Creation of innovations and technologies that affect the effectiveness of e-commerce entrepreneurs among Internet merchants


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Abstract - Creation of innovations and technologies that affect the effectiveness of e-commerce entrepreneurs among Internet merchants have the objective of 1) to study the factors of creating innovation and technology that affect the effectiveness of entrepreneurs. E-commerce business among Internet merchants 2) to study the marketing effectiveness of e-commerce entrepreneurs among Internet merchants; and 3) to study structural equation models, innovation and Technologies affecting the effectiveness of e-commerce entrepreneurs among Internet merchants, survey research methodology, quantitative research methods, e-commerce business groups among Internet merchants 400 The samples were analyzed for confirmation elements (CFA), structural equation analysis (SEM), consistency, empirical data. Chi-square value 176.197 / df = 147.0 / sig. = 0.051 / CMIN / df. = 1.199 / CFI = 0.975 / GFI = 0.931 / IFI = 0.992 / NFI = 0.992 / AGFI = 0.931 /RMSEA=0.020/RMR=0.008 All indexes are qualified. Model consistency was statistically significant.

The research found that the factors that positively influence the effectiveness of innovation and technology affecting the effectiveness of e-commerce entrepreneurs among Internet merchants group the highest. Is the technology innovation of e-commerce business, followed by Communication process, technology innovation, e-commerce business and technology decision-making process for factors that indirectly influence the marketing effectiveness of e-commerce businesses among Internet merchants, it was found that the influencing factor Through the spread of e-commerce technology innovation and the factors that indirectly influence the effectiveness of e-commerce entrepreneurs among Internet merchants through the diffusion of technological innovation of e-commerce businesses and From the decision-making process to use the highest technology innovation is the quality of this technology innovation system. The most direct influence on the spread of technological innovation of the e-commerce business is the technological innovation feature of the e-commerce entrepreneurs among Internet merchants and the factors that directly influence the technology innovation decision-making process in the technology innovation spread of the e-commerce business is the highest. Technological innovation features of e-commerce entrepreneurs among Internet merchants.

Keywords: innovation and technology, e-commerce business, Internet shopping

Introduction

Today is the digital technology world. The advancement of information technology is increasing rapidly. Internet networking and communication technologies have changed the way people live, conduct business and communicate. Today, with the increasing number of Internet

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users around the world, the Internet has become the largest source of information sharing and exchange. In the world, causing the change of communication style from the traditional communication era to the use of communication technology in the digital era of the virtual world (Virtual World) has created the era of communication without borders. Life in both the real-world society and the virtual world society and has a more rapid communication.

From the advancement of the Internet, computer and communication technology, new social innovations are the new social networks that are widely known as "Online Social Community) or “social networks” (Social This social network is a public space where members - people of all ages, races and religions, all educational levels, professions, and social groups from around the world - communicate or write content, stories, experiences, articles. Photos and videos that members have written and made themselves or found in other media. Then share with others who are in their network via the Internet and social media (Social Media). Social networks are growing rapidly and continuously, causing the technological evolution of various types of social media including Weblogs, also known as blogs, social networking sites such as Facebook, Twitter, Myspace, etc.

Social media marketing communication or online marketing plays a role in reaching more consumers and responding to customers immediately. Online marketing materials can also reach the target audience completely. Therefore, the success of online marketing has a very important role and importance as small and medium enterprises in large countries pay more attention to advertising, public relations and presentation of products and services through social media, for example. For example, via Facebook, Instagram fan page. and Twitter. In addition, social networks are often used as a meeting point for friends or acquaintances. Or even use it as a public space to share information with people in the community. The people in the community can do various activities. both for business studies and entertainment together [4]

