ECONOMIC GROWTH, REGIONAL STUDY IN SOUTHEAST ASIA DIGITAL MARKETING SECTOR

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ABSTRACT

This study aims to analyze the impact of the digital marketing sector on economic growth in the Southeast Asian region by using key indicators: broadband penetration and the number of people in the productive age group. These two variables are used to represent technological readiness and workforce capacity as drivers of digital-based economic growth.

The research employs a quantitative approach with secondary data from ten Southeast Asian countries (Indonesia, Malaysia, Singapore, Thailand, the Philippines, Brunei Darussalam, Cambodia, Vietnam, Laos, and Myanmar) covering the period from 2019 to 2023. The analysis technique used is panel data regression with the Random Effect Model (REM) approach and assumption testing using the OLS method. The results show that the broadband variable has a positive and significant effect on economic growth, with a coefficient of 0.981 and a significance level of 0.000. This indicates that high-speed internet access is a crucial catalyst for the growth of the digital sector and economic activities in the region. The variable representing the productive age population does not show a significant impact on economic growth, suggesting that the quantity of labor does not necessarily guarantee increased economic output unless accompanied by improvements in productivity and human capital quality.

Keywords: Economic growth; digital marketing; Southeast Asia

INTRODUCTION

The world of the internet is currently very developed throughout the world, which can increase the reach of production, business and marketing, and research is starting to include analysis that relates to the situation in developing countries, namely digital marketing (Anon 2024c). Signs of digital marketing adoption are clearly visible throughout the Asian region, especially Southeast Asia. Cities in Southeast Asia use mobile phones for business.Southeast Asia is recorded as having the highest level of Internet usage in the world, with an average of 3.6 hours spent on the internet every day. One of the main contributors to internet use is social media. The level of social media usage in ASEAN is among the highest in the world. The use of social media is widely considered to be the first gateway to more economically productive use of digital marketing (Anon 2024b).

Growth theoryThe new economy emphasizes the role of technological progress which has an important role in a country's economy, this was conveyed

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by Solow (Schumpeter 2021).Education plays a major role in shaping the ability of developing countries to create new knowledge, absorb modern technology, and produce skilled workers as well as develop capacity to create sustainable growth and development. Economic Research Institute for ASEAN and East Asia (ERIA)(Anon 2024a) stated that Singapore is a country with a frontier phase in high-tech infrastructure, which means it is superior in terms of knowledge and is also a center for competitive technological learning and also the creation of technological products. However, on the other hand, Indonesia is still in the learning phase with Thailand, the Philippines and Vietnam, where high-tech infrastructure is still at the learning stage by using and imitating, this is the main problem in this research. Empirical evidence shows that most developing countries in Southeast Asia need to accelerate the existence of a large population which is not balanced by adequate education in order to make optimal use of technological advances, because this is also the key for developing countries to get out of the middle income trap which will then become a knowledge-based factor of sustainable economic development and growth. So this research will be very important for sustainable economic growth in the technology sector, especially digital marketing.

Seeing this problem, several ways to overcome it include conducting field/online observations, where the population of countries in Southeast Asia aged 15-54 years as a productive workforce is an important element in spurring economic development. The creative industry and digital marketing are one of the pillars of the current economy in almost all countries. So digital marketing knowledge and training is something that must be provided in the world of education today. Apart from that, a fast/broadband internet connection is really needed to overcome learning problems and create technology products.

Research related to regional or regional studies related to economics, geopolitics and international trade has been carried out by Annisa and Ulfatun (Annisa and Ulfatun Najicha 2021). Digital marketing strategy in Poerna research at al. Go-Food and GrabFood are used as research objects because they are currently leaders in the OFD (Online Food Delivery) segment for the Southeast Asia region, including Indonesia (Poerna Wardhanie, Naufal, and Eko Wulandari 2021). The results of this research state that the group's studies related to the economy, geopolitics,

international trade and digital marketing have a significant influence on economic growth both in regional and international areas, with demographic data including productive age, education and employment. In this research, the renewable things that will emerge are:

1. Broadband/internet speed level that supports smooth digital marketing processes.

2. The new economic growth theory put forward by Solow where the Solow (Schumpeter 2021) economic growth model provides an overview of the correlation of interactions between capital or capital growth, labor development and technological improvements in an economy, and the effect on the amount of output in that economy.

