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8 Reviewing The Competitiveness of Indonesian E-Commerce Through The Theoretical Framework of E-Business Competitiveness

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Abstract— This research is motivated by the phenomenon of e-commerce which has a very large influence on the economic growth of a country in the current digital era. This study utilizes an e-commerce competitiveness framework recommended by Ramune Ciarnienė and Giedre Stankevičiūtė to describe the map of Indonesia's e-commerce strength through Strengths Opportunities Aspirations and Result (SOAR) analysis. The description of Indonesia's e-commerce competitiveness generated in this study can be used as a basis for determining strategies to increase Indonesia's economic growth and face competition with other countries.

Keywords— e-commerce, framework, competitiveness, SOAR analysis, economic growth

I. INTRODUCTION

The existence of information and communication technology makes the transformation of the transaction process change rapidly from conventional (manual) to electronic. One of them that is familiar to us is e-commerce, which according to Turban is defined as the free exchange of goods and services between independent organizations and or people supported by the comprehensive use of a powerful ICT system and a globally standardized network infrastructure[1, p. 20]. As a digital economy platform other than fintech, e-commerce is something that cannot be denied its benefits in our lives[2]. With e-commerce, people are given the convenience of searching for the goods or services they want and making transactions easier. Producers as producers of goods will certainly be greatly helped in terms of increasing a wider market reach, while for consumers, they will be assisted by e-commerce in meeting the needs of purchasing transactions for goods or services. Thus e-commerce encourages an increase in consumption and production in the community and further results in increased national income and ultimately encourages an increase in the economic wealth of a country[3]. So this has a very positive effect on economic growth, which, if sustainable, will be an important pathway out of poverty and a major driver of human development. Based on this, as a developing country, Indonesia needs to be able to know the strength of its e-commerce competitiveness in order to increase its economic growth as well as to implement strategies in facing competition with other countries.

Talking about the competitiveness of Indonesian e-commerce, through tools in the form of open knowledge maps, there are six groupings of research discussions, namely:

- 1) *Competitive advantage, micro business, and consumer.*
- 2) *Fintech, Marketing, and its use*
- 3) *Alternative application, Business sustainability, and consumer protection.*
- 4) *Cross-border e-commerce.*
- 5) *Conceptual framework, and knowledge management.*
- 6) *Marketing mix and digital literacy[4].*

However, although from these groupings there are groupings that discuss the Conceptual framework, and knowledge management, research on the strength of Indonesia's e-commerce competitiveness has not yet discussed.

This article describes the use of an e-business competitiveness framework to show a map of Indonesia's e-commerce competitiveness, so it is hoped that the results of this study can be continued as a comparison tool for Indonesia's e-commerce competitiveness with any country that wants to know the comparison of its strength with that of other countries. So that further strategies can be drawn up on how Indonesia can outperform the countries being compared.

II. THEORY AND METHOD

A. E-Commerce Competitiveness

In general, according to Ramune iarnienė and Giedre Stankevičiūtė competitiveness can be described as the social, economic, political, technological and other comparative positions of companies, sectors and countries with respect to analog units[5]. This means the entity's ability to maintain and strengthen its position in the market through enhancement of key competencies.

While Masagus M. Ridhwan, et al. in his article citing articles from Reis and Farole Analysis said that competitiveness mostly refers to the Trade Competitiveness Diagnostic (TCD) which is an approach that aims to provide an understanding of the position, performance, and ability or capability of a country in the export market, as well as about the factors that influence it. competitiveness[6]. Furthermore,

it is said that trade activities become a useful lens in measuring competitiveness, because in general, in the export market, countries that have high competitiveness in domestic factors are also superior. This proves that the relationship between trade and productivity is reciprocal.

According to Lilik Rudianto in his article entitled "Competitiveness Theory", based on existing references, there are several opinions regarding the assessment of the level of competitiveness in general, namely[7]:

1) For the competitiveness of companies functioning in the manufacturing sector, the definition of competitiveness is a function of the firm's control over a particular industry, cost advantage, and the surrounding political-economic environment, which implies the need for consideration of external and internal competitiveness.

2) Competitiveness is defined as the relationship between customer and shareholder values through matching and enhancing an organization's capabilities, offerings and potential, as well as the organization's ability to act and react through its financial strengths.

3) Competitiveness which is seen as a multidimensional concept has several elements of competitiveness evaluation, namely price, place, and product coverage.