At present, the Thai e-commerce business has a continuous growth trend. In 2017, the total value was approximately 2,812,592.03 million baht, or 9.86 percent, an increase from 2016. The proportions are divided by type as follows: 1) B2B e-commerce has a sales value. in the amount of 1,675,182.23 million baht, or 59.56%, an increase of 8.63%; 2) B2C e-commerce with a transaction value of 812,612.68 million baht, or 28.89 percent, an increase of 15.54%; and 3) B2G e-commerce with a sales value of 324,797.12 million. baht, representing 11.55%, an increase of 3.24%. It was found that the industries with the highest value were the retail and wholesale industry with a value of 869,618.40 million baht (30.92%), the second place, the accommodation industry, with a value of 658,131.15 million baht (23.40%), and the third industry was the accommodation industry with a value of 658,131.15 million baht (23.40%). Production, valued at 417,207.07 million baht (14.83%), 4th place, information and communication industry, valued at 404,208.00 million baht (14.37%), 5th place, transportation industry, valued at 104,904.28 million baht (3.73%), 6th place, art industry Entertainment and recreation, valued at 19,716.04 million baht (0.70%), ranked 7th in other service industries, valued at 11,280.33 million baht (0.43%), and 8th in insurance industry, valued at 2,729.65 million baht (0.10%). [6]

The key point of e-commerce business entrepreneurs in online marketing is reaching the desired target audience in order to link them to more product or service sales. Therefore, the strategy must understand the daily life style of the target audience and understand their habits, thoughts, activities of interest in order to find a connection point with the target audience. Attract the target audience to be interested in increasing sales by entrepreneurs should choose to apply social networks in online marketing. For products or services that have a target consumer group who regularly uses social networks and can be influenced by word of mouth. In addition,
entrepreneurs also need to prepare personnel who can supervise and operate online community marketing, as well as choose the right social media marketing format and content. In addition, the effectiveness of social media usage should be monitored and assessed for the benefit of adjusting marketing strategies appropriately.

From the importance of technological innovation as mentioned above Therefore, the researcher is interested in studying technological innovations that affect the success of electronic commerce by focusing on the creation of innovations and technologies that affect the effectiveness of e-commerce operators in the group of internet merchants. For the results of the study, it will help encourage e-commerce entrepreneurs to see opportunities and take advantage of the e-Commerce market to adapt to modern marketing channels to reach more consumers. Including helping to generate revenue and increase sales of products and services as well as being useful in the effective management and development of e-commerce marketing promotion and distribution strategies among e-commerce business operators to consumers and for the benefit of strategic planning and the most efficient distribution of e-commerce which will affect the Thai economy as a whole as well as to increase the capability of Thai entrepreneurs to be ready to compete in the world market. digital age

Research objectives

1. To study the factors of innovation and technology that affect the effectiveness of e-commerce operators in the group of internet merchants.
2. To study the success of electronic commerce, e-commerce business operators in the group of Internet commerce operators.
3. To study the structural equation modeling of technological innovations affecting the success of electronic commerce, e-commerce entrepreneurs in the group of Internet commerce entrepreneurs.

Scope of research

In this study, the researcher has determined the scope of research for technological innovations that affect the success of electronic commerce, e-commerce entrepreneurs in the group of internet trading operators as follows:

1. A study of the structural equation model of technological innovations affecting the success of electronic commerce, e-commerce business operators in the group of internet trading operators. is an exploratory research using quantitative research methods (Quantitative Method) The research tool was a questionnaire. (Questionnaire) The sample group was E-commerce business operators in the group of operators who sell products via the Internet, 600 samples.
2. The variables in this research consisted of
   2.1 Independent variables have 2 variables as follows:
       2.1.1 The characteristics of resources consist of 5 variables, namely, resources, development, support, technology and participation
       2.1.2 Technology innovation management consists of 4 variables, namely policy, goal, action plan, and resource preparation
       2.2 Common variables There are 2 variables as follows:
       2.2.1 Trust in technological innovations consisted of 5 variables: personal experience trusts acceptable risk reliability and the response
2.2.2 Technology innovation management consists of 5 variables, namely, resource supervision. Resource Promotion knowledge innovation the sufficiency of resources and the readiness of personnel

2.3 Dependent variable is the success of e-commerce entrepreneurs in e-commerce in the group of online merchants. There are 5 variables, namely, return, customer base, market value utilization and evaluation.

