



E-Commerce Technology Transformation as an Effort to Increase Interest Entrepreneurship in the Age of Industry 4.0

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ABSTRACT

The rapid development of digital technology in the Industry 4.0 era has brought significant transformation in various sectors, including the economic sector. One sector that has experienced drastic changes is the e-commerce sector. This is evidenced by the fact that since the Covid-19 pandemic in March 2020, the number of e-commerce-based MSMEs in Malang City has increased dramatically by 123 percent. This, of course, is considered quite proud in line with the efforts of the City Government (Pemkot) of Malang to continue to optimize digitalization in all sectors of the creative economy (Ekraf). (Firdausi, n.d.) The ease of access to the internet and mobile devices has driven the growth of e-commerce exponentially. This research aims to analyze how the transformation of e-commerce technology can be an effort to increase entrepreneurial interest in the Industry 4.0 era. This research uses a qualitative approach with a literature.

INTRODUCTION

Economic development in a country can improve the economy in various types of economic activity, one of which is in the industrial sector. Economic development can not only be measured by the increase in production of goods and services but can be measured through various aspects of the economy such as education, available infrastructure, can improve health, use modern tools (technology), increase opinions and community welfare. Entrepreneurial interest is one of the main indicators of a country's economic progress. One of the drivers of the national economy is the role of MSMEs, one of its roles can be seen from the absorption of labor that is higher than other sectors in Indonesia. MSMEs can reduce unemployment and the number of poor families in Indonesia. In fact, in 2018 the MSME sector could absorb as much as 97.0% of the total workforce in Indonesia, which is around 116,978,631 workers (Nalini, 2021). Therefore, the first role of MSMEs in the economy is to reduce unemployment in Indonesia and to overcome poverty by increasing employment. In addition, in 2018 the total number of MSMEs in Indonesia reached 64.2 million (99.99 percent) of the total business actors in Indonesia. The high level of MSMEs in Indonesia makes MSMEs have a large contribution to Indonesia's national GDP, which is 61.1% and the rest or 38.9% is contributed by large-scale entrepreneurs and 0.01% of total business actors. Furthermore, micro-scale businesses in Indonesia have a contribution to GDP of 37.8% (Ministry of Finance, 2020). The environment in the business world (entrepreneurship) should be a friendly environment, namely an environment that encourages the creation of new businesses with ease of capital, the availability of incentives to start a business, supportive and efficient infrastructure so that it is specifically aimed at causing a significant increase in entrepreneurship.

Someone who has an interest in entrepreneurship means having a sense of interest in becoming an entrepreneur who is willing to carry out activities in managing time, skills and finances for business progress with self-confidence, creative and innovative, honest, disciplined, independent and hard work, curiosity, risk-taking, and future-oriented. However, the traditionalism of entrepreneurial methods that require large capital and complex infrastructure is often a challenge for the younger generation. Moreover, the industrial era 4.0 has brought about a significant digital revolution, including in the form of e-commerce technology

LITERATURE REVIEW

Interest in entrepreneurship

Entrepreneurial interest according to (Aqmal, Putra, and Suseno 2020) is an interest that individuals have in entrepreneurial activities without any encouragement from other parties. According to (Norman, Pahlawati, and Paramansyah 2022) entrepreneurial interest is the desire possessed by individuals to try and pursue a business, take responsibility for the path that has been chosen and the risks, and the desire not to repeat the same mistakes. (Hendrawan and Sirine 2017)(Hendrawan and Sirine 2017) also expressed his opinion regarding entrepreneurial interest as an individual's ability to fulfill the fulfillment of life's needs and get problem solving from every problem, start a business by bravely facing the risks that will come, always learn from mistakes, and have the desire to do because it is beneficial to himself and the Effect of Economic Literacy, E-Commerce, and Family Environment on Student Entrepreneurial Interest. Based on this understanding, it can be concluded that entrepreneurial interest is a willingness, interest, willingness possessed by individuals in meeting their needs, starting new businesses and developing these businesses with the courage to accept risks, and learning from the inabilities that have been experienced *E-commerce*.

E-commerce is one of the technological factors where the development of information and communication can change the way humans interact with the environment. According to (Sihombing and Sulisty 2021), (Achmad Ihza Maulana Ibrahim and Muslimin 2022) who say e-commerce has a positive and significant impact on entrepreneurial decisions. Because e-commerce can open up entrepreneurial opportunities with the goodness of interaction and communication between website users, making sales functions clear and simple, can increase sales efficiency, attract customers, and can increase work efficiency.

E-commerce also involves electronic funds transfer, automated inventory management systems, electronic data exchange and automated data collection systems. According to Akbar, M.A., & Alam, S. N. (2020). *E-COMMERCE: Basic Theory in Digital Business*. Yayasan Kita Tulis. E-commerce is the buying, selling and marketing of goods and services through electronic systems. Such as television, radio, and computers or internet networks. Business transactions that occur on electronic networks such as the internet. Anyone with an internet connection can participate in e-commerce activities.

ENTREPRENEURSHIP

Etymologically, entrepreneurship comes from the words "wira" and "usaha". The word wira means exemplary or exemplary, while usaha means a strong will to obtain something. Self-effort leads to labor and thought in

achieving the goal of entrepreneurship a goal. The figure of an entrepreneur who has more or less resilient, tenacious, independent, unyielding, respect for ethics, skilled, resilient, responsive, potential-oriented and so on, which is the most ideal figure that is indispensable in the country's development scene. Entrepreneurship can be defined as taking risks to run one's own business by utilizing opportunities to create new businesses or with an innovative approach so that the business being managed grows to be large and independent in facing the challenges of competition. Referring to the Decree of the Minister of Cooperatives and Small Business Development Number 61/KEP/M/XI/1995, Entrepreneurship is the spirit, attitude, behavior and ability of a person.

in handling businesses or activities that lead to efforts to find, create and apply new ways of working, technology and products by increasing efficiency in order to increase efficiency. provide better services and obtain greater profits.

MOTIVATION

Motivation is defined as a desire to learn something, in a context that usually refers to stimulating student interest or what is known as intrinsic motivation (Aidora & Tan Yeong, 2014). Motivation can be defined as the drive within a person to do an activity as well as possible and achieve personal goals in the form of achievement. Motivation for entrepreneurship is a personal goal and believes that they can achieve success. Someone who has motivation in general will be more likely to survive and they tend to have enough resources to withstand the negative competition that occurs when entrepreneurship (Robert, Daniel & Piers Thompson., 2017). Motivation indicators refer to feeling pressured to do something, for example, doing an activity in order to get a reward or to feel proud.

Potential Students as Prospective Entrepreneurs

Students are referred to as agents of change in later community life. In relation to this, entrepreneurship is one form of change and benefit from the existence of students. With this activity whose perpetrators are students, it will change the social status of the people around them as well. Therefore, it is very important for students to realize the importance of this entrepreneurial activity early on. Students have more knowledge than ordinary people in general, so it is hoped that students can have a good impact on their social life later. In addition, students are also expected to be able to implement their knowledge into social life later.

Factors that Hinder and Spur Student Interest in Entrepreneurship According to The fundamental basis of the entrepreneurial process is often

found in venture success patterns. In addition to variations in business, entrepreneurs, geography, and technology, key enabling factors also dominate the dynamic entrepreneurial process. controlled components of the entrepreneurial process that can be measured, influenced and changed. Founders and investors focus on these factors when conducting the risk analysis process and determining change efforts to increase the chances of venture success. In addition to success, an entrepreneur is also always overshadowed by potential failures that will provide more lessons than just success. there are several factors that cause entrepreneurs to fail in running their new business, namely:

1. Managerial incompetence. Not being competent or not having the skills and knowledge to manage a business is a major contributing factor that makes a company less successful.
2. Lack of experience, both in technical skills, visualizing the business, coordinating, managing human resources and integrating company operations.
- 3 Lack of financial control In order for the company to succeed well, the most important factor in finance is maintaining cash flow, carefully managing expenses and income. Errors in maintaining cash flow will hamper the company's operations and result in the company not running smoothly.
4. Failure in planning. Planning is the starting point of an activity, once it fails in planning, it will experience difficulties in implementation.
5. Inadequate location. Strategic business location is a factor that determines business success. An unstrategic location can make it difficult for the company to operate because it is less efficient.
6. Lack of equipment supervision. Supervision is closely related to efficiency and effectiveness. Lack of supervision can result in inefficient and ineffective use of company equipment (facilities).
7. An attitude that is not serious in trying. A half-hearted attitude in business will cause the business to be unstable and fail. With a half-hearted attitude, the possibility of failure becomes greater.
8. Inability to make entrepreneurial transitions. Entrepreneurs who are not prepared to face and make changes will not become successful entrepreneurs. Success in entrepreneurship can only be obtained if you dare to make changes and are able to make transitions every time.

Social Media Environment

Social media is a tool for delivering messages from sources to audiences. Life today cannot be avoided from technological advances, because scientific progress always follows it.

Technological innovations have been made to benefit human life. Technology offers many conveniences and new ways to do human activities (Al-Kansa et al. 2023). Entrepreneurial spirit includes the ability to take creative and innovative actions to create added value in a changing business context. (Jannah and Fourqoniah 2023)..

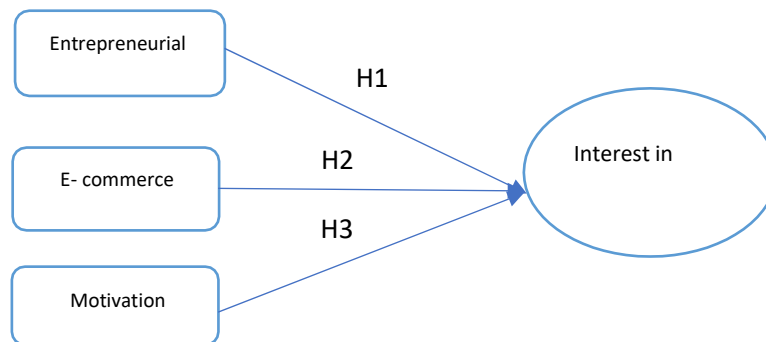


Fig. Framework

Research Methods

This type of research is quantitative research by obtaining data packaged in the form of numbers and analyzing them using statistics so that they are able to fulfill scientific rules, namely concrete / empirical, objective, measurable, rational, and systematic. (Jonathan Saswono 2006). This study consists of entrepreneurial insight, motivation, and the environment as an independent variable and interest in entrepreneurship as the dependent variable. The population in the study were all students of Management Study Program, Faculty of Economics and Business, XXX University. The sampling technique used is simple random sampling technique. The sample taken or used amounted to 150 respondents. The data used in the study are primary data sourced from field studies in the form of questionnaires. The data analysis method used is multiple linear regression tests.

From the table above, it can be seen that the general picture shows the number of 204 respondents. Of the 204 respondents who participated in this study, there were 87 respondents from 2017, and 72 respondents from 2017, there were 45 respondents

from 2018. The percentage of respondents consists of 29.33%, 45.33% and 25.33%, meaning that the 2017 school year is more dominant in this study.

Table 2. Statistical Description of Research Variables

Variables	Std. Deviation	Actual Range	Average Actual	Theoretical Range	Average theoretical
Soul Entrepreneurship	3,090	7-24	19,90	6-24	15
<i>E-Commerce</i>	2,676	6-20	16,21	5-20	12,5
Motivation	2,415	4-16	13,78	4-16	10

From the table above, information about the standard deviation, range and theoretical average of each question and the average and actual range of answers of each respondent can be seen.

Table 3. Model Accuracy Test

ANOVA^b

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	825.353	4	206.338	54.230	.000 ^a
Residuals	521.266	137	3.805		
Total	1346.620	141			

a. Predictors: (Constant), Gender, TPK, TE

b. Dependent Variable: TMB

Based on the ANOVA or Ftest test can be seen in the table above, then obtained

Fhitung of 54.230 is greater than *Ftabel* of 2.67 with a significance level of

0.000. Since the probability is smaller than 0.05 ($0.000 < 0.05$), it can be stated that the variable selection in this study is correct. Significant F test

Table 4. Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.783 ^a	.613	.602	1.951

a. Predictors: (Constant), Gender, TPK, TE

b. Dependent Variable: TMB

The table above shows the correlation coefficient value of 78.3%, this shows the relationship between the factors that influence entrepreneurial interest is quite strong positive. The adjusted R square value of 0.602 or 60.2%, this indicates that entrepreneurial interest can be explained by e-commerce, entrepreneurial knowledge, gender is 60.2% while the remaining 39.8% is caused by other factors that are not explained in this study.

c. The Effect of E-Commerce on

Student Interest in Entrepreneurship The table above shows that e-commerce has a positive effect on student interest in entrepreneurship so that H1 can be accepted. These results are in line with research conducted by (Trihudiyatmanto 2019). Which proves that e-commerce has a positive effect on student interest in entrepreneurship. This study proves that UNSIQ economics faculty students agree with the benefits obtained by implementing e-commerce can reach and interact with consumers more quickly, easily and can play an important role in entrepreneurship.

CONCLUSION

Based on the results of the research and discussion, it is concluded as follows:

a. E-Commerce has a positive effect on student interest in entrepreneurship (H1 accepted). When someone has the knowledge that e-commerce can facilitate online business, it can support to foster entrepreneurial interest.

b. Entrepreneurial knowledge has a positive effect on student interest in entrepreneurship. (H2 accepted). When someone has a good entrepreneurship education, it will support to foster entrepreneurial interest.

c. Motivation to use e-commerce applications in entrepreneurship that motivates members of the organization by motivating themselves. Motivation to use e-commerce applications in entrepreneurship obtained student results that the motivation to use e-commerce applications on respondents who

already have an account is higher than those who do not have an account and do not have a business compared to students who already have their own business or family business.

d. Advice

Seeing that in reality someone who has an interest in entrepreneurship but has not dared to make a full decision to set up a real business. Improve the quality of teaching by providing more adequate facilities and infrastructure to provide entrepreneurship training in accordance with technological developments so that it will encourage students to be more confident in entrepreneurship.

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