B. Framework of E-Commerce Competitiveness

The framework used as a guide for mapping the competitiveness of Indonesian e-commerce is referred to from the research results of Ramune iarnienė and Giedre Stankevičiūtė. In an article entitled "Theoretical Framework of E-Business Competitiveness, Ramune iarnienė and Giedre Stankevičiūtė propose a conceptual theoretical model for the analysis of e-commerce competitiveness and indicators for measuring the competitive capacity of e-business. This model includes four different but interrelated levels of analysis, namely: company level, industry level, country level, and global level[5]. The model looks like in figure 1 below.

According to Ramune iarnienė and Giedre Stankevičiūtė the competitiveness of companies is strongly influenced by the general environment of e-business. This global competitiveness is expressed by the Global Competitiveness Index. There are five dimensions with different factors that play a major role for business competitiveness at the country level. These dimensions are:

1) **Macroeconomic dimension**, this dimension includes: GDP, macroeconomic stability, unemployment, inflation rate.

2) **Market dimension**, this dimension includes: intensity of competitiveness, market structure and capacity, customer-supplier negotiation strength, and distribution channels.

3) **The socio-cultural dimension**, this dimension includes: the spread of ICT, ICT competence, and the use of e-commerce.

4) **The technology dimension**, this dimension includes: ICT infrastructure, technological innovation, and technological readiness.

5) **The government dimension**, this dimension includes: government policies and strategies, e-government development, and e-participation.

At the industry level, areas that have impact on playing an important role in competitiveness are: competition in the e-

commerce sector, enterprise innovation, enterprise productivity, HR characteristics, and others. While at the company level, competitiveness can be expressed by financial and operational capabilities (sales, profits, costs, ICT investment, profitability indicators, waiting time, productivity, etc.), market share indicators, and managerial competence.

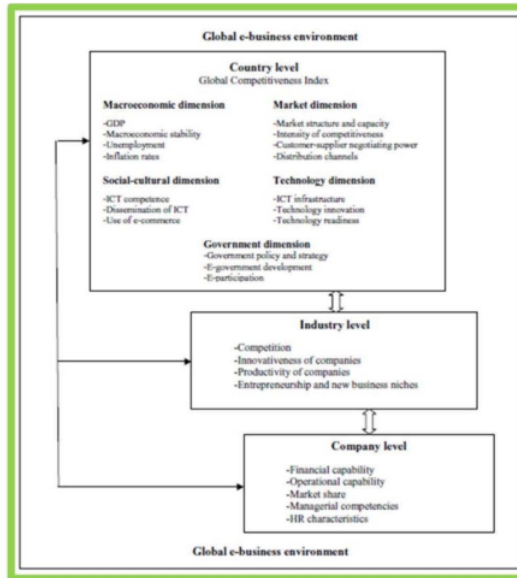


Fig.1. Theoretical Model of E-Commerce Competitiveness[5]

C. Method and Data Support

The research method used is descriptive-analytical. In general, what is done in this research is an inventory of all the data needed to meet the criteria or variables of e-commerce competitiveness in the framework of the competitiveness model that has been previously defined.

The type of data used or sought for research material in this dissertation is mixed data consisting of qualitative data and quantitative data. Quantitative data is very basic data to meet the criteria contained in the framework of e-commerce competitiveness. While qualitative data is supporting data used in conducting analysis to formulate the proposed strategy recommendations.

Secondary data sources come from documentation or literature, especially soft copies because the documents are taken from the download process on sites that provide statistical data and from the results of special requests via e-mail correspondence with the relevant agencies. The data sought is data related to the variables contained in the theoretical model of e-commerce competitiveness as shown in figure 1. Secondary data sources for each level in the theoretical model of e-commerce competitiveness include:

1) **Country-level competitiveness**, data sources are obtained from:

- The Global Competitiveness Report (2015-2020).
- Indonesia Central Bureau of Statistics.
- <https://tradingeconomics.com>.
- Asia Financial Stress Index FSI (adb.org).

- e) Trade Statistics Portal (kemendag.go.id).
 - f) World Trade Statistical Review.
 - g) Global Digital Report, Digital Indonesia 2020,
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 - i) The Institute of Internet Indicator.
 - j) 2019 Annual Report Directorate General of Penyelenggaraan Pos dan Informatika Kementerian Komunikasi dan Informatika (PPI Kemkominfo).
 - k) <https://publicadministration.un.org>.
 - l) Global Finance Magazine.
 - m) International Institute for Management Development World Digital Competitive Ranking (IMD WDCR).
 - n) The Heritage Foundation (Index of Economic Freedom).
 - o) E-Government Development & Participant Index, United Nation.
- 2) Industry-Level Competitiveness data sources are obtained from:
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 - b) forbes.com,
 - c) Priceonomics Redbooth; <https://priceonomics.com>.
- 3) Competitiveness at the Enterprise Level data sources are obtained from:
- a) e-Economy SEA (South East Asia) report from Google, Temasek and Bain & Company.
 - b) Australian Government: "E-commerce in Indonesia a Guide for Australian Business" .,
 - c) <https://databoks.katadata.co.id>,
 - d) Indonesia Central Bureau of Statistics.