Concepts, theories and related research

In this research, the researcher aims to study the structural equation modeling of technological innovations affecting the success of e-commerce, e-commerce operators in the group of online merchants. By integrating the ideas of [1] marketing strategy in the digital era is a transformation of marketing competitive strategy into relationship with corporate resources, which is a strategy that businesses use to accumulate resources. corporate value and related research in which [5] studied behavior and important factors from marketing communication towards product purchase of consumers from marketing communication in social media format. The importance of social media marketing communications is at a high level and consumer purchase of products from social media marketing communications. in the understanding the average level of feelings and behaviors was the highest level of product purchase. Important factors from social media marketing communication are related to product purchase of consumers from social media marketing communication, perception stage and behavior stage both in the same direction and in Different directions. [8] has studied the strategies of marketing beauty products through digital trading channels and found that the online marketing mix is of the highest importance, namely sales channels, price, promotion. marketing Privacy Personal service and products the sub-factor with the highest average was the website's ease of use, ease of use, and speed of searching, choosing and ordering. hypothesis test results It was found that online marketing mix factors were related to the purchasing behavior of beauty products through digital channels is relatively low.

research method

The study of technological innovations affecting the success of electronic commerce, e-commerce entrepreneurs in the group of Internet commerce entrepreneurs was a survey research using quantitative research methods. (Quantitative Method) using descriptive research methodology and using questionnaires as a tool for collecting data. There are procedures and methods for conducting research as follows:

Population and sample

1. The research population is e-commerce operators in the group of internet merchants.
2. The sample size is determined from the number of e-commerce operators of 527,324, of which 158,197 e-commerce operators are registered in the Bangkok area, from the Ministry of Digital Economy and Society. year Therefore, the sample size was determined using the concept of calculating the sample size of Taro Yamane. In the event that the population studied at 95% confidence level and the tolerance of the error is not greater than 5%, use the formula.

From the calculation of the sample size according to the Taro Yamane formula, the total number of samples was 398.99 or 399 samples, which considered the suitability of the samples used in this research. The researcher determined that the sample size was suitable for the AMOS data analysis by using the Structural Equation Model (SEM) technique, which the researcher used to determine the sample size according to [9] and Hair et al (2010) stated that the sample size should be 10 to 20 times the number of observed variables in the study. In this research, there were
24 observable variables (24 X 20 times equal to 480), thus increasing the sample size from 399 samples to 600 samples, which from the calculation results is the minimum sample size that can be used for Analyzing by using structural equation modeling (SEM) analysis techniques, therefore, but for the completeness and completeness of the data of e-commerce entrepreneurs in the group of Internet merchants who have a large number of questionnaires distributed, a total of 600 samples were made.

3. Sampling The researcher uses a probability sampling method using the Simple Random Sampling method. The convenience of the researcher was mainly from the sample group who provided cooperation with information from e-commerce business operators in the group of Internet commerce operators in the Bangkok area. The total number of samples was 600 samples.

Educational tools

The tools used this time the closed-ended questionnaire consists of 3 parts:

   Part 1 Questionnaire on personal characteristics factors, 6 items, consisting of gender, age, education level, type of business, average monthly income, and period of operation It is a closed-ended question with only one answer.

   Part 2 Questionnaire on variables of technological innovation in e-commerce operations for e-commerce business operators in the group of internet trading operators consisted of Resource attributes Technology Innovation Management Trust in technological innovation technology innovation management It is a closed-ended question with only one answer. Using a Liker Scale with 5 different answer levels, 95 questions total.

   The third part of the questionnaire about the success of electronic commerce entrepreneurs in the e-commerce business in the group of merchants selling products via the Internet consisted of: return, customer base market value utilization and evaluation, there are 25 questions, which are closed-ended questions with the respondents to choose only one answer. Using a Liker Scale with 5 levels of answers to choose from.

