

ISSN 2063-5346



DESIGN THINKING AS A STRATEGY TO IMPROVE BUSINESS PERFORMANCE OF E-COMMERCE COMPANIES IN INDONESIA

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Article History: Received: 01.02.2023

Revised: 07.03.2023

Accepted: 10.04.2023

Abstract

The growth of the e-commerce industry in Indonesia shows a rapid increase, the dominant factor as a cause is the existence of very wide business opportunities that can be obtained from the potential of a large population. Opportunities for e-commerce companies are still wide open to develop their business with bright prospects. This research was conducted with the aim of getting an overview of the influence of a dynamic environment, dynamic capabilities, design thinking, partnership programs, eco-innovation programs, on the business performance of e-commerce companies in Indonesia. This study uses a quantitative approach with descriptive and explanatory survey types with the number of respondents as many as 65 companies. The object of research is an e-commerce company engaged in the marketplace and retail. Data analysis was performed using descriptive statistics and inferential statistics. The results of the descriptive analysis show that the dynamic environment, dynamic capabilities, design thinking, partnership programs and eco-innovation programs as well as the business performance of e-commerce companies in Indonesia are obtained as follows: The company's ability to adapt to a dynamic environment is in an influential position, dynamic ability is one of the variables studied showing a fairly influential position, design thinking strategies in e-commerce companies in Indonesia are quite influential, partnership programs in good e-commerce companies and eco-innovation programs in e-commerce companies' trade are good. The allocation of costs for implementing partnership and eco-innovation programs is supported by the management of partner companies.

Keywords: Strategy, business performance, e-commerce, design thinking

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DOI: 10.31838/ecb/2023.12.s1.074

1. Introduction

Business strategy is an important thing that needs to be prepared from the start, business strategy is a company's effort to take policies that are guided by integrated commitments and actions. Business strategy design is carried out to achieve competitive advantage in accordance with business objectives. Companies can determine the direction by identifying markets, competitors, customers in order to improve maximum business performance with the support of a good business strategy. The strategy used by the company will help determine long-term performance results (Wheelen et al., 2014). Economic growth can be created through e-commerce business which is caused by the speed of sales, the breadth of the business reach and the increase in the revenue chain.

The impact of the Covid-19 pandemic is a decline in the economy, so many business actors turn to online or e-commerce businesses. In Indonesia, e-commerce business opportunities are still wide open, prospects are bright, and will have a positive influence on economic growth in Indonesia. In the e-commerce business there are aspects involved such as sellers, buyers, intermediaries, policies and regulations from regulators. Efforts to reach the market for e-commerce companies must introduce products to be marketed to potential consumers by carrying out targeted promotions, recognizing potential customers, strengthening branding, maximum service, and doing it regularly. The most effective promotional media is online through social media, marketplace, email marketing, facebook pixel, google ads, blogs, online forums, WhatsApp Business, linkedin and paid advertising.

In 2019, the start of the covid-19 pandemic, Indonesia became the country that adopted the highest e-commerce in the world in 2019. The e-commerce industry can open up new opportunities that can create trickle-effect for the industry in supporting sectors such as logistics, IT infrastructure, and e-commerce operators. The service business and retail sales consisting of several categories, such as fashion, consumer goods, as well as beauty and health products still dominate the e-commerce industry in Indonesia, which is facilitated by the existence of a marketplace.

Today's people's lifestyle is partly dependent on technology, as a result of which traditional business transactions are starting to be abandoned, therefore e-commerce will become one of the prima donna of businesses that can boost the emergence of new start-ups that can meet the needs of the wider community. The increase in digital-based transactions occurs due to the amount of time at home during the pandemic, increasingly sophisticated and established technology accompanied by easier transaction processes. The development of e-commerce has become a driving force for digital-based businesses, with high e-commerce growth. In Indonesia, the opportunity to work on digital-based businesses is still very wide, so that Indonesia is not a target for foreign markets, but is fertile ground for quality e-commerce entrepreneurs in Indonesia who are able to become world-class companies.

Currently, business people can offer services or products digitally with a wider reach of consumers. The number of startups in Indonesia in 2021 based on the records of the Financial Services Authority is 2,319. Of these, there are eight unicorns and one decacorn company which makes the potential for digital transactions in the country very extraordinary, which is estimated to reach \$ 124 billion by 2025. As many as 88.1% of internet users in Indonesia use e-commerce services to buy certain products (Kominfo, 2021)

2. Literature Review and Hypotheses

2.1 Literature Review

Strategic management is defined as a process of evaluation, planning, and implementation designed to maintain or enhance competitive advantage. The evaluation process relates to the external and internal environment. Planning involves developing business models, corporate directions, competitive tactics, international strategies, acquisitions, and collaborative actions. The implementation phase requires leadership to build an appropriate organizational structure, develop a management culture, control strategic processes, and direct the organization through corporate governance (Sammut-Bonnici, 2015).