III. RESULT AND DISCUSSION

From the results of data collection, based on an analysis of the SOAR components namely strengths, opportunities, aspirations and results, Indonesia's e-commerce competitiveness can be described as follows:

A. Analysis of Indonesia's E-commerce Competitiveness Strengths

Based on the variables contained in the dimensions at each level in the Theoretical Framework of E-Business Competitiveness, Indonesia's competitive strengths can be identified as follows:

- 1) At the country level, Indonesia's strengths are as follows:
 - a) On the macroeconomic dimension, Indonesia has a modest GDP growth acceleration[8].
 - b) Market Dimension Indonesia's strengths in the market dimension include: i) Indonesia is one of the top 10 exporters of agricultural products in the world, ii) Indonesia is included in the top 10 exporters of world food products, iii) Including Global Value Chains (GVC) participants or worldwide network for the production of goods and services, iv) Including world merchandise exporter countries according to certain regions and economies.

c) In the socio-cultural dimension, Indonesia's strengths are as follows: i) From the aspect of ICT competence, Indonesia ranks third after China and India in terms of internet penetration in Asia Pacific. ii) From the aspect of the dissemination of ICT, Indonesia has the power to disseminate non-smartphone mobile phones and virtual reality devices.

2) At the industrial level, Indonesia's strengths are as follows: i. Indonesia has companies that are considered to be the most innovative in the world according to Forbes.com. ii. Based on data from Priceonomics Redbooth, Indonesia is ranked third out of 38 countries as the most productive country.

3) At the Company level, Indonesia's strengths are as follows: i) Financial or funding capabilities for large e-commerce. ii) Indonesia's e-commerce operational capabilities show a rapid increase. iii) Has a large market share.

B. Analysis of Indonesian E-commerce Competitiveness Opportunities

Opportunities for e-commerce competitiveness for the Indonesian state are taken based on the results of weaknesses or threats in the variables contained in the dimensions at each level in the Theoretical Framework of E-Business Competitiveness. Opportunities identified as follows:

1) At the country level, Indonesia's strengths are as follows:

a) On the macroeconomic dimension, Indonesia has the following opportunities: i) Indonesia has the opportunity to reduce the unemployment rate. ii) Indonesia has the opportunity to suppress inflation to be more stable.

b) In the market dimension, Indonesia has the opportunity to: i) Exporter of office and telecommunications equipment. ii) Countries that are included in the group of countries that have a growth in the volume of world merchandise trade according to certain regions and economies. iii) Leading exporter country in world merchandise trade. iv) Leading exporter country in the world's commercial merchandise services. v) A country that has a wider involvement in trade in commercial services than a particular economy. vi) Country exporters and importers of office equipment and telecommunications. vii) The main exporter of goods-related services. viii) Major exporters of manufacturing services. ix) The main exporting country of travel. x) countries that trade as both exporters and importers in other business services by category in a particular economy. xi) Leading countries for intermediate goods exporters and importers. xii) world merchandise exporters by region and specific economy. xiii) The world's exporting countries of commercial services by region and specific economy.

c) Opportunities owned by Indonesia in the socio-cultural dimension include: i) Dissemination of ICT for Mobile phone (any type), Smart phone, Laptop or desktop computer, Tablet device, Device for streaming TV content over the internet, Smarthome device, and Smart watch of wristband. ii) Indonesia, especially its population over the age of 15, has the opportunity to increase the use of e-commerce. What is meant by the use of the internet includes:

account ownership in financial institutions, credit card ownership, mobile money accounts, making online bill payments,

d) In the Technology dimension, the opportunities that Indonesia has in almost all fields, including the following: i) Information and Communication Technology Infrastructure. ii) Technological Innovation. iii) Technology Readiness

e) Similar to the technology dimension, in the Indonesian Government dimension, there are opportunities to improve: i) Governance Rules and Strategies. ii) Development of E-government. iii) E-participation.

