

CHAPTER 1

INTRODUCTION

1.1 Background of The Problem

Entering Era 4.0 is a digital era of utilizing technology, information and communication bases for all fields, one of which is the economy. Human innovation in the field of communication and technology has given birth to the digital economy. According to Dalle (2019), the digital economy is the implementation of economic activities carried out on the basis of internet media. Through this media there is no longer a time and distance limit. In the concept of the digital economy, business actors are individuals who master the basis of communication and technology. The emergence of the digital economy is marked by the existence of e-banking, e-commerce to social media. Therefore, the government must gradually and continuously build infrastructure based on information and communication technology.

Overall access and use of Information and Communication Technology (ICT) in the world continues to increase along with the development of various supporting infrastructures. All global ICT indicators show a very significant increase except for fixed line subscribers per 100 population which tends to decline worldwide.

If you refer to the Global Information Technology (ICT) Development from 2005 to 2019, it can be seen that the use of mobile networks for both communication and internet activities, developments that occur almost all over the

world, including Indonesia, while personal use of the internet, especially for use from home to house also increased although not as high as the use of mobile phones. The following data shows the development of Information and Communication Technology (ICT) as shown in Figure 1 below:

Figure 1
Global ICT Developments 2005 – 2019

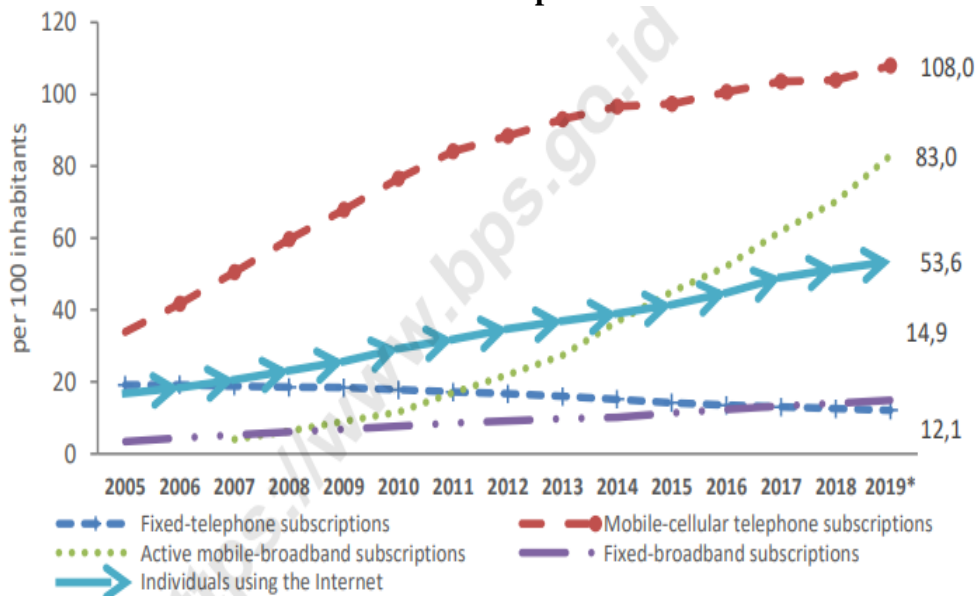


Figure 1 shows that the provision of ICT services continues to progress very rapidly throughout the world. Based on estimates from the International Telecommunication Union (ITU) in 2019, the indicator is worth 108, namely there are 108 cellular phone subscribers from 100 people in the world, which means that one resident subscribes to more than one SIM (Subscriber Identify Module). On the other hand, fixed telephone subscribers per 100 population experienced a downward trend. This situation can not be separated from the shift in the communication media of the people who originally used home phones to become cellular phones. However, in Indonesia, almost every household has a

family member who subscribes to a cellular phone for each individual and uses the landline together.