Strategic management emphasizes long-term performance, the company goes through a decision-making process, evaluates the things that are done and the implementation of

activities that are carried out well, this process is carried out continuously by evaluating and controlling the internal business, analyzing competitors and competitive strategies, evaluating opportunities and threats by taking into account the company's strengths and weaknesses. Many companies can manage high short-term performance, but not many can sustain it in the long term. In order for a company to succeed in maintaining long-term performance, it must be able to carry out activities that satisfy the market, and must be able to adapt its activities to meet new markets. Strategic management is managerial decisions and actions that help determine the long-term performance of an organization (Wheelen, 2018). The strategic management process begins with an in-depth evaluation of the organization's internal environment and its external environment. Evaluation is a component of a SWOT analysis (internal strengths and weaknesses, external opportunities and threats). The main component of internal analysis is the company's resources that can be combined and developed into capabilities (Sammut-Bonnici, 2015). The environmental evaluation process develops a set of strategic plans and implements them through three stages, namely strategic evaluation, planning strategic activities, and implementing strategic activities.

Strategy formulation, developing a vision and mission, identifying external opportunities and threats of the organization, determining internal strengths and weaknesses, setting long-term goals, generating alternative strategies, and selecting specific strategies to pursue (David, 2011). The formulation is divided into two, namely external analysis and internal analysis. The company will conduct an external analysis that focuses on environmental threats and opportunities that refer to economic, social, cultural, demographic, environmental, political, legal, governmental, technological, competitive trends and events that can significantly benefit or harm the organization in the future. Internal analysis focuses on the analysis of company resources (such as place, machinery, financial capital, human capital, and distribution networks), which can be combined and developed into capabilities (Sammut-Bonnici, 2015).

In a company, a leader has a very important role, so it is necessary to know and understand carefully the conditions inside

(internal) and outside (externally) the company. Internal factors have a very important influence in achieving company goals, namely by controlling the management system as a basis for employees in carrying out their work. External factors are factors that exist outside the company, namely a dynamic environment that can affect the achievement of company goals which often experience changes and turmoil.

2.1.1 Dynamic Environment

The dynamic environment provides major changes to dynamic capabilities, dynamic environmental factors encourage companies to have good capabilities in developing companies, so that companies will be able to maintain their performance (Winter, 2003). Environmental conditions affect organizational actions, including in the process of making organizational strategies (Lenz, 1981). According to (Igor Ansoff & Sullivan, 1993) that the relationship between environmental change must rely on a number of strategic plans to be able to cope with unexpected changes and conditions.

2.1.2 Dynamic Capabilities

Aspects of dynamic capabilities are very important for companies to achieve competitive advantage, dynamic capabilities as a mindset in integrating, reconfiguring, updating and reinventing core capabilities in response to a constantly changing environment in achieving and maintaining competitive advantage (Wang & Ahmed, 2007). According to (Teece et al., 1997) dynamic capability is the company's ability to integrate, build, and reshape its external and internal capabilities to respond to environmental changes, the ability to achieve competitive advantage, the dynamic capability approach emphasizes two aspects, namely the dynamic aspect of updating competencies in accordance with changes in the business environment and the capability aspect emphasizing the key role of strategic management.

2.1.3 Design Thinking

Design thinking is a concept of thinking in finding ideas that has become popular among many people in recent years. Design thinking, will become an indispensable concept for now and in the future (Dalsgaard, 2014). Design thinking is very important for

humans as the center of the innovation process which emphasizes observation, collaboration, fast learning, visualization of ideas, rapid concept prototyping and business analysis which greatly affects innovation and business strategy (R. Cooper et al., 2009). Design thinking is defined as a collaborative process to find practical, not theoretical solutions (Tim Brown, 2008). Design thinking is an iterative process with the goal of understanding users, making assumptions, and redefining problems to identify alternative strategies and solutions. Design thinking uses a solution-based approach to solving problems. Design thinking can be done in accordance with the stages, namely Emphasise, define, ideate, prototype, test. Design thinking serves to solve unclear or unknown problems, generate ideas in brainstorming, and adopt a hands-on approach to prototyping and testing. Design thinking also involves ongoing experimentation in the form of sketches, prototypes, testing, and sharing of concepts and ideas. Design thinking can have a real impact in business with a change in mindset for example the focus of innovation has shifted from initially focusing on technical things to focusing on design, product centric to customer centric, and marketing focus shifting to focus on user experience so design thinking is at the core of effective strategy development and organizational change.

2.1.4 Partnership

The application of partnerships will provide benefits for the company, namely synergy so that each partner gets more benefits, work processes and results are obtained faster because of adequate information, the company is more flexible, there is risk sharing, reduces capital requirements because the company concentrates on effective core competencies, the business capabilities of each partner will increase, because with the same information one can obtain additional benefits and advantages from partners, achieve efficiency and effectiveness. Partnership is a cooperation strategy that is formed because of the dimensions of trust and commitment between partners. Trust and commitment are formed due to several influencing factors, including resource dependence, relationship quality factors (Vigneron et; al, 1999), flexibility factors, and information dissemination factors.