Data collection

   1. Secondary data includes information from research and collection from document books. Technology innovation concept, technology innovation trust concept, strategic management component concept in strategy implementation, strategic management concept, strategic management process concept and related research.

   2. Primary data is data from questionnaires answered by a sample group obtained from a specific random sample from a sample group or e-commerce business operators in the group of Internet commerce operators, sent in a total of 600 samples by the respondents to answer. Questionnaires and collect questionnaires and code them After that, the data is imported into the computer for processing. by using a statistical program for research.

Data Analysis and Statistics used in Research

   1. Data analysis

      1.1 Examine the researcher's data to verify the completeness and completeness of the questionnaire, and compile a questionnaire for use in coding by bringing the correct questionnaire already Let's enter the pre-defined code. for closed-ended queries open-ended questionnaire the researcher grouped the answers and counted the scores and entered the code.

      1.2 Data processing the code is then saved to a file using a computer for processing. To calculate statistics using the program SPSS For Windows.
2. Statistics for data analysis consists of the following statistics:

2.1 Descriptive statistical analysis, i.e., frequency, percentage, arithmetic mean, standard deviation, range, minimum, maximum, variance, skewness, kurtosis.

2.2 Analysis using inferential statistics (Inferential Statistics) using statistics in the analysis consisting of confirmatory component analysis. (Confirmatory Factor Analysis (CFA) and Structural Equation Model: SEM) to check the harmony of the research model with the empirical data (Model Fit). The indices used to check the coherence of the model with the empirical data consisted of Chi-Square, CMIN/df., CFI, GFI, IFI, NFI, AGFI, RMSEA and RMR indices. Model Harmony Verification Statistical data processing from ready-made computer programs.

Summary of research results

1. Results of general data analysis, most of the e-commerce business operators are female 67.50% and 37.50% male, aged between 31-40 years old 47.50%, followed by 46-50 years old, 35.5% and older. 50 years, 14.0%, educational level, Bachelor's degree, 66.25 percent, followed by 28.00 percent below bachelor's degree, 58.48% were retail entrepreneurs and 46.52% were wholesalers, with average monthly income between 50,000 – 100,000-baht, 35.85 percent, followed by income 100,01 – 150,000 baht, 26.45%, and income less than 50,000-baht, 13.40 percent, with a period of more than 5 years - 10 years, 46.50 percent, followed by less than 5 years. 28.25 percent, respectively.

2. The results of the analysis of e-commerce business operators had an average of 3.98 opinions on the characteristics of resource components, with the highest opinion on the development aspect with an average of 4.21, followed by the resource participation aspect. Technology and support, respectively. In the technology innovation management component, the opinions were at a high level with an average of 4.43, with the highest opinion on policy having an average of 4.12, followed by goals on action plans and resource preparation. Technology innovation management elements have opinions. At a very high level, there is an average. 3.76 with the highest opinion on the readiness of personnel with an average of 3.87, followed by knowledge innovation. resource management Resource Promotion and the sufficiency of resources. The Trust Element in Technology Innovation There is a very average level of opinion. 3.87 with the highest opinion on acceptable risk, with an average of 3.76, followed by reliability. Responsive reliability and personal experience Components of e-commerce success have an opinion at a high level with an average of 4.00 with the highest opinion on utilization. with an average of 4.05, followed by evaluation aspect market value, return, and customer base, respectively.