3. Human Investment Theory, (Nurkholis 2018)the income generated in the future is a higher level of income so that it can exceed the higher level of consumption as well. This investment is correlated with education, through the availability of this investment, human capital is expected to increase.

4. Analyze and map economic growth and human investment in supporting digital marketing via broadband and the productive age population.

5. Providing recommendations for the economic growth of the Southeast Asia region, especially Indonesia, in implementing digital marketing, thereby contributing to community income.

THEORETICAL REVIEW

Digital Marketing

The concept of digital marketing comes from the internet and search engines on websites. When internet usage exploded in 2001, the market was dominated by Google and Yahoo as search engine optimization (SEO). The use of internet searches grew in 2006 and in 2007 the use of mobile devices increased drastically which also increased the use of the internet and people from various parts of the world began to connect with each other through social media (Pentz and Ryke 2021).

Digital marketing is defined as marketing activities including branding that use various web media such as blogs, websites, email, Adwords, or social networks. Digital marketing as a promotional media aims to convey or disseminate or market about a product so that it can influence consumers to buy it (Rauf et al. 2021).

Solow's Theory of Economic Growth

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The Solow economic growth model provides an overview of the correlation of interactions between capital or capital growth, labor development and technological improvements in an economy, and the effect on the amount of output in the economy (Schumpeter 2021). The first stage is carried out by examining how the demand for goods determines the capital pool. This stage assumes that technology and the workforce are constant. In the following description, these assumptions will be removed one by one, namely the removal of the assumption that the condition of the workforce is different, and the removal of the assumption that there is a change in technology. According to the Solow growth model, the supply function of goods is based on the production function with output depending on the supply of capital or capital and the availability of the labor force.

$$Y = F(K,L)$$

The Solow growth model assumes that the production function has constant return to scale (CRS) properties. This assumption aims to facilitate analysis in the explanation of the Solow growth model. In the current era of economic development, technology has a fundamental role in the efficiency of output production (Dykas, Tokarski, and Wisła 2022). Therefore, it is natural that the Solow growth model is modified by adding another exogenous variable, namely technological development. Next, the variable technological change is entered, or also called labor efficiency (E). Labor efficiency explains the state of society's knowledge regarding production methods, where when technology develops, the level of labor efficiency also increases.

$$Y = F(K, L \ x \ E)$$

With E is a new variable, namely labor efficiency. $L \ x \ E$ shows the number of effective workers. The new production function shows the amount of output (Y) depends on the number of units of capital (K) and the number of effective workers ($L \ x \ E$).

Human Investment Theory

Investment in the HR sector takes the form of sacrificing something that is measurably worth money in the hope of obtaining better income in the future. The income generated in the future is a higher level of income so that it can exceed the higher level of consumption as well. This investment is correlated with education, through the availability of this investment, human capital is expected to increase (Nurkholis 2018).

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People who have high qualities both intellectually, physically and conscientiously are true human beings. Genuineness as a human being generally has economic, social, cultural and political value. There are at least two domains for becoming a quality human being:

a. Personal qualities are acquired as a result of aspects that come from, not innate.

b. Personal qualities obtained through the learning process.

Human investment has the aim of increasing the intelligence possessed in each field. Investment results are still influenced by innate personal qualities and efforts to improve quality.

Information and communication technology

The term ICT first appeared after the combination of computer and communications technology, technological elements consisting of software, hardware and telecommunications equipment (Vahedi, Zannella, and Want 2021). Universally, ICT includes all technical equipment that is useful for processing information and can accommodate communication through a combination of computer and communication technology by using innovative ways to provide users with access to information (Kaiser, Xie, and Rathore 2021). States that technological products such as the internet and computers are technological progress with labor-saving technological progress, because they are obtained by saving either labor or capital (for example, a higher level of output can be obtained through the same quantity of labor or capital input). Meanwhile, there are also technological advances that increase labor (labor augmenting technological progressif), which arise if the skills or quality of labor are increased, for example through the use of various telecommunications media (Todaro and Smith 2006).

Apart from recognizing the role of progress in information and communication technology for economic growth and productivity, this progress also plays a role in spurring increases in productivity and innovation in various fields, for example financial services and several agricultural and mining sectors (Meidayati 2017). Technological advances have also replaced government services (including education and health). This is used in the form of an application as a means

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of delivering services from the government which can increase the efficiency of implementing government services and reduce expenses for businesses and citizens who interact with the government. Thus there is great potential to transform effective government and business services through cutting-edge technology.

Demographics

The term demography was first known and introduced by Achille Guillard in 1855 in his book entitled "Elements de Statistique Humaine, ou Demographie Comparee". Demography is a science that studies everything from human conditions and behavior that can be measured, including universal changes, civilization, physical, moral and intellectual conditions (McDonald 2015). Demography examines the distribution, number, composition of the population, territory, its changes, as well as the causes of changes that occur due to mortality, natality (fertility), social mobility (change of status), and territorial movement (migration). State that population growth is not a problem, but a fundamental element in driving economic development. The large

population is a potential market that can be a source of demand for various types of goods and services which will then spur various types of economic activity in a country to create economies of scale in the production process. These economies of scale then benefit various groups, reduce production costs, and create a source of stock or supply of labor in sufficient quantities at low prices, thereby encouraging increased output or higher aggregate production.

RESEARCH METHOD

This research uses a quantitative research approach (Sugiyono 2016). Data sources were obtained from second parties or source data from several main sources, namely the World Bank, United Nation Development Program, and International Telecommunications (ITU). Using a sample of ten countries in the Southeast Asia region (Indonesia, Malaysia, Singapore, Thailand, Philippines, Brunei Darussalam, Cambodia, Vietnam, Laos and Myanmar). And the analysis method used in this research is panel data and the OLS (Ordinary Least Square) assumption test will be carried out (Widarjono 2005).

The data analysis method in this

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research uses an econometric model in the form of a panel data regression model. Estimating using panel data can be done using three approaches, namely: Pooling Least Square, Fixed Effect Approach, and Random Effect Approach. Selecting the appropriate data regression for processing panel data can use the Chow Test (F Statistics) and the Haussman Test (Nihil 2015).

The purpose of using this method is to analyze in depth related economic growth digital marketing who owns the instrument boardband and the population of productive age, as well as its application in countries in Southeast Asia, especially Indonesia. The processed data will be analyzed descriptively to obtain in-depth and systematic research results.

RESULTS AND DISCUSSION

This research used 90 observations. The dependent variable in this research is National Economic Growth (GDP percentage) (Y) and the independent variables consist of broadband (X1) and the number of working age population (X2). Because

the data in this study have different units of measurement, the original data was transformed (standardized) first before being analyzed further. In this case, the author performs an inverse transformation on the original data to equalize the weights on each variable into a smaller range so that the data can meet the assumptions underlying the analysis. For the next process, the transformed data is used.