With partnerships, companies get several important benefits, namely market access,

technology, and capital. To expand its activities to international or global markets, companies must establish partnerships with various parties such as suppliers, distributors and even consumers. By partnering, companies can also get opportunities to innovate, create knowledge and improve organizational capabilities and human resources. According to (Wittmann et al., 2009) partnerships can provide benefits and positive impacts for the two companies involved if using an approach based on resources, competencies and relational factors. In addition, companies can cooperate with other companies in the form of eco-innovation development as an effort to encourage companies to overcome environmental damage and preserve ecosystems.

The implementation of eco-innovation in every industrial practice has been targeted by the National Innovation Committee which focuses on energy, water, food, health, medicine, education, marine, defense and weaponry, transportation, information and communication technology, and the creative economy. Indonesia is a country that needs eco-innovation because the industrial development base that has been applied so far is based on natural resources. Environmental damage originating from upstream such as illegal logging for various purposes, and downstream such as industrial production waste, is a latent problem that can be solved. Eco-innovation has been defined with different goals because the concept of environmental technology has changed a lot in line with the changing environmental agenda.

2.1.5 Eco-Innovation

Eco-innovation refers to all forms of innovation (technological and non-technological), new products, services, new business practices, which create business opportunities and environmental benefits by preventing or reducing their impact, or by optimizing the use of natural resources (including energy use). Based on the definition of the Organization of Economic Co-Operation and Development (OECD), Eco-innovation is the implementation of the development of new products or services, new processes, new marketing methods, new organizational methods in workplace organizations or external relations (*Regions*, 2005).

The concept of green industry or green industry is defined as development activities

and industrial products that do not have an impact on the environment or harm human health (UNIDO, 2011) with the aim of strengthening environmental, climate and social aspects in the company or company environment. business activities. The development of domestic industries that lead to the development of green industries, the Indonesian government takes an approach that is not much different from the practice carried out by developed countries which first developed a green industry, namely by developing existing industries towards green industries and building green industries. new industry with green industry principles.

2.1.6 Business performance

Sustainable business performance is also known as green business. A sustainable business is one that minimizes negative environmental and social impacts so that future generations have adequate resources to meet their needs and can ensure long-term health for survival. Sustainable business performance is critical to success in a competitive environment (Haseeb et al., 2019). Figure 2.1 shows a strategic design thinking model to improve the business performance of e-commerce companies in Indonesia.

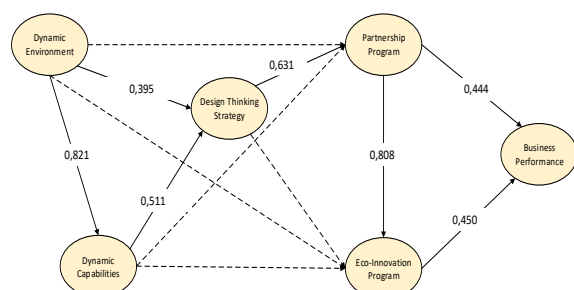


Figure 2.1 Design Thinking Strategy to Improve Business Performance

2.2 Hypothesis

Based on the strategy design thinking model to improve the business performance of e-commerce companies in Indonesia that has been described, the research hypothesis can be formulated as follows:

H1: The relationship between dynamic environment and dynamic capability is significant with a T-statistic value of 2.558 (>1.96) p-value of 0.000 (<0.05). The estimated value of the original sample is 0.821 which indicates that the direction

of the relationship between dynamic environment and dynamic capability is significant. Thus the hypothesis H1 in this study which states that "dynamic environment affects dynamic capabilities" is accepted.

H2: The relationship between dynamic environment and design thinking is significant with a T-statistic value of 2.838 (>1.96) p-value 0.000 (<0.05). The estimated value of the original sample is 0.395 which indicates that the direction of the relationship between dynamic environment and design thinking is significant. Thus the H2 hypothesis in this study which states that "dynamic environment affects design thinking" is accepted

H3: The relationship between dynamic capability and design thinking is significant with a T-statistic value of 3.64 (>1.96) p-value of 0.000 (<0.05). The estimated value of the original sample is 0.511 which indicates that the direction of the relationship between dynamic capabilities and design thinking is significant. Thus the H3 hypothesis in this study which states that "Dynamic capabilities affect design thinking" is accepted.

H4: The relationship between design thinking and partnership programs is significant with a T-statistic value of 6.348 (>1.96) p-value of 0.000 (<0.05). The estimated value of the original sample is 0.631 which indicates that the direction of the relationship between design thinking and the partnership program is significant. Thus the hypothesis H4 in this study which states that "design thinking affects the partnership program" is accepted.

H5: The relationship between the partnership program and business performance is significant with a T-statistic value of 4.204 (>1.96) p-value of 0.000 (<0.05). The estimated value of the original sample is 0.444, which indicates that the direction of the relationship between the partnership program and business performance is significant. Thus the hypothesis H5 in this study which states that "Partnership programs affect business performance" is accepted.

- H6: The relationship between the partnership program and the eco-innovation program is significant with a T-statistic value of 21.405 (>1.96) p-value 0.000 (<0.05). The estimated value of the original sample is 0.808, which indicates that the direction of the relationship between the partnership program and the eco-innovation program is significant. Thus the hypothesis H6 in this study which states that "partnership programs affect the eco-innovation program" is accepted.
- H7: The relationship between eco-innovation programs and business performance is significant with a T-statistic value of 3.952 (>1.96) p-value of 0.000 (<0.05). The estimated value of the original sample is 0.450 which indicates that the direction of the relationship between the eco-innovation program and business performance is significant. Thus the hypothesis H7 in this study which states that "Eco-innovation programs affect business performance" is accepted.

