC has been proven to increase

entrepreneurial self-efficacy (ESE) and individual entrepreneurial orientation (IEO), and both also have a significant positive effect on EI. This shows that mastery of digital competence not only directly encourages entrepreneurial intention, but also works through strengthening entrepreneurial self-efficacy and individual entrepreneurial orientation as double mediators in this research model. Thus, DC becomes an important foundation in shaping students' readiness for entrepreneurship in the digital economy era.

This study has several limitations that need to be considered. First, the sampling technique used purposive sampling and only focused on business and economics students in Surabaya, so the results cannot be generalized to students in other cities, non-business study programs, or different levels of education. Second, the data was collected using a self-report questionnaire with a Likert scale, which has the potential to cause social desirability bias and common method bias, because all variables were measured at the same time and from the same source. Third, the cross-sectional research design only captured entrepreneurial intent at a single point in time, so it was unable to describe changes in students' EI as their entrepreneurial experience developed or their exposure to digital technology intensified.

Based on these limitations, future research should expand the sample coverage to universities outside Surabaya, involve students from various disciplines, and use more diverse sampling techniques to make the results more representative. Further research could also use a longitudinal design to observe the dynamics of EI changes over time, as well as combine quantitative and qualitative methods to explore in greater depth students' real experiences in utilizing digital competencies for entrepreneurship. In addition, subsequent researchers could add other variables such as environmental support, work experience, or formal entrepreneurship education as additional moderator or mediator variables. For universities, the results of this study indicate the importance of strengthening curricula and support programs that integrate digital competency training with the development of ESE and IEO, for example through technology-based business projects, startup incubation, and practitioner mentoring so that students' entrepreneurial intentions can develop into concrete actions.

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APPENDIX

Appendix 1: Respondents al Profile

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	**109**	**58.6**	**58.6**	**62.4**
Women	**70**	**37.6**	**37.6**	**100.0%**
Total	**186**	**100**	**100%**	**—**

University	Frequency	Percent	Valid Percent	Cumulative Percent
—	7	3.8	3.8	3.8
Adhi Tama Institute of Technology Surabaya (ITATS)	4	2.2	2.2	5.9
Sepuluh Nopember Institute of Technology (ITS)	12	6.5	6.5	12.4
Others	3	1.6	1.6	14.0
Ali bin Abi Thalib Islamic College, Surabaya	3	1.6	1.6	15.6
Luqman Al-Hakim Islamic College (STAIL)	5	2.7	2.7	18.3
Barunawati College of Port Administration and Management	3	1.6	1.6	19.9

Panglima Sudirman College of Administrative Sciences	**2**	**1.1**	**1.1**	**21.0**
Satya Widya College of Language and Literature	**3**	**1.6**	**1.6**	**22.6**
Widya Darma College of Economics	**1**	**0.5**	**0.5**	**23.1**
Fatahillah College of Economics	**1**	**0.5**	**0.5**	**23.7**
IEU College of Economics	**3**	**1.6**	**1.6**	**25.3**
Indonesia College of Economics (STIE Surabaya)	**1**	**0.5**	**0.5**	**25.8**
Mahardhika College of Economics	**1**	**0.5**	**0.5**	**26.3**
Satya Widya Tourism Economics College	**1**	**0.5**	**0.5**	**26.9**
Perbanas Surabaya College of Economics	**-**	**-**	**-**	**-**

Semester	Frequency	Percent	Valid Percent	Cumulative Percent

6	60	32.3	33.7	33.7
7	88	47.3	49.4%	83.1%
8	26	14.0	14.6	97.8%
9	4	2.2	2.2	100.0%
Total Valid	178	95.7	100.0	—
Missing (System)	8	4.3	—	—
Total	186	100.0%	—	—

Appendix 2: The Results of Outer Loading

Item	DC	EI	ESE	IEO
DC10	0.716	–	–	–
DC14	0.771	–	–	–
DC15	0.651	–	–	–

DC2	**0.751**	**–**	**–**	**–**
DC4	**0.664**	**–**	**–**	**–**
DC6	**0.736**	**–**	**–**	**–**
EI1	**–**	**0.810**	**–**	**–**
EI2	**–**	**0.838**	**–**	**–**
ESE1	**–**	**–**	**0.763**	**–**
ESE3	**–**	**–**	**0.768**	**–**
ESE5	**–**	**–**	**0.757**	**–**
IEO1	**–**	**–**	**–**	**0.651**
IEO3	**–**	**–**	**–**	**0.755**
IEO7	**–**	**–**	**–**	**0.781**
IEO8	**–**	**–**	**–**	**0.688**

Appendix 3: Construct Reliability and Validity

Construct	Cronbach's Alpha	Composite Reliability (rho_A)	Composite Reliability (rho_C)	AVE
DC	0.810	0.810	0.864	0.551
EI	0.527	0.529	0.809	0.673
ESE	0.638	0.639	0.805	0.580
IEO	0.722	0.742	0.827	0.546

Appendix 4: Cross Loading

Item	DC	EI	ESE	IEO
DC10	0.716	0.408	0.411	0.526
DC14	0.771	0.339	0.444	0.441
DC15	0.651	0.448	0.383	0.386
DC2	0.751	0.409	0.389	0.390
DC4	0.664	0.392	0.430	0.473
DC6	0.736	0.391	0.401	0.451
EI1	0.432	0.810	0.304	0.511
EI2	0.488	0.838	0.354	0.518

ESE1	**0.358**	**0.401**	**0.763**	**0.602**
ESE3	**0.411**	**0.410**	**0.768**	**0.651**
ESE5	**0.416**	**0.307**	**0.757**	**0.622**
IEO1	**0.395**	**0.314**	**0.365**	**0.781**
IEO3	**0.478**	**0.387**	**0.358**	**0.742**
IEO7	**0.558**	**0.527**	**0.518**	**0.786**
IEO8	**0.465**	**0.438**	**0.527**	**0.688**

Appendix 5: The Results of R-Square (R2)

Variable	R-square	Adjusted R-square
EI	**0.405**	**0.395**
ESE	**0.270**	**0.265**
IEO	**0.419**	**0.415**

Appendix 6: The Results of the Hypothesis Test

Path	Frequency (O)	Sample Mean (M)	STDEV	T Statistics	P Values
DCL → EI	**0.250**	**0.241**	**0.084**	**2.982**	**0.003**

DCL → ESE	0.519	0.526	0.077	6.702	0.000
DCL → IEO	0.647	0.649	0.053	12.172	0.000
ESE → EI	0.191	0.197	0.065	2.92	0.004
IEO → EI	0.305	0.307	0.079	3.847	0.000

Appendix 7: The Results of the Indirect Effect Test

Path	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
DCL → ESE → EI	0.099	0.104	0.042	2.369	0.018
DCL → IEO → EI	0.197	0.198	0.058	3.407	0.001