

CHAPTER 1 INTRODUCTION

1.1 Research Object Overview

1.1.1 PT Telkom Indonesia (Persero) Tbk. Profile

PT Telkom Indonesia (Persero) Tbk. Is a State-Owned Enterprise (BUMN) in the field of Information and Communication Technology (ICT) services and telecommunications networks in Indonesia. In the world of the telecommunications industry, PT Telekomunikasi Indonesia has the majority shareholder, the Government of the Republic of Indonesia, at 52.09%, while the remaining 47.91% is controlled by the public (Telkom Indonesia, 2021).



Picture 1.1 PT Telkom Indonesia (Persero) Tbk. Logo
Source: Telkom Indonesia, 2021

As a state-owned company whose shares are traded on the stock exchange, the company's majority shareholder is the Government of the Republic of Indonesia. At the same time, the rest is controlled by the public. The largest state-owned T.I.M.E.S (Telecommunication, Information, Media, Edutainment and Services) business provider company in Indonesia, is a complete business portfolio following the changing trends of global business.

The service's name was changed to the State Post and Telecommunications Company in 1961. (PN Postel). The State Post and Giro Company (PN Pos & Giro) and the State Telecommunications Company were formed from PN Postel in 1965. (PN Telekomunikasi). PN Telekomunikasi was renamed General Telecommunications Company (Perumtel) in 1974, and it now provides national and international telecommunications services. The Indonesian government took

over all shares of PT Indonesian Satellite Corporation Tbk. (Indosat) in 1980 and turned it into a State-Owned Enterprise (BUMN) to provide international telecommunications services, independent from Perumtel. Telecommunications Law No. 3 of 1989 was passed in 1989, and it controls the participation of the private sector in telecommunications operations.

Based on Government Regulation No. 25 of 1991, Perumtel changed its name to become an Indonesian telecommunications firm in 1991. An initial public offering of Telkom shares was held on November 14, 1995. Telkom's stock has been listed and traded on the Jakarta Stock Exchange (JSX) and the Surabaya Stock Exchange (BES) (both now known as the Indonesia Stock Exchange (IDX)), the New York Stock Exchange (NYSE), and the London Stock Exchange (LSE) since then (LSE). Telkom's shares are also traded on the Tokyo Stock Exchange but are not listed. The total number of shares issued was 933 million at the time.

Indonesia's government has deregulated the telecommunications sector since 1989, allowing for free market competition. Telecommunications Law No. 36/1999 was passed in 1999. As a result, Telkom no longer enjoys a telecommunications monopoly in Indonesia. Telkom purchased 35 percent of Telkomsel's shares from PT Indosat Tbk. in 2001 as part of Indonesia's telecommunications service industry reorganization, which included eliminating joint ownership and cross-ownership between Telkom and Indosat. There has been a duopoly of local telecommunications operations since August 2002. On October 23, 2009, Telkom unveiled "New Telkom," which was highlighted by a shift in the company's identity.

Telkom Indonesia has continued to grow in the telecommunications sector from 1965 until today. In the process of its growth, PT Telkom Indonesia (Persero) Tbk. transformed into a digital telecommunication company by implementing customer-oriented business and operational strategies. This effort, will make the Telkom Group more lean and flexible in adjusting to the fast-paced changes in the telecoms market. Along with the development of time, Telkom

Indonesia has been divided into three digital business domains, namely Digital Connectivity, Digital Platform, and Digital Services (Telkom Indonesia, 2021).

PT Telkom Persero Tbk. has a subsidiary that supports the growth of technology. Some of the subsidiaries of the Telkom Group are PT Telekomunikasi Selular (Telkomsel), PT Multimedia Nusantara, PT PINS Indonesia (PINS/Pramindo), PT Infomedia Nusantara (Infomedia), PT Dayamitra Telekomunikasi (Mitratel/Dayamitra), PT Napsindo Primatel Internasional (Napsindo) , and PT Graha Sarana Duta (TelkomProperty/GSD)

1.1.2 Vision and Mission of PT Telkom Indonesia (Persero) Tbk

To continue to support national digitalization and to internalize the transformation agenda, Telkom has renewed its purpose, vision, and mission. The purpose of PT Telkom Indonesia is “Creating a more prosperous and competitive nation and providing the best-added value for stakeholders”. With the vision "Being the digital telco of choice to advance the community." And the mission of Telkom Indonesia are:

1. Accelerate the development of infrastructure and smart digital platforms that are sustainable, economical, and accessible to the whole community.
2. Develop superior digital talent that drives digital capabilities and the nation's level of digital adoption.
3. Orchestrate the digital ecosystem to provide the best customer digital experience.