3. Method

This study examines design thinking strategies to improve the business performance of e-commerce companies. The implementation of eco-innovation programs and partnership programs to improve the business performance of e-commerce companies in Indonesia with a strategic management approach as an effort to improve business performance is something that must be considered by company management. There are two research variables in this study, including the dependent variable (endogenous) namely the business performance of e-commerce companies and as the object of research as the independent variable (exogenous) namely dynamic environment, dynamic capabilities, design thinking, partnership programs and eco-innovation programs. The unit of analysis used as respondents in this study is an e-commerce company in Indonesia. This research was conducted in less than one year from April to September 2022.

The type of research conducted is descriptive and verification research. Descriptive research is research that describes something (Naresh K. Malhotra, 2015). Through descriptive research, a description of the assessment data from respondents regarding

the dynamic environment, dynamic capabilities, design thinking, partnership programs and eco-innovation programs will be obtained as well as an overview of the business performance of e-commerce companies.

Verification is research conducted to test the truth of the existing sciences in the form of concepts, principles, procedures, propositions and practices from the science itself (Arifin, Z, 2011), verification research aims to obtain the truth of the hypotheses brought. how to collect data from the field, regarding the influence of dynamic environments, dynamic capabilities, design thinking, partnership programs and eco-innovation programs on business performance in e-commerce companies.

Based on the type of research, namely descriptive and verification research which was carried out by collecting data from the field, the sampling method in this study was a random sampling method which was carried out by collecting data randomly from members of the population. Each member of the population has an equal chance of being selected as a member of the sample. The type of technique used in this study is cluster random sampling, which is a sampling technique using a population that does not come from a cluster of e-commerce companies. The selected respondents came from groups based on the type of idEA member companies that have a large enough population of members. Data collection techniques are carried out by distributing questionnaires or questionnaires to respondents using the Google Form application. Questionnaires or questionnaires are data collection techniques that are carried out by giving a set of written statements to respondents to be answered (Sugiyono, 2011).

Primary data sources were obtained by conducting interviews with the Chief Executive Officer (CEO) of e-commerce companies. Another source of data is the result of distributing questionnaires sent to every e-commerce company in Indonesia. The secondary data sourced from internet data such as the idEA website,

3.1 Population and sample

The population in this study is the company which is engaged in e-commerce and is a member of the Indonesian E-commerce Association (idEA). The population of e-commerce companies spread across various

parts of Indonesia is 500 companies(idEA, 2021).

The sample is part of the total population and the characteristics possessed by that population (Sugiyono, 2015). The determination of the number of samples developed by Roscoe in Sugiyono (2015) is a feasible sample size in the study is 30 to 500. From the number of population members that are considered large enough and spread in various parts of Indonesia, in this study a sample was taken with the hope that the number of the sample taken can represent the population that is used as the object of research. According to (Gay L.R and Diehl, PL, 1992) that the sample must be as large as possible, the more samples taken, the more representative and the results can be generalized, but the sample size accepted in descriptive research is at least 10% of the population. Based on the provisions of Gay L.R and Diehl, PL (1992) in this study with a population of 500 companies engaged in e-commerce and incorporated in idEA, the number of samples taken was 10% of the 500 companies that support the e-commerce business as many as 50 companies.

3.2 Data Collection Technique

This study uses techniques in the data collection process including:

- a. Questionnaire is a data collection technique that is carried out by distributing questionnaires containing statements of the object under study that reflect indicators on dynamic environmental variables, dynamic capabilities, design thinking, partnership programs, eco-innovation programs and business performance of e-commerce companies. Respondents can choose the right alternative answer on each variable that has been provided.
- b. Literature study is an activity to collect information related to theories related to the problems and variables studied, namely the study of literature on the relationship between dynamic environments, dynamic capabilities, design thinking, partnership programs, eco-innovation programs and business performance of e-commerce companies. Literature studies were obtained from various sources, including: Indonesian Education University Library,

Journals, Print Media and Electronic Media (Internet).

- c. Interviews were conducted by asking questions orally in face-to-face meetings with the Management of the Indonesian National Shipping and Shipping Company Association (Asperindo). Interviews are divided into two types, namely:
 - 1) Structured interviews, used to know for sure about the information that will be obtained by meeting between researchers and resource persons by informing in advance about the information to be sought, where researchers use interview guidelines that have been arranged systematically.
 - 2) Unstructured interview is a way of collecting data by meeting directly or indirectly between interviewers and resource persons where researchers do not use interview guidelines that have been arranged systematically.

- d. Observation

In this study, observations were made by observing and recording directly on the object of research, namely by observing e-commerce companies in Indonesia.