2) At the industrial level, the opportunities that Indonesia has are as follows:

a) Indonesia has the opportunity to be more competitive in improving its industrial performance.

b) Indonesia has the opportunity to further develop entrepreneurship and develop new businesses

3) At the Company level, Indonesia has the opportunity to develop the characteristics of Human Resources.

C. Analysis of Indonesian E-commerce Competitiveness Aspirations

Aspirations or other words of hopes and goals for Indonesia's success in e-commerce are indirectly expressed by an organization called the Indonesian E-commerce Association abbreviated as idEA (Indonesian E-commerce Association) connecting integrated communication between Indonesian E-commerce industry players with industry partners, including the government. These aspirations are[9]: i) Equitable wealth distribution in Indonesia through e-commerce activities. ii) E-commerce facilities are available to all Internet users in Indonesia. iii) Indonesia is the largest digital economy base in Southeast Asia.

D. Analysis of Indonesia's E-commerce Competitiveness Results

The results or results of the Indonesian e-commerce industry that have been achieved in a tangible and measurable manner refer to the Road Map or Road Map of the National Electronic-Based Trading System for 2017-2019[10]: The results consist of the following program groups:

1) Funding, including:

a) Funding and loan financing schemes channeled through the following activities: i) Increase access to Kredit Usaha Rakyat (KUR) with credit risk assessment that is adjusted to the e-commerce trading business model. ii) Optimizing the Bank/Non-Bank Financial Industry as KUR distributors.

b) Funding and grant-financing schemes (subsidies), are channeled through the following activities: i) Preparation of a grant scheme for the operation of a business incubator. ii) Develop a scheme for providing grants whose sources come from corporate social responsibility funds from BUMN and the like.

c) Provision of alternative funding and grant financing schemes (subsidies)

d) Provision of alternative funding and angel capital/seed capital financing schemes. This is realized by: i) Realizing business matching between angel investors and venture capital companies with potential e-commerce-based companies. ii) Develop a scheme using the "Father Adopt"

approach that can be used by business actors or large non-ICT industries by providing seed capital and technology support to support start-ups.

e) Availability of alternative funding and crowd funding schemes.

f) Tiered opening of the Negative Investment List

2) Taxation, including:

a) Simplification of the Fulfillment of Tax Obligations, by simplify taxation procedures for e-commerce business actors and tax incentives for trading investors

b) Preparation of Registration Procedures for e-commerce business actors..

c) Equality of tax treatment

3) Consumer protection, including:

a) Preparation of Regulations for Trading Transactions Through Electronic Systems.

b) Build consumer trust

c) Development of National Payment Gateway

4) Education and Human Resources, including:

a) Awareness raising and education for consumers, SMEs, and the entire e-commerce ecosystem.

b) Providing policy makers with an understanding of e-commerce in accordance with the roles of each stakeholder.

c) Your Integrity Building Program for start-up.

d) Formal education for e-commerce talent needs.

e) Development of e-commerce education facilitators.

5) Communication Infrastructure, carried out through improving communication infrastructure (internet speed, network, and security)

6) Logistics, carried out through:

a) Improvement of e-commerce logistics.

b) Implementation of outsourcing of e-commerce logistics facilities for micro, small and medium enterprises.

c) Increasing the capacity of local/national logistics service providers to meet shipping needs throughout Indonesia

d) Development of logistics systems from villages to cities.

7) Cyber Security, carried out through:

a) Increased security for electronic transaction activities.

b) Monitoring and increasing public awareness of cybercrime.

c) Development of a model of a national supervision system in e-commerce transactions

8) Formation Management of the 2017-2019 SPNBE Roadmap Implementers

All external and internal components of the SOAR matrix obtained above are then used as material to determine the strategy to be proposed in dealing with various national economic interests.

So in general, it can be explained more systematically using a flow chart (see Figure 2 below) how the description of Indonesia's e-commerce competitiveness produced above is then used as the basis for determining strategies to increase Indonesia's economic growth and to face competition with other countries.



Fig. 2 Flow chart Diagram for Improvement E-commerce Competitiveness

Furthermore, the Flow Chart can also be used to make recommendations for increasing competitiveness in general other than e-commerce, what is important here is the utilization of the competitiveness framework, SOAR analysis of a condition of a system, and then the strategy is determined.

IV. CONCLUSION

Through this research, the competitiveness of e-commerce can be described so that further strategies can be drawn up for the Indonesian state to face global economic competition through e-commerce. Research can be further developed into each variable in more detail by considering research methods or the use of other frameworks.

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