3. The results of the analysis of the statistical examination of the technological innovation model variables affecting the success of e-commerce business operators in the group of Internet trading operators. The underlying variables consisted of 2 variables, namely resource characteristics and Technology innovation management the common variables consisted of 2 variables, namely, trust in technology innovation and technology innovation management, variable according to the success of electronic commerce, e-commerce operators in the group of internet trading operators. The range is between 2.67 – 3.15, the minimum is 2.00 and the maximum is 5.00, the mean is between 3.86 – 4.21, which is a high level. The standard deviation (S.D.) ranged from 0.52 to 0.66, indicating that the data was distributed close to the mean. This is because the standard deviation is not more than 30% of the mean and the variance or square of the standard deviation to measure the distribution of the data is between 0.27 – 0.44 when considering the skewness. (Skewness) or asymmetry of the distribution as a whole, it was found that the
distribution was skewed to the left. (negative skewness) indicates that the data for all variables scores above the mean. The skew values are between (-1.06) and (-0.27). Considering the kurtosis between (-0.36) and 1.66, the variable is considered to be distributed as a normal curve. The results of descriptive statistical analysis showed that the variables were reliable and suitable to be analyzed into the structural equation model, technological innovations affecting the success of e-commerce, e-commerce business operators. In the group of entrepreneurs who can sell products via the Internet.

4. The results of the structural equation analysis of technological innovation models affecting the success of electronic commerce, e-commerce operators in the group of Internet commerce operators examined the suitability and correctness of the e-commerce model. structure and adjust the model to be perfect in order for the statistical values to be accepted by means of linking variables Modification Indices and checking the suitability and validity of the structural equation model by considering the regression coefficient weight between 0.89 – 0.96, the multiple correlation coefficient (R2) to Check the variance in conjunction with the indicators.

The results of the causal structural equation test analysis, the technological innovation model affecting the success of electronic commerce, e-commerce entrepreneurs in the group of Internet trading operators, independent variables, change leadership variables. motivation to work recognition of organizational support Work satisfaction and organizational commitment and dependent variables of e-commerce success of e-commerce business operators in the group of online merchants. by considering the regression coefficients of the independent variables in the form of standard scores. which is the decision coefficient that indicates the influence of the variable the statistical significance at 0.001 and the statistical significance at 0.05 were summarized as follows:

1. The characteristics of resources consist of 5 latent variables, namely, resources, development, support. technology and participation the regression coefficient was weighted between 0.94 – 0.97 and the multiple correlation coefficient (R2) of 86.0% - 91.0% percent. The test results showed that resource characteristics influenced the success of e-commerce, e-commerce entrepreneurs among entrepreneurs. online shopping for goods There were 4 direct influences and 5 indirect influences.

2. Technology innovation management consists of 4 latent variables. In terms of policy, goals, action plans, and resource preparation, the regression coefficients were weighted between 0.85–0.95, and the multiple correlation coefficient (R2) was 83.0% - 91.0%. on the success of e-commerce, e-commerce operators in the group of internet trading operators who have direct influence There are 3 aspects and there are 3 indirect influences.

3. Trust in technology innovation consists of 5 latent variables: personal experience trusts acceptable risk reliability and the response the regression coefficients were weighted between 0.84 – 0.93, and the multiple correlation coefficient (R2) was 84.0% - 94.0%. The test results showed that trust in technology innovations influenced the success of e-commerce, e-commerce operators in the group. Traders selling products via the Internet. There were two direct influences and one indirect influence.

4. Technology innovation management consists of 5 latent variables: personal experience resource management Resource Promotion knowledge innovation the sufficiency of resources and the readiness of personnel the regression coefficients were weighted between 0.47 – 0.94 and the multiple correlation coefficient (R2) was 41.0% - 94.0%. The results showed that technology innovation management had an influence on the success of electronic commerce, e-commerce
operators in the group of entrepreneurs. Engage in trading products via the Internet. has a direct influence on one side.

5. The success of electronic commerce, e-commerce business operators in the group of Internet trading operators are sent as dependent variables, consisting of 5 latent variables, namely, return, customer base, market value utilization and evaluation the regression coefficient was weighted between 0.64 – 0.96 and the multiple correlation coefficient (R2) was 49.0% - 98.0%.