3.3 Validity and Reliability

3.3.1 Validity

Validity relates to the accuracy of using indicators to explain the meaning of the concepts being studied. In the test of the validity of the measurement there are two events, namely first, by correlating the score of the statement item (item) with the total item. Second, correlate each item indicator score with the total construct score. In this study, construct validity is used which will prove how well the results obtained are in accordance with the theory designed in tests that are assessed through convergent and discriminant validity. Validity is determined by correlating the scores obtained from each item in the form of questions with the total score. The total score is the value obtained from the sum of the scores of all items, if the scores of all items arranged according to the dimensions of the concept are correlated with the total score, it can be said that the measuring instrument is valid.

Prior to statistical data processing, the data that was successfully obtained from the respondents was tested for validity or the level of accuracy between the actual data and the data from the respondents. If there are

similarities in the data, then the test is declared valid (Sugiyono, 2013). The results of the validity test of each variable such as dynamic environment, dynamic capabilities, design thinking, partnership programs, eco-innovation programs, and business performance with a total statement of 63 items are considered valid because they have $r_{\text{count}} > r_{\text{table}}$ (0.244). Thus all the indicators forming the independent variables can be used as a research measuring tool

3.3.2 Reliability

Reliability is a test carried out with measurements that are consistent with measuring instruments whose results can be trusted and there are no errors so that the measurement results can be guaranteed consistency. Reliability is an indication of the stability and consistency of the instrument to measure the concept and helps to assess the goodness of the measure.

An instrument is said to be reliable if the Spearman-Brown reliability coefficient is more than 0.70 ($r_i > 0.70$). Calculation of the reliability of dynamic environmental variables dynamic capabilities, design thinking, partnership programs, eco-innovation programs, and business performance as endogenous variables based on PLS SEM calculations, the results are as shown in Table 3.1

Table 3.1 Reliability Test Results

No.	Variable	C σ Count	C σ Table	Conclusion
1	Business performance	0.918	0.700	Reliable
2	Design Thinking Strategy	0.963	0.700	Reliable
3	Dynamic capabilities	0.968	0.700	Reliable
4	Dynamic environment	0.950	0.700	Reliable
5	Environmental Innovation Program	0.970	0.700	Reliable
6	Partnership Program	0.935	0.700	Reliable

Source: processed data results, 2022

Table 3.1 shows that the value of Cronbach's Alpha on all research variables has a value greater than 0.700 (>0.700), which means that the testing of this research instrument has succeeded in obtaining a strong level of internal consistency in each variable, so that the

measurement scale of all constructs is reliable. The data collected from the questionnaire was processed using the Partial Least Square Structural Equation Model (PLS SEM) application to test the outer and inner models.

3.4 Data Analysis Technique

Data analysis is the process of processing data into information. The data analysis process is carried out with the aim of analyzing the data that has been collected statistically to see whether the resulting hypothesis has been supported by the data and the characteristics of the data become easier to understand and useful as a solution to a problem, especially related to research. The tool used in this study was a questionnaire which was compiled based on the variables contained in the study.

Data analysis in this study was carried out through several stages, namely as follows:

1. Compile data, aiming to check the completeness of the respondent's identity, completeness of data and data entry in accordance with the research objectives.
2. The selection of data is done to check the perfection and correctness of the data that has been collected from the results of the questionnaire
3. Data tabulation which aims to make it look simpler, concise and easy to understand, is carried out with the following steps:
 - a. Score each item
 - b. Add up the scores on each item
 - c. Score rating on each variable
4. Analyzing data is the process of processing data using statistical formulas and interpreting the data to obtain conclusions.
5. Testing, the testing process is carried out to test the hypothesis. The analytical method used in this study is the verification method.

The study was conducted to determine the effect of dynamic environment relations, dynamic ability, design thinking, partnership programs, eco-innovation programs, and business performance of e-commerce companies in Indonesia. The measurement scale used in this study is a semantic differential scale which usually shows a seven-point scale with bipolar attributes that measures the meaning of an object or concept.

3.4.1 Descriptive Analysis

Descriptive analysis is carried out to analyze the data by describing or describing the data that has been collected as is without intending to make conclusions or generalizations that are generally accepted. The research tool used in this research is a questionnaire or questionnaire compiled based on the variables contained in the research data, namely providing information and data regarding the influence of dynamic environmental relationships, dynamic capabilities, design thinking, partnership programs, eco-innovation programs, and business performance. company. e-commerce in Indonesia. Processing of data collected from the questionnaire results can be grouped into three steps, namely preparation, tabulation and application of data with a research approach.

3.4.2 Verification Analysis

Evaluation of the measurement model (outer model) was conducted to assess the validity and reliability. To calculate the relationship between each indicator and each variable is done using the PLS SEM measuring instrument. Calculation of Average Variance Extracted (AVE) is the value owned by each variable with a value above 0.5, if there is an AVE value below 0.5, it means that there are still invalid indicators. Discriminant validity is a useful factor to check whether the construct has sufficient discriminant. The method used is to calculate Fornell's criteria that are lacking, namely the correlation value between the variable and the variable itself and variables with other variables. The Fornell value of the lesser criterion occurs when a gap occurs if the correlation value between one variable and the variable itself is smaller than the correlation between variables and other variables. The cross loading test is to test the correlation between indicators and their variables with the provision that indicators measuring the variable itself must be greater than the indicator value for measuring other variables. The next stage is to test the reliability of the outer model. The level of reliability is called high if the Cronbach Alpha and Composite Reliability values are above the number > 0.7

4. Results

4.1 Outer Model

External model analysis defines how each indicator relates to its latent variable. Tests carried out on the outer model include:

1. Discriminant Validity.
The value of the cross loading factor is useful for checking whether the construct has sufficient discriminant or not by comparing the value of the loading of the intended construct to be greater than the value of the loading of other constructs.
2. Extracted Average (AVE).
The AVE test value is expected to exceed 0.5.
3. Composite Reliability
Composite reliability test value is data that has composite reliability must be > 0.7 which means it has high reliability.
4. Alpha Cronbach.
The test value on Cronbach's alpha is expected to be > 0.6 for all constructs.

4.1.1 Convergent Validity

The correlation between indicator scores and construct scores can also be referred to as convergent validity which aims to determine the validity of each relationship between indicators. The value of Convergent Validity is the value of the loading factor on the latent variable with its indicators. Calculations with the PLS-SEM Model can be said to meet Convergent Validity if the outer loading value exceeds the number > 0.7 .

4.1.2 Average Variance Extracted

Average Variance Extracted (AVE) can be used for each construct or latent variable to evaluate discriminant validity. The model has better discriminant validity if the AVE value is > 0.5 . In this study, the AVE value for each construct is presented in table 4.1 below:

Table 4.1 Average Variance Extracted (AVE) Values

Variable	AVE
- Business performance	0.809
- Design Thinking Strategy	0.781
- Dynamic capabilities	0.759
- Dynamic environment	0.6 98
- Eco-Innovation program	0.829
- Partnership program	0.768

Source: Results of Data Processing with PLS SEM, 2022

4.1.3 Discriminant Validity

Discriminant validity is a factor to check whether the construct has sufficient discriminant or not. Calculating Fornell-Lacker criteria is to determine the value of the correlation between variables with the variables themselves and variables with other variables. Fornell-Lacker value occurs when the correlation value between one variable and the variable itself is not greater than the relationship between variables with other variables.

Cross loading test is the correlation between indicators and their variables provided that the indicator measuring the variable itself has a value greater than the value of the other variable indicator.

4.1.4 Composite Reliability

The outer model can be measured in addition to assessing convergent validity and discriminant validity, it can also be done by looking at the reliability of the construct or latent variable which is measured by looking at the composite reliability value of the indicator block that measures the construct. The level of reliability is called high if the Cronbach Alpha and Composite Reliability values are above the number > 0.7 as shown in Table 4.1 below.

Table 4.1 Reliability Measurement with Cronbach Alpha and Composite Reliability

Latent Variable	Cronbach's Alpha	rho_A	Composite Reliability	AVE
- Business performance	0.951	0.957	0.962	0.809
- Design Thinking Strategy	0.965	0.967	0.970	0.781
- Dynamic capabilities	0.971	0.973	0.974	0.759
- Dynamic environment	0.964	0.966	0.968	0.698
- Eco-Innovation Program	0.974	0.975	0.978	0.829
- Partnership program	0.938	0.945	0.952	0.768

Source: Results of Data Processing with PLS SEM, 2022

Based on the table above, the model shows that the composite reliability value for all constructs is above 0.70. Thus it can be said

that all constructs have good reliability in accordance with the minimum required value. Meanwhile, seen from the value of Cronbach's alpha, it can be seen that all constructs are also above the value of 0.7. Thus it can be said that all constructs have good reliability in accordance with the required minimum threshold

4.2 Measurement Inner Model

4.2.1 R Square

R-squared value (R^2) used to assess how much influence certain independent latent variables have on the dependent latent variable. The R square category is grouped into three categories, namely the strong category, the medium category, and the weak category (Hair Jr, et al., 2021). According to Hair et al, the R square value of 0.75 is included in the strong category, the R square value of 0.50 is included in the medium category and the R square value of 0.25 is included in the weak category (Hair Jr, et al., 2021).

Variable v measurement results of the Eco-innovation program are included in the strong category with an R value of 0.794, while the business performance variable with R^2 value of 0.740 design thinking R^2 of 0.747. R^2 dynamic capability of 0.672 is included in the medium category, and the partnership program is included in the weak category with an R square value of 0.416. The value of R^2 indicates the level of determination of the exogenous variable to the endogenous variable. The greater the value of R^2 then the better the level of determination. The results of the calculation of the value of R^2 can be seen in Table 4.2 below.

Table 4.2. R Square Value

	R Square	R Square Adjusted
- Business performance	0.740	0.727
- Design thinking Strategy	0.747	0.738
- Dynamic capabilities	0.672	0.667
- Eco-innovation program	0.794	0.780
- Partnership program	0.416	0.387

Source: Results of Data Processing with PLS SEM, 2022

The table above shows that the value of R^2 for the business performance construct is 0.740. This means that design thinking,

partnership programs, eco-innovation programs, are able to explain the business performance variance of 74.0%. R^2 value for the design thinking construct is 0.747 meaning that the environment is dynamic, dynamic ability, able to explain the variant of design thinking by 74.7%. R^2 value for The Dynamic Ability construct is 0.672. This means that the dynamic environment is able to explain the dynamic Capabilities variant of 67.2%.