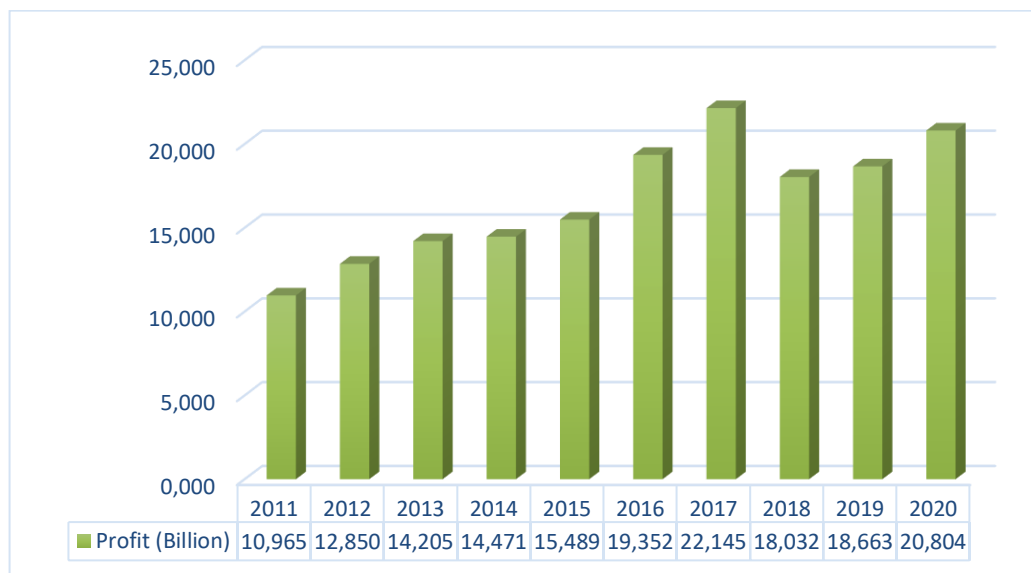
1.2 Research Background

Along with science and the development of human civilization, information and communication technology have evolved. The growing ease of access in various parts of the world proves that the era of globalization is so real. Developing countries are frequently seen as of late and backward, but Indonesia is fast in responding to technological developments (UII, 2021).

Technological developments continue to grow, supported by the effective release of 4G/IMT advanced in 2011. 4G has internet speeds 500 times faster than 3G, which can help people's digital lifestyle. 4G can also increase productivity in

various fields, especially in the content industry. And there are many more conveniences obtained in developing 4G networks for the community. Therefore, the emergence of 4G in 2011 was a big step for forming the telecommunications industry (Indotelko, 2021).

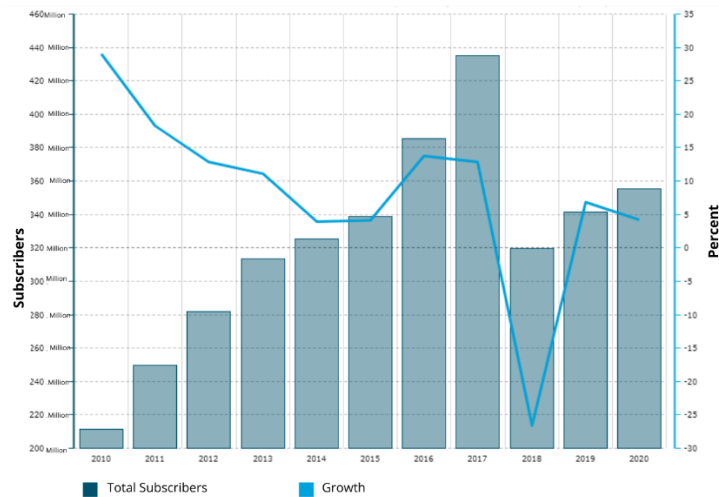
PT Telkom Indonesia (Persero) Tbk. has increased its profits and shares in the past ten years. The increase can be seen in the form of a graphic as follows:



Picture 1.2 Net Profit of PT Telkom Indonesia (Persero) Tbk. 2011- 2020
Source: Data that has been processed from Telkom Indonesia Annual Report, 2011-2020

Quoted from the Katadata page, PT Telkom Indonesia (Persero) Tbk's financial performance continued to rise despite the Covid-19 pandemic. It can be proven from the increase in Telkom's profit to double digits in the first half of 2021 compared to the same period in the previous year. Earnings per share also rose from Rp 110.93 to Rp 123.69. The increase in Telkom's net profit was driven by an increase in the company's revenue by 3.92% in the first half of this year (Katadata, 2021a). PT Telkom Indonesia has penetrated throughout Indonesia with its network service provider so that urban and rural communities already know about this Telkom network. Unexpectedly, PT Telkom Indonesia (Persero) Tbk. has become one industry that contributes to national economic growth (CNBC Indonesia, 2020).

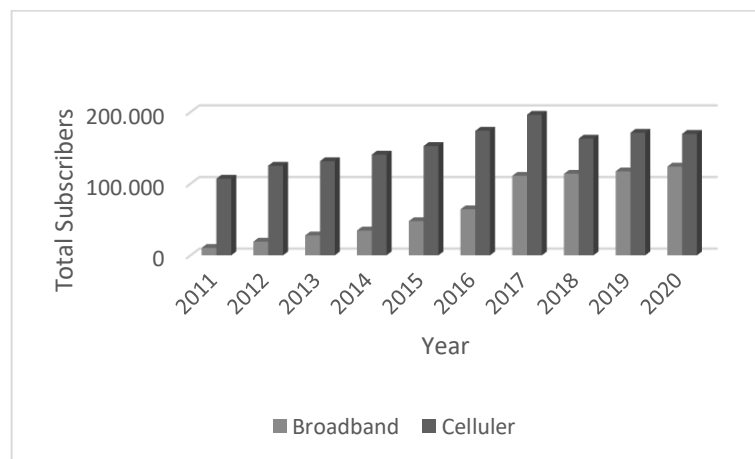
Indonesia has shown rapid development in the use of Information Technology in the last ten years. The development of several indicators of ICT utilization in Indonesia can be seen from broadband internet users at PT Telkom Indonesia (Persero) Tbk, which reached an increase of 82.77% in 2012 from the previous year. And it continues to increase every year until 2020. And not only that, we can see in the graph below. Cellular phone users in Indonesia reached 355.6 million subscribers in 2020 (Kominfo, 2021).



Picture 1.3 Number and Growth of Telkomsel Cellular subscribers (2010-2020) (Kominfo, 2021)

In 2018 there was a decline in revenue and users in all telecommunications sector companies in Indonesia. We can analyze one of the subsidiaries that have a big influence on PT Telkom Indonesia, namely Telkomsel. Several main factors caused the telecommunications industry to decline, namely registration of prepaid SIM cards, price wars, and the decline in legacy services such as telephone and messages (Kompas, 2019). The price of data packages in Indonesia is very low. Indonesia is one of the countries with the lowest data package prices. However, after the transition process, the telecommunications sector in Indonesia is growing and innovating again. It is said that legacy service revenue such as telephone and SMS is declining because non-legacy income such as internet data is more dominant. And the negative cause of services that led to a decline in revenue and customers in the telecommunications industry in 2018 was the government's policy to register prepaid sim cards.

From the annual report of PT Telkom Indonesia (Persero) Tbk. in the 2010-2020 period, there are developments in cellular phone and broadband users. Although there was a slight decrease in cellular telephone subscribers in 2018, in the following years, it continued to grow. As seen from broadband users who continue to grow every year, it can be proven that the development of telecommunications in Indonesia is quite fast.