The results of the analysis of the influence of the causal structural equation, the technological innovation model affecting the success of e-commerce business operators in the group of Internet commerce entrepreneurs revealed that the factors affecting the success of e-commerce operators among the highest e-commerce operators are resource attributes. have the most positive influence the total influence coefficient was 0.79, followed by technological innovation management with the total influence coefficient. 0.65 Trust in Technology Innovation Total Influence Coefficient 0.43 and technology innovation management total influence coefficient 0.24, with 94.0% explaining the influence of change. In addition,[7] the research also found that the factor in technology innovation that affects technology innovation management the most is technology innovation management. Total influence coefficient 0.76 followed by resource characteristics. The total influence coefficient of 0.65 and the trust in technology innovation The total influence coefficient of 0.35 describes the influence of change by 74.0%, and the technology innovation factor that most affects the trust in technology innovation is the management of technology innovation. Total influence coefficient 0.56 followed by resource characteristics. The total coefficient of influence 0.36 describes the influence on the percent change. 74.0% and resource characteristics have a positive influence on the management of technological innovation. The total influence coefficient of 0.86 explains the influence on the change by 68.0%, which from the analysis results summed up the hypothesis testing of technological innovations affecting the success of electronic commerce, e-commerce operators in the online shopping merchants’ group. Internet.

Discuss the results

From the research results, the structural equations, technological innovation models that affect the success of electronic commerce, e-commerce operators in the Internet trading operators’ group were consistent with the empirical data with statistically significant results. The influence of technology innovation model affecting the success of electronic commerce, e-commerce entrepreneurs in the group of internet merchants found that the factors affecting the success of electronic commerce, e-commerce entrepreneurs in the group of entrepreneurs the highest delivery of online product trading is Resource attributes the highest positive influence, followed by technology innovation management. Trust in technology innovation and technology innovation management, research results are in line with the concept of [10] said that marketing strategy in the digital era is a transformation of marketing competitive strategy into relationship with corporate resources, which is a strategy that businesses use to accumulate valuable organizational resources. The research also found that the factors of technological innovation that had the greatest effect on technology innovation management is the management of technological innovation, followed by resource characteristics. and trust in technological innovation This is in line with the [12] which studies technology innovation and service quality that affect the decision to choose a mobile phone service provider in Bangkok. It was found that technology innovation and quality Service affecting the decision to choose a mobile phone service provider in Bangkok is the innovation of observing technology. service quality Trust.
In addition, the most important factor in technology innovation that affects the trust in technology innovation is technology innovation management, followed by technology innovation. Resource attributes and resource attributes have a positive influence on technology innovation management, consistent with the concept of [13] that innovation is a new idea or practice that is completely or partially changed from the previous practice. What has been done in order to be used to improve the efficiency of various operations and resource attributes have a positive influence on the success of electronic commerce, e-commerce operators among Internet commerce operators, through trust, technological innovation and technological innovation management, resource attributes have a positive influence. On the success of e-commerce, e-commerce operators in the Internet commerce group through technology innovation management and through technology innovation management in the field of technology innovation management have a positive influence on the success of e-commerce. Electronic commerce, e-commerce business operators in the group of operators selling products via the Internet through trust, technological innovation and technological innovation management. In line with the concept of [11] said that managing an innovative organization by applying skills, knowledge and creativity is an important tool of management with the goal of creating added value for Product organization, including the aspect of improving operational and production efficiency. And trust, technological innovation has a positive influence on the success of e-commerce operators, e-commerce operators among Internet commerce operators. Through the management of technological innovations in line with the concept of [10] who said that organizational innovation is the nature of an organization that has successfully applied new changes and spread until it became an order. practices for the general public that lead to the good effectiveness of the organization.

Suggestions
Suggestions for this research
1. According to research results, technology innovation management has a positive influence on the success of e-commerce entrepreneurs in e-commerce operators among Internet commerce entrepreneurs. Therefore, there should be a clear direction, objectives, goals and strategies that can develop the organization. To be an organization of technological innovation, as well as to manage the organizational structure that can stimulate and cause technological innovation within the organization, especially the organizational structure that has the appropriate level of flexibility to stimulate to create technological innovations within the organization.

Suggestions for the next research
1. There should be a study of the sample group classified by the e-commerce business operators in each industry to acknowledge the technological innovations that affect the success of e-commerce. different environment

References

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