R^2 value for the eco-innovation program construct is 0.794. This means that the dynamic environment, dynamic capabilities, design thinking, partnership programs are able to explain the variants of the eco-innovation program by 79.4%. The value of R^2 for the partnership program construct is 0.416. This means that the dynamic environment, dynamic capabilities, design thinking is able to explain the variance of the partnership program by 79.4%.

4.2.2 T Statistics (Bootstrapping)

T Statistics (Bootstrapping) reflects the relationship between variables where the relationship between variables is said to be significant if the T statistic value is above 1.9 and the P Value (significant level) is below 0.05.

4.2.3 Discussion

Based on the results of the study, it was found that design thinking as a strategy in an effort to improve business performance through partnership programs in e-commerce companies, as follows:

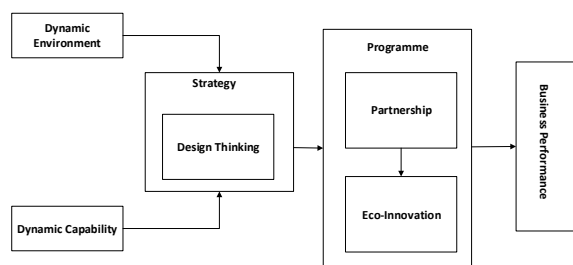


Figure 4.1 E-commerce Enterprise Business Performance Improvement Model

a. Business performance is influenced by dynamic capabilities through design thinking strategies and implementation of partnership programs and eco-innovation. In this study, design thinking becomes the company's strategy to improve the business performance of e-commerce companies

through partnerships with other companies that support and benefit each other and implement eco-innovation programs that support environmentally friendly programs in Indonesia. In addition, partnerships and eco-innovation have proven to have a significant influence in improving the business performance of e-commerce companies in Indonesia. In an effort to establish partnerships, e-commerce companies gather in a forum used to establish communication between Indonesian e-commerce industry players, namely the Indonesian E-commerce Association. (idEA) as a bridge to maintain good relations between industry players and industrial partners on a sustainable basis, including with the government in terms of regulations related to industrial interests, as well as with other associations that are directly important elements in industrial development. e-commerce industry ecosystem. There are regulations, namely Government Regulations Number 80 of 2019 which regulates Trading Through Electronic Systems which emphasizes implementation (e-commerce), while still taking into account the principles of: good faith, wisdom, transparency, trust, accountability, balance, fair and healthy. The dynamic environment and dynamic capabilities do not affect the partnership, because each company is different in assessing the impact of the dynamic environment and dynamic capabilities, the success of the partnership is influenced by the agreed program between partners supported by the allocation of costs provided between partners. Procedures in the partnership will be essential for mutual agreement and mutual trust and good communication between partners to benefit.

b. Eco-innovation has a significant effect on Business Performance. Eco-innovation is directly influenced by dynamic capabilities and partnerships, because in eco-innovation there are several benefits to increase capacity and competitiveness. e-commerce company in Indonesia. Increasing the capacity and competitiveness of e-commerce companies in Indonesia will accelerate economic development in the territory of Indonesia. There are several benefits of eco-innovation, namely: social, economic, environmental and political.

These benefits can be described as follows:

- 1) economic benefits, namely optimizing production costs, reducing waste management costs, minimizing production process and organizational costs, developing green images, new products, and competitiveness;
 - 2) environmental benefits, namely efficient use of resources, minimizing the use of non-renewable resources, reducing waste production;
 - 3) social benefits, namely supporting sustainable social activities;
 - 4) political benefits, namely for resource justice and material security.
- dynamic capabilities have a significant influence on eco-innovation. Success in innovation is largely determined by management involvement in decision making based on market conditions and competitors that can be used to innovate. According to (Chen et al., 2015), dynamic capability is the company's ability to apply its resources and knowledge to update and create organizational capabilities to respond to dynamic markets.
- c. The company's external factors dominate the use of design thinking as the company's strategy in implementing partnership programs and implementing eco-innovation programs that have a significant effect on achieving business performance .

5.1 Research Limitations

This dissertation research has several limitations, including:

1. The number of analysis units of e-commerce companies studied is still relatively small, only 65 companies, so for further research, the number of e-commerce companies can be increased for better results.
2. The characteristics of each e-commerce company in Indonesia have significant differences. When viewed from the field of business, operations, resources and organizational structure owned by most of the companies that have joined the idEA membership, it can be said to be good .
3. An in-depth study of the dynamic environmental variables that can affect the design thinking strategy and business performance of e-commerce companies is required.