According to Healey (2019) in the development and use of technology, information and communication (ICT) Indonesia is still far behind compared to other Asian countries. Countries such as Japan and South Korea have proven that by using technology a country can accelerate the country's growth and development. The position of Indonesia's World Information and Communication Technology Development Index (ICT) is ranked 114 in 2017 and 111 in 2018. Indonesia's position is only above allied countries such as Cambodia, Nyanmar and Timor Leste but still below Malaysia, Brunei Darussalam, Vietnam and the Philippines as shown in Table 1.1 below:

Table 1.1
Information and Communication Technology Development Index (IP-ICT)
Several Countries in the World in 2017 – 2018

Negara	IP-TIK/ ICT Development Index	Rangking	IP-TIK/ ICT Development Index	Rangking
(1)	(2)	(3)	(4)	(5)
Korea (Rep.)	8,80	1	8,85	2
Iceland	8,78	2	8,98	1
Denmark	8,68	3	8,71	4
Switzerland	8,66	4	8,74	3
Inggris	8,53	5	8,65	5
Jepang	8,32	11	8,43	10
Australia	8,08	16	8,24	14
Singapura	7,85	20	8,05	18
Malaysia	6,22	62	6,38	63
Brunei Darussalam	6,56	54	6,75	53
Thailand	5,31	79	5,67	78
Vietnam	4,18	108	4,43	108
Filipina	4,52	100	4,67	101
Indonesia	3,85	114	4,33	111
Kamboja	3,24	128	3,28	128
Timor-Leste	3,11	127	3,57	122
Myanmar	2,59	140	3,00	135
Total Negara	175 Negara		176 Negara	

Source: National Statistics Agency (2019)

Based on Table 1.1, it can be seen that when compared to countries in one region, namely Southeast Asia, the position of Indonesia's information and communication technology development index is below that of Singapore, Malaysia, Thailand, the Philippines and even Vietnam. Thus, it can be seen that the implementation of the role of information and communication technology in various fields or aspects of people's lives in Indonesia has not been optimal so that it has not shown a significant contribution to the progress and growth of the national economy as a whole.

According to Mursyid (2020) the use of ICT nationally or the level of progress of information and communication technology in a region can be shown through the information and communication technology development index (IPTIK). The index was developed by the International Communication Union (ITU) in 2008. This index is a composite or composite composed of 11 indicators which are divided into three sub-indices, namely the access and infrastructure sub-index, the usage sub-index and the expertise sub-index. Each index has a relatively different role. The access and infrastructure sub-index is based on five indicators, namely fixed telephone subscribers per 100 population, cellular telephone subscribers per 100 population, international internet bandwidth per user, the percentage of households that control computers and the percentage of households that access the internet. The usage sub-index is compiled with three indicators, namely the percentage of the population accessing the internet, fixed cable broadband internet subscribers per 100 population and internet subscribers

per 100 population, while the skill sub-index is prepared with three indicators, namely average length of schooling, gross enrollment rate (junior high school and senior high school). equivalent) and promote tertiary gross participation of highly educated people.

As an integrated region, Southeast Asia is actually not well connected digitally. This can be seen from the wide digital access gap between Singapore as the country with the most developed economy and other countries in the region. As a result, digital communication cannot run smoothly, thus affecting regional interconnectivity. This is the problem that is discussed in this article and based on the results of research that has been done, it was found that the digital divide in Southeast Asia is caused by government policies that are not well targeted and the low income per capita of most people. Government policies are correlated with the failure of policy makers to build an adequate and equitable telecommunications infrastructure network in all regions. While,

William et al (2019) the use of information and communication technology lags behind compared to other countries, where based on the index Indonesia's development of information and communication technology is ranked 11th, while several countries in the region such as Malaysia and Singapore are above Indonesia. Referring to the Master Plan for the Acceleration and Expansion of Indonesian Economic Development (MP3EI), the challenges faced by the Indonesian people are the development of Indonesia's infrastructure and human resources to encourage economic growth. One of the infrastructures

developed to encourage the economic growth of the Indonesian nation (Komenko Ekonomi, 2018). The development of information and communication technology (ICT) is a terminology foundation that includes all technical equipment for processing and conveying information which includes two aspects, namely information technology and communication technology.

