An Analysis Effect of Internet Capability on The Enhanced of Student Interest in Pursuing Technological Entrepreneurship During Pandemic

Surjandy¹*, Bruno Sablan²
¹School of Information Systems, Bina Nusantara University, Jakarta, Indonesia
²University of Florida, Florida, USA
*Corresponding Author: surjandy@binus.ac.id

ABSTRACT

Indonesia’s internet use is increasing rapidly, especially during the Covid-19 pandemic. The most significant number of internet users today are at the age of students. Students can use the Internet for learning, social activities, and business. Therefore, it is the background of this study to explore factors in internet skills, such as contextual efficacy, internet self-efficacy, and computer self-efficacy, which affect the interest of students in Indonesia to become a technopreneur. The study uses quantitative methods, with the Structural Equation Model and Partial Least Square (SEM-PLS) techniques. Data collection using snowball sampling technique from 11 cities in Indonesia and collected 506 respondents used in this study during the pandemic situation. This study found four relationships that have an influence. Computer self-efficacy impacts 68.2% of individual entrepreneurship orientation and 34.3% of technopreneur intention. Contextual element affects 43.9% of technopreneur intentions. Internet self-efficacy affects 17.3% of technopreneur intentions. The study found that three relationships had no effect. The conclusion of the research conducted during the COVID-19 pandemic is that the ability to surf the Internet for Computer Self Efficacy, Contextual Elements, and Internet Self Efficacy directly affects students’ desire to become technopreneurs.

Keywords:
- Technopreneur Intention
- Internet Self-Efficacy
- Individual Entrepreneurship Orientation
- SEM - PLS

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1. INTRODUCTION

Indonesia’s internet users during the pandemic increased by 35 million [1]. University students dominate the increase in internet users [2]. Students utilize the Internet for a multitude of purposes, encompassing social interactions, academic pursuits, and entrepreneurial endeavors [3][4]. However, despite the fact that students employ the Internet to enhance their business endeavors, the Indonesian government still requires a significant number of new technopreneurs [5]. This issue becomes the background of this research to explore the factors of internet ability that influence students to become technopreneurs. Several studies have been conducted to increase entrepreneurship, especially for university students [6][7][8][9][10][11].

However, the specific methods in which internet infrastructure can contribute to the advancement of students’ commercial endeavors have not been conclusively determined not identified in earlier research. The research examines the direct influence of contextual elements on technopreneur intention (TI) through Individual Entrepreneurial Orientation (IEO) [12]. The research[13] examines the direct and indirect effects of ICT Self Efficacy and IEO on TI. The research concerns the factors influencing student interest in technopreneurs [14]. Investigating the impact of ICT self-efficacy on technopreneur student motivation influences intention [15] research examines contextual factors' influence on individual entrepreneurial intentions [16]. This study indicate that contextual factors have a positive and significant effect on IEO [17]. This study uses Semantic Equation Model and Partial Lease Square (SEM-PLS) techniques to explore the influence of factors that influence student interest in becoming a technopreneur [18]. SEM-PLS is often used in information systems research [19]. Respondent data amounted to 506 respondents consisting of 338 male respondents (66.8%) and 168 respondents (33.2%) female and consisted of 11 cities. This research benefits the industry, especially learning institutions, so it can improve learning materials to increase students’ interest in becoming a technopreneur.

2. LITERATURE

This paragraph will explain the theories used in this research.

2.1. Technopreneur Intention (TI)

TI creates ideas and guide individual actions towards developing and applying new technology business concepts. Therefore, if the Intention is high, it will encourage someone to become a Technopreneur [20].
2.2. Individual Entrepreneurial Orientation (IEO)

IEO comes from Entrepreneurial Orientation (EO). IEO is finding and taking advantage of untapped market opportunities or responding to challenges [21]. A person’s willingness to take risks in uncertain situations. IEO attracted extensive theoretical and empirical attention in this research [22].

2.3. Contextual Element (CE)

CE is one of the environmental factors that contribute to entrepreneurship and influences business decisions more than personality factors—CE is a component related to entrepreneurial intentions. [23][24].

2.4. Internet Self-Efficacy (ISE)

ISE is a belief in oneself that exceeds one’s ability to organize work and do specific jobs using the Internet to get results from an achievement. Internet Self-efficacy is closely related to the psychological attitude factor of all humans [25], [26].

2.5. Computer Self-Efficacy (CSE)

CSE is a judgment of a person’s computer skills and expertise to perform a task. It is related to information technology. Therefore, the study CSE is essential to determine individual behavior and performance in dealing with information technology [26][27][28].

2.6. Previous Studies, Research Gaps and Research Quest

Several studies have been conducted to increase entrepreneurship, especially for university students [6][7][8][9][10][11]. The research examines the direct influence of CE on TI through IEO [12]. The research [13] examines the direct and indirect effects of ICT Self Efficacy and IEO on Technopreneur. The research concerns the factors influencing student interest in technopreneur [14].ICT self-efficacy’s influence on TI mediated by student motivation [15] [16]. The study’s research question, which is derived from an explanation of the research gaps, is: How do students on the internet abilities affect their desire to become technopreneurs?

3. METHODOLOGY

This section will explain the research methods used and the formation of the research model.
3.1. Research Model Development

In this section, we will explain the formation of the research model as illustrated in Figure 1.

Figure 1 is the research model used in this study, with an explanation of the formation of the model and hypotheses in the following subsections. The formation of this research model uses the Stimulus-organism-response (SOR) framework [29], [30] where ISE, CE, & CSE become a stimulus that will influence the organism, namely the IEO factor and the expected response is TI.

3.2. The Relationship Between ISE, Influences IEO and TI Factor

A previous study shows a positive and significant influence between Internet Self Efficacy and individual entrepreneurial orientation and technopreneur intention [14], [24]. Based on this opinion, the hypothesis formed is:

$H_{1A}$: Internet Self-Efficacy Influences Individual Entrepreneurial Orientation factor.

$H_{1B}$: Internet Self-Efficacy influences Technopreneur Intention factor.

3.3. The relationship between CE influence IEO and TI Factor

Previous research shows a significant positive influence between CE and TI. Therefore, CE are essential when discussing entrepreneurial intentions and behavior [24]. Based on this opinion, the hypothesis formed is:
H2A: Contextual Element (CE) influences the factor of Individual Entrepreneurship Orientation.
H2B: Contextual Element (CE) influences the factor of Technopreneur Intention.

3.4. The relationship between CSE influence on the IEO and TI Factor

Previous research has shown a positive and significant influence between CSE and IEO shown a positive and significant influence with TI [31] [14]. Based on this opinion, the hypothesis formed is:

H3A: Computer Self Efficacy influences the factor of Individual Entrepreneurial Orientation.
H3B: Computer Self Efficacy influences the factor of Technopreneur Intention.

3.5. The relationship between IEO and TI Factor

In previous research, it found that there was a positive and significant influence between IEO and TI. Another research proves the same thing—experiences of entrepreneurial qualities of specific individuals (e.g., risk-taking, innovation, and proactiveness [14], [24]. Based on the literature, the hypothesis formed is:

H4: Individual Entrepreneurial Orientation influence on the factor Technopreneur Intention.

3.6. Data Gathering

The data collection strategy employed in this study involved the distribution of a questionnaire across several social media platforms (e.g., Line, WhatsApp, Telegram) using Google Forms. The questionnaire utilized a Likert scale with six response options and employed a snowball-sampling technique. Based on the obtained result, it can be observed that there are a total of eleven cities that have been indirectly acquired.

4. RESULTS and DISCUSSION

This section will discuss the data resources, result and discussion.

4.1. Data Resources

The respondents who took part in this survey were 506 respondents.
Figure 2 describes the number of respondents by university city with the following details: 206 respondents (40.7%) from Jakarta, 161 respondents (31.8%) from Tangerang, 39 respondents (7.7%) from Depok, 13 respondents (2.6%) from Yogyakarta, 59 respondents (11.7%) from Bandung, 17 respondents (3.4%) from Bekasi, 4 respondents (0.8%) from Malang, 3 respondents (0.6%) from Semarang, 2 respondents (0.4%) from Purwokerto, 1 respondent (0.3%) from Sumedang and Cilegon. 338 male respondents (66.8%) and 168 respondents (33.2%) Female.

4.2. Outer Loading Calculation Result

This section explains the calculation results from the SmartPLS application.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Contextual Element (CE)</th>
<th>Indicator</th>
<th>Computer Self Efficacy (CSE)</th>
<th>Indicator</th>
<th>Individual Entrepreneurial Orientation (IEO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE1</td>
<td>0.752</td>
<td>CSE1</td>
<td>0.705</td>
<td>IEO1</td>
<td>0.730</td>
</tr>
<tr>
<td>CE2</td>
<td>0.741</td>
<td>CSE2</td>
<td>0.817</td>
<td>IEO2</td>
<td>0.709</td>
</tr>
<tr>
<td>CE3</td>
<td>0.753</td>
<td>CSE3</td>
<td>0.733</td>
<td>IEO3</td>
<td>0.727</td>
</tr>
<tr>
<td>CE4</td>
<td>0.711</td>
<td>CSE4</td>
<td>0.787</td>
<td>IEO4</td>
<td>0.757</td>
</tr>
<tr>
<td>CE5</td>
<td>0.763</td>
<td>CSE5</td>
<td>0.761</td>
<td>IEO5</td>
<td>0.735</td>
</tr>
<tr>
<td>ISE1</td>
<td>0.743</td>
<td>TI1</td>
<td>0.703</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISE2</td>
<td>0.740</td>
<td>TI2</td>
<td>0.718</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISE3</td>
<td>0.769</td>
<td>TI3</td>
<td>0.729</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISE4</td>
<td>0.696</td>
<td>TI4</td>
<td>0.748</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISE5</td>
<td>0.723</td>
<td>TI5</td>
<td>0.808</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 describes the calculation results of outer loading where the score of all indicators used is greater than 0.6, which generally means all indicators are valid.

4.3. Average Variance Extracted, Reliabilities Cronbach’s Alpha dan R Squared

In this section, we will explain the results of the reliability calculation.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach's Alpha</th>
<th>Average Variance Extracted (AVE)</th>
<th>R Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSE</td>
<td>0.897</td>
<td>0.503</td>
<td></td>
</tr>
<tr>
<td>CE</td>
<td>0.874</td>
<td>0.521</td>
<td></td>
</tr>
<tr>
<td>IEO</td>
<td>0.846</td>
<td>0.520</td>
<td>0.584</td>
</tr>
<tr>
<td>ISE</td>
<td>0.876</td>
<td>0.502</td>
<td></td>
</tr>
<tr>
<td>TI</td>
<td>0.908</td>
<td>0.524</td>
<td>0.775</td>
</tr>
</tbody>
</table>

Table 2 explains the validity and reliability of each factor. All factors are valid (AVE > 0.5) and reliable (Cronbach’s Alpha > 0.6)

4.4. Calculation Result of T-Statistic and P-value

This section will explain the results of bootstrapping calculations and hypotheses.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Variable</th>
<th>Original Sample</th>
<th>T-Statistic</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1A</td>
<td>ISE → IEO</td>
<td>0.096</td>
<td>1.085</td>
<td>0.278</td>
<td>No</td>
</tr>
<tr>
<td>H1B</td>
<td>ISE → TI</td>
<td>0.173</td>
<td>2.936</td>
<td>0.003</td>
<td>Yes</td>
</tr>
<tr>
<td>H2A</td>
<td>CE → IEO</td>
<td>0.007</td>
<td>0.093</td>
<td>0.926</td>
<td>No</td>
</tr>
<tr>
<td>H2B</td>
<td>CE → TI</td>
<td>0.439</td>
<td>7.185</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H3A</td>
<td>CSE → IEO</td>
<td>0.682</td>
<td>7.917</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H3B</td>
<td>CSE → TI</td>
<td>0.343</td>
<td>5.024</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H4</td>
<td>IEO → TI</td>
<td>0.061</td>
<td>1.139</td>
<td>0.255</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 3 shows the results of the research, which concludes as follows:

- **H1A. Internet Self Efficacy no influences on Individual Entrepreneurial Orientation.**
ISE factor has no significant effect on IEO (T-Stat value 1.085 (> 1.96) and P-Values 0.278 (<0.05)). It means hypothesis H1A is not significant. This study proves that ISE does not affect the IEO. The results of previous studies stated that self-efficacy greatly influences a person’s interest in becoming an entrepreneur. However, the covid condition affects a person’s interest in becoming an entrepreneur due to unclear conditions going forward [32].
**H1B. Internet Self-Efficacy Influences on Technopreneur Intention.**
ISE factor has a significant effect of 17.3% on TI (T-Stat value of 2.936 (> 1.96) and P-Values 0.003 (<0.05)). It means the hypothesis H1B is significant. This study proves that ISE affects TI for students [32]. During the Covid pandemic, 17.3% of students utilized the internet as their infrastructure, indicating a small usage rate.

**H2A. Contextual Element no influences on Individual Entrepreneurial Orientation**
CE factors have no significant effect on IEO (T-Stat value 0.093 (> 1.96) and P-Values 0.926 (<0.05)). It means the hypothesis H2A not significant. The results of this study also state that CE will not necessarily have an effect. Still, more precisely, the knowledge will be much better and affect interest in becoming a technopreneur [33].

**H2B. Contextual Element influences on Technopreneur Intention.**
CE has a significant effect of 43.9% on TI (T-Stat value of 7.185 (> 1.96) and P-Values 0.000 (<0.05)). The hypothesis H2B is Significant. This study proves that CE affect TI for students. These results are similar to the previous one, which stated that the contextual element is a very important factor [34].

**H3A. Computer Self Efficacy Influences on Individual Entrepreneurial Orientation.**
The computer Self Efficacy factor has a significant effect of 68.2% on IEO (T-Stat value 7.917 (> 1.96) and P-Values 0.000 (<0.05)). It means the hypothesis H3A is significant. This study proves that Computer Self Efficacy affects Individual Entrepreneurial Orientation for students. The impact of the COVID-19 pandemic has also made students find flexibility (online learning compared to face-to-face learning). Motivation becomes very important in online learning because it has many different physical and emotional factors during the online learning process that affects students to learn entrepreneurship [33], [35].

**H3B. Computer Self-Efficacy Influences on Technopreneur Intention.**
The CSE factor has a significant effect of 34.3% of Technopreneur Intention (T-Stat value 5.024 > 1.96) and P-Values 0.000 (<0.05). It means the hypothesis H3B is significant, this study proves that CSE affects TI. Even in the COVID-19 pandemic, students with CSE can use technology like e-commerce. The results of this study are the same as those of previous studies which state that knowledge (self-efficacy) still increases one’s interest in becoming a technopreneur [33].

**H4. Individual Entrepreneurial Orientation no influences on Technopreneur Intention**
The IEO factor has no significant effect on TI (T-Stat value 1.139 (< 1.96) and P-Values 0.255 (>0.05)). So, it concludes that hypothesis H4 not significant. This study proves that IEO does not affect the TI factor of students [33].

The study indicates that students’ computer usage is proficient, but they still lack understanding of internet infrastructure for business support, with only 17.3% currently using it, requiring improvement.
5. CONCLUSION

The findings of this study indicate that Computer Self Efficacy (CSE) plays a significant role, accounting for 68.2% of the variance in Individual Entrepreneurial Orientation (IEO). Additionally, the Contextual Element (CE) was shown to have a substantial impact on Technopreneur Intention, explaining 43.9% of the variance. Lastly, Computer Self Efficacy (CSE) was identified as the third greatest influencing factor, accounting for 34.3% of the variance in Technopreneur Intention.

The primary distinction between this study’s data gathering and earlier research was that the latter was carried out under normal circumstances, whereas the former was done when the Covid-19 epidemic was still active. The research found that during the COVID-19 pandemic, students who had CSE affected IEO and TI. Furthermore, CE factors affect TI, and ISE affects TI. It means students with Internet and computer skills tend to conduct business activities using the internet during the COVID-19 pandemic. However, CE and ISE did not affect IEO and TI during the pandemic. It can happen because of the uncertainty of the economic situation. The ability to surf and create content on the Internet is no longer an obstacle to entrepreneurship as a student. The research indicates that students’ computer usage is proficient, but they still lack understanding of internet infrastructure for business support, with only 17.3% currently using it, requiring improvement.

The results of this study are beneficial for the education industry in creating learning content that can support the creation of technopreneurs in the future.

Future research is needed to complement the factors not found in this study. The implication of this research can be useful for learning development, specifically for creating new technopreneurs.

REFERENCES