5.2 Conclusion

The results obtained conclusions regarding the description of the characteristics of e-commerce companies in Indonesia based on 65 companies that are the subject of this study are as follows:

1. Based on the analysis of dynamic environmental variables, dynamic capabilities, design thinking, partnerships, environmental innovation and business performance of e-commerce companies in Indonesia, the following results are obtained.
 - a. The company's ability to adapt to the dynamic environment of e-commerce companies in Indonesia is in a position of influence. The competitor dimension gets the highest score of 79.96%, through dynamic environments to environmental changes. This is in accordance with the early history of e-commerce in Indonesia, which initially used the internet to display products. For payment transactions, sellers and consumers still have to meet, hereinafter referred to as cash on delivery (COD). Since 2021, e-commerce is predicted to become a trend that continues during the pandemic and continues in the new normal era as it is today. In 2017 the government through Presidential Regulation Number 74 of 2017 concerning the Road Map of the 2017 Electronic-Based National Trading System (E-commerce Road Map). In e-commerce, online shopping continues to be encouraged but to attract consumers is a challenge that must be faced, so e-commerce companies innovate. Other evidence can be seen from the ability of e-commerce companies to survive in a dynamic environment caused by demographic, political, technological, economic, socio-cultural factors, suppliers, consumers, competitors, distributors, government agencies.
 - b. Dynamic capability is one of the variables studied, with the results of the study showing a fairly influential position for e-commerce companies. Adaptive Capability is the dimension with the highest score of 74.34% compared to other dimensions. This is

evidenced by the number of e-commerce companies that have the ability to adapt to changes that occur both internally and externally.

- c. Based on the results of the design thinking strategy research, e-commerce companies in Indonesia are in a position that is quite influential. The People centered dimension is the dimension with the highest score, this is in line with the evidence that e-commerce companies apply design thinking as a process method for how to create new and innovative ideas that can solve a problem. People centered emphasizes that every action taken is centered on what the user wants and needs.
- d. The partnership program in e-commerce companies is good, the implementation of partnerships is carried out through programs agreed with partners supported by budget allocations and the availability of processes for conducting partnerships, based on the results of partnership research in e-commerce. E-commerce companies in Indonesia are in a position of considerable influence, partnership as a form of legal business operation between two or more companies that share management and business benefits.
- e. The eco-innovation program in e-commerce companies is good, the implementation of eco-innovation is carried out through programs agreed with partners supported by budget allocations and the availability of processes in implementing eco-innovation. Innovation research on e-commerce companies in Indonesia is in a fairly influential position, the application of eco-innovation can reduce pollution caused by the production process carried out by the company, so as to reduce the company's compliance costs against pollution and can also create a good reputation for the company. A good reputation is an intangible asset that becomes the capital to improve the company's performance compared to its competitors. Company management

must be committed to managing capabilities companies in carrying out eco-innovation that will be able to improve company performance in facing global market competition.

2. The dynamic environment is proven to have a significant effect on the dynamic capabilities and design thinking of e-commerce companies in Indonesia, the dynamic environment has no effect on the partnership programs and eco-innovation programs implemented by e-commerce companies in Indonesia.
3. Dynamic capabilities are proven to have a significant effect on the implementation of design thinking in e-commerce companies in Indonesia. Dynamic capabilities have no effect on partnership programs and eco-innovation programs implemented by e-commerce companies in Indonesia.
4. Design thinking has been proven to have a significant effect on the implementation of the partnership program for e-commerce companies in Indonesia (the result of testing hypothesis 8), design thinking has no effect on the eco-innovation program implemented by e-commerce companies in Indonesia and has no effect on performance business.
5. The partnership program has been proven to have a significant effect on business performance and the implementation of the eco-innovation program for e-commerce companies in Indonesia.
6. The eco-innovation program has been proven to be able to positively influence the business performance of e-commerce companies in Indonesia.

5.3 Recommendation

The study was conducted to determine the relationship between dynamic environment, dynamic capabilities, design thinking, partnership, eco-innovation and business performance of e-commerce companies with a total of 65 respondents of e-commerce companies in Indonesia. Based on the descriptive statistics of verification and discussion that have been carried out, the researcher recommends several things:

1. The dynamic environment is a consideration for e-commerce companies in Indonesia that still needs to be improved, namely regarding the decision making of e-

- commerce companies related to effectiveness and rationality in anticipating government regulations.
- The dynamic capabilities of e-commerce companies in Indonesia are good but still need to be improved, especially regarding the ability to learn market knowledge as a basis for developing effective strategies and the ability to allocate resources for marketing activities, recommendations for these two variables are training to deepen market knowledge and resources . management power.
 - The design thinking strategy for e-commerce companies in Indonesia is good, but efforts still need to be made to improve research programs to collect data on people's behavior towards the digital economy, recommendations for this research activity are training and budgets to improve research capabilities on social phenomena that affect economic system as an intelligence space, including various access to instruments, capacity and information processing.
 - The implementation of the partnership program carried out by e-commerce companies in Indonesia is good but still needs to be improved, especially regarding the support for green marketing programs from each partner company, the recommendation for this variable is the company's commitment to using environmentally friendly products. or activities.
 - The implementation of eco-innovation carried out by e-commerce companies still needs to be improved, especially regarding research and development of green technology internally as well as the readiness of standard operating procedures (SOPs) for the implementation of green marketing internally and the development of these SOPs in an effort to support green technology programs in Indonesia.

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