The results of panel data regression will be used to see the influence, level of significance, and relationship between the independent variable and the dependent variable. To find out the magnitude of the influence of the independent variable on the dependent variable, it can be seen through the R-squared value. Meanwhile, to determine the level of significance between variables, it can be seen through the probability value. If the probability value is smaller than $\alpha = 0.05$ then it can be said that the independent variable has a significant effect on the dependent variable. The following are the results of this research's regression testing:

Table 1
Random Effect Model Regression Results

Dependent variable: Economic Growth

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Variable	Coefficient	Std. Error	t-Statistics	Prob.	Information
X1	0.009349	0.001074	8.793563	0.0000	Significant
X2	0.011566	0.037455	0.306418	0.7307	Not significant
R-Squared	0.810872				

Source: Eviews 8, data processed

Table 1 shows that the Broadband variable has a partially significant effect on Economic Growth in 10 countries in Southeast Asia (ASEAN members) with a p-value of 0.0000 which is less than 0.05. The number of working age population does not have a partially significant effect on economic growth in 10 countries in Southeast Asia (ASEAN members) with a p-value of 0.7307, which is greater than 0.05.

Based on the results of the estimation of the regression model using the Random Effect Model, the following regression equation is obtained.

$$Y = -0{,}000826 + 0{,}981604X_1$$

Based on the panel data regression results, it is known that the constant value is negative at 0.000826, which means that if all independent variables are zero (0), then Economic Growth in 10 countries in Southeast Asia (ASEAN members) will decrease by 0.000826 units. The R2 value of 0.788467 or 78.85% means that the independent variable can explain its influence on economic growth in 10 countries in Southeast Asia (ASEAN members) by 78.85%, where the remaining 21.15% is explained by other variables. outside the model.

Meanwhile, the Broadband coefficient (X2) has a positive value of 0.981604, which means that when Broadband increases by 1 unit, Economic Growth in 10 countries in Southeast Asia (ASEAN members) will increase by 0.981604 units. This shows that if there is an increase in broadband usage in Southeast Asian countries, it will increase the growth rate in Southeast Asian countries. This research is in line with previous research conducted by The World Bank (Meidayati 2017), where broadband has a significant influence on economic growth, where this influence is greater in developing countries than in developed countries.

The importance of broadband development is closely related to technology in general, because broadband is also a catalyst for other sectors to grow as part of what is called

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General Purpose Technology (GPT). Therefore, by investing in wireless broadband access infrastructure, jobs and income are created not only through direct investments, which create or expand the capacity, speed and reliability of existing networks, but also through indirect benefits from filling gaps in wireless broadband services. The availability and adoption of high-speed broadband internet access by consumers is a major driver of information and communications technology (ICT) capabilities and the overall economic prosperity and well-being of developed countries (Marolla 2018).

Based onThe statistical results and model test results on the working age population variable are not significant on economic growth in Southeast Asian countries. Southeast Asia as a developing country has a population of approximately 600 million people, and half of this population is in the productive age range, namely 15-64 years (Inekwe 2013). However, the results of the variable number of working age population on the economic growth variable in ASEAN countries show that the population increase is not significant in terms of economic growth, this is due to labor productivity.

CONCLUSION

Based on the results of the research analysis and discussion, it can be concluded that the broadband factor also has a positive and significant influence on economic growth in the Southeast Asia region. Broadband as a catalyst for other sectors in the Southeast Asia region or primary use of technology (GPT). The speed and wide affordability of broadband provides efficiency for user agents in various economic activities and also has a wider reach for progress for rural communities that were previously unreachable, especially in the geographic form of countries in the Southeast Asia region except Singapore, not all of which are urban.

Demographics, which are proxied by the working age population, do not have a significant influence on economic growth. This is because the large labor supply in several Southeast Asian countries is not matched by a high level of labor productivity, especially for the working age population. Apart from that, people over 65 years old, especially the majority of countries in Southeast Asia, in terms of preparation for old age, are not like Singapore, where every salary received will be accommodated in state social funds for their old age needs. In

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several countries in Southeast Asia, due to lack of education, this affects their lifestyle, with the consequence that in old age there are illnesses and more need for medical assistance, which then, because they are unable to achieve these capabilities, becomes the responsibility of the state and the ratio is greater than the insignificant profits from owning assets. owned. The results of the research analysis and discussion, it can be concluded that the broadband factor also has a positive and significant, but demographics, which are proxied by the working age population, do not have a significant influence on economic growth.

The limitations in this study lie in the location that needs to be expanded, the population and sample that are reproduced and other variables that may arise in the future. So that the suggestion for the next research is to be able to carry out improvements to the limitations of the research that has been submitted.

REFERENCES

Annisa, Hannah, and Fatma Ulfatun Najicha. 2021. "KONSEKUENSI GEOPOLITIK ATAS PERDAGANGAN INTERNASIONAL INDONESIA." *Jurnal Global Citizen : Jurnal Ilmiah Kajian Pendidikan Kewarganegaraan* 10(2).

Anon. 2024a. "ERIA-Economic Research Instititute for ASEAN and East Asia." Anon. 2024b. "Global Web Index." Anon. 2024c. "UNCTAD Statistics."

Dykas, Paweł, Tomasz Tokarski, and 'Rafał Wisła. 2022. *The Solow Model of Economic Growth*.

Inekwe. 2013. "The Relationship between Real GDP and Non-Performing Loans: Evidence from Nigeria." *International Journal of Capacity Building in Education and Management (IJCBEM)* 2(1).

Kaiser, M. Shamim, Juanying Xie, and Vijay Singh Rathore. 2021. "Information and Communication Technology for Competitive Strategies: Intelligent Strategies for ICT." *Lecture Notes in Networks and Systems* 190(Ictcs).

Marolla, Cesar. 2018. *Information and Communication Technology for Sustainable Development*. McDonald, Peter. 2015. "Demographic Change: How, Why and Consequences." in *Change!: Combining Analytic Approaches with Street Wisdom*.

Meidayati, Anis Wahyu. 2017. "Impact of

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Telecommunication Infrastructure, Market Size, Trade Openness and Labor Force on Foreign Direct Investment in ASEAN." *Journal of Developing Economies* 2(2).

Nihil. 2015. *Operasionalisasi Regresi Data Panel (Dengan Eviews 8)*. Vol. 4.

Nurkholis, Afid. 2018. "Teori Pembangunan Sumberdaya Manusia: Human Capital Theory, Human Investment Theory, Human Development Theory, Sustainable Development Theory, People Centered Development Theory." *INA-Rxiv*.

Pentz, Chris D., and Lieze Ryke. 2021. "The Intention to Repurchase Apparel Online: A Case of South African Millennial Men."

Poerna Wardhanie, Ayouvi, Althov Zhorif Naufal, and Sri Hariani Eko Wulandari. 2021. "Perancangan Strategi Digital Marketings Dengan Metode Race Pada Layanan Online Food Delivery Berdasarkan Perilaku Pelanggan Generasi Z." *Journal of Technology and Informatics (JoTI)* 3(1).

Rauf, Abdul, Sardjana Orba Manullang, Tri Endi Ardiansyah, Fara Diba, Ilham Akbar, Robi Awaluddin, Puji Muniarty, and Hamdan Firmansyah. 2021. *Digital Marketing : Konsep Dan Strategi*.

Schumpeter, Joseph. 2021. *The Theory of Economic Development*.

Sugiyono, D. 2016. *Quantitative, Qualitative and R&D/Sugiyono Educational Research Methods (in Indonesian)*.

Todaro, Michael P., and Stephen C. Smith. 2006. "Pembangunan Ekonomi Jilid 1." *Economic Development*.

Vahedi, Zahra, Lesley Zannella, and Stephen C. Want. 2021. "Students' Use of Information and Communication Technologies in the Classroom: Uses, Restriction, and Integration." *Active Learning in Higher Education* 22(3).

Widarjono, Agus. 2005. *Ekonometrika : Teori Dan Aplikasi Untuk Ekonomi Dan Bisnis*.

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