Toade et al (2019) the use of ICT has many benefits, especially to encourage the rate of economic growth. Utilization of ICT in the business world, such as the use of the internet, digital information systems to other software will help increase business productivity, especially profits. When the profit of the business sector increases, it will certainly encourage an increase in government revenue in the tax sector, thus encouraging the increase in the national economy. If referring to the income description, Indonesia in recent years has carried out infrastructure development in the context of utilizing ICT in various fields including access and infrastructure as shown in Table 1.2 below:

Table 1.2
Indonesia's IP-ICT Development 2018 - 2019

Subindeks	IP-TIK 2018	IP-TIK 2019	Pertumbuhan (%)
Akses & Infrastruktur	5,34	5,53	3,56
Penggunaan	4,45	4,85	8,99
Keahlian	5,76	5,84	1,31
IP-TIK	5,07	5,32	4,96

Skala IP-TIK : 0-10

Sumber: Hasil Pengolahan Subdirektorat Statistik Komunikasi dan TI, BPS

Catatan: ITU belum merilis *ICT Development Index* atau IP-TIK 2018 dan IP-TIK 2019

Table 1.2 shows that ICT development in Indonesia has continued to increase in recent years, this is indicated by an increase in IP-TIK which is 5.07%

in 2018 to 5.32% in 2019 or is on a scale of 0-10 with growth reaching 4.96%. The same thing also happened to the three sub-indexes that make up IP-TIK which also experienced developments from 2018 and 2019. Continuing to increase the percentage of the use of IP-TIK indicates that the utilization of ICT in Indonesia is getting higher and at the same time indicates that it has increased economic growth in Indonesia from the range of 2018 to 2019.

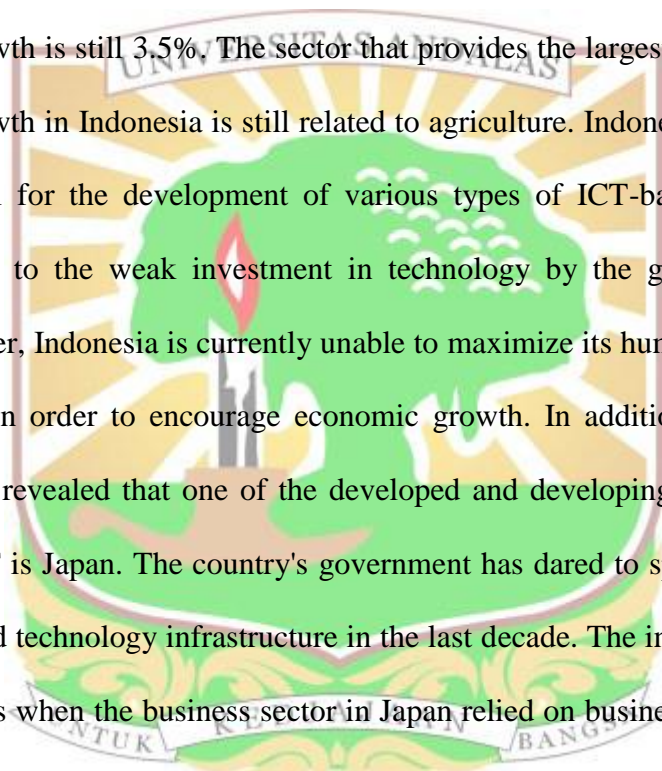
If it is observed from the development of ICT utilization in Indonesia along with the increase in expertise in mastering technology which is at 5.84% in 2019, followed by the access and infrastructure sub-index which continues to strengthen, while the ICT utilization index in 2019 is at 4.85, it is clearly seen that the government is trying to encourage infrastructure improvement, providing experts to encourage strong control of the community to be able to use ICT so that it can encourage national economic improvement.

The development of ICT in Indonesia refers to the program run by Bahrini and Qaffas (2019) revealing that one of the keys to Finland's progress is the government's ability to develop ICT that can be utilized by all economic driving companies in the area. The government is a vendor that is ready to prepare all ICT devices. In Finland, ICT has become the leading tool for the government and the highest foreign exchange supplier compared to other sectors.

In addition, Malik et al (2019) revealed that ICT is a superior facility that is multifunctional. Australia is one of the countries that utilize ICT facilities to increase the country's economic growth. The government invites technology

investors to develop ICT tools. Technological investments developed by the government and investors become jobs, so as to reduce unemployment, besides that the government also requires technology investor companies to pay taxes to the government so that the country's foreign exchange or economic growth will increase.

According to Herlinda (2019), the contribution of ICT to Indonesia's economic growth is still 3.5%. The sector that provides the largest contribution to economic growth in Indonesia is still related to agriculture. Indonesia actually has great potential for the development of various types of ICT-based businesses. However, due to the weak investment in technology by the government in a planned manner, Indonesia is currently unable to maximize its human resources to develop ICT in order to encourage economic growth. In addition, Ridwan and Syafei (2020) revealed that one of the developed and developing countries with the use of ICT is Japan. The country's government has dared to spend trillions of dollars to build technology infrastructure in the last decade. The investment began to show results when the business sector in Japan relied on businesses in the field of technology and communication as their main platform. Starting from the development of satellite technology, computer chips to digital marketing and the development of appropriate technology, especially Android. The business unit developed by the government in collaboration with a number of parties was able to lift the Japanese economy, which had slumped since the 2013 Earthquake and Tsunami disaster.



Tohir (2020) revealed that in the next ten years Indonesia will rely heavily on the ICT-based business sector, therefore the government must have the courage to invest in technology. Choi et al (2019) revealed that ICT is not only useful in developing the business sector but can also be used in the education sector, especially during the Covid-19 Pandemic. In addition, during the Covid-19 Pandemic, the Singaporean government managed to increase the value of its foreign exchange earnings amidst other nations in the Asian region experiencing negative economic growth. Rohid et al (2020) the Indian government requires every technology-based investor to pay taxes to the government, as well as provide special facilities for the Indian community as a result the Indian economy begins to grow.

In 2020 there was a fundamental change in the pattern of human life in the world, due to the Covid 19 outbreak that has hit the whole world until now. The use of ICT continues to experience a significant increase in the midst of the Covid 19 pandemic at the beginning of 2020. The Indonesian government has declared a health emergency and obliges every citizen to reduce activities outside the home, always use masks, maintain distance and diligently wash hands with soap and running water, in addition to the real sector, especially the business world, began to develop the use of ICT, especially the internet. In the business world, the internet is used as a tool to help people work from home (work from home), while in education and business the internet is a means for remote technology development,

According to Hidayat (2020) in the second and third quarters of 2020 the communication and technology sector contributed the most to the addition of the state treasury. The higher the intensity of people using the internet and the communication technology that supports it has made a major contribution to taxes, especially those related to satellite and optical network tenants in Indonesia, in addition to working using communication technology in the midst of the Covid 19 pandemic has created innovation for most people, namely the more The creativity of the community in developing their potential such as the birth of the profession as a YouTuber, an IT-based endorser, as well as the advancement of the e-commerce business unit which encourages the continued growth of the community's economy in Indonesia amid the Covid 19 pandemic, which cannot be known with certainty when it will end.

Based on the brief description of a number of previous research literature, the researcher considers that Indonesia as a large country and ready to become a developed country in the future is still not able to utilize ICT to encourage the country's economic growth. Several countries in the Asian region such as Malaysia, Singapore, Thailand, Japan, Korea and Vietnam are the leading countries that are able to utilize ICT to encourage economic growth. Therefore, researchers are interested in conducting research that is solid literature entitled: Study Literature Impact Of Information, Communication, Technology (ICT) Development On Economic Growth In Indonesia.

1.2 Formulation of Problem

In accordance with the description of the background of the problem that has been described previously, it can be proposed a formulation of the problem that will be proven in this study, namely:

1. How is the use of Information, Communication, Technology (ICT) in Indonesia?
2. How is the influence of Information, Communication, Technology (ICT) on economic growth in Indonesia?

1.3 Purposes of Research

Based on a brief description of the formulation of the problem, the objectives of this research are:

1. Analyzing the use of Information, Communication, Technology (ICT) in Indonesia.
2. Empirically prove the influence of Information, Communication, Technology (ICT) on economic growth in Indonesia.

1.4 Benefits of Research

Based on the formulation of the problem and research objectives, it is hoped that the results obtained can be useful for:

1. Government

The results obtained in this study can be used as an evaluation tool to determine a number of variables that can encourage an increase in local revenue, besides that this research can also contribute to formulating



strategic policies related to ICT development to encourage increased economic growth in Indonesia in general and West Sumatra in particular.

2. Practitioner

The results obtained in this study can add insight to those who read this research, especially in understanding the role of electronic payments on local revenue, especially in the city of Padang.

3. Academics

The results obtained in this study can be used as a reference or reference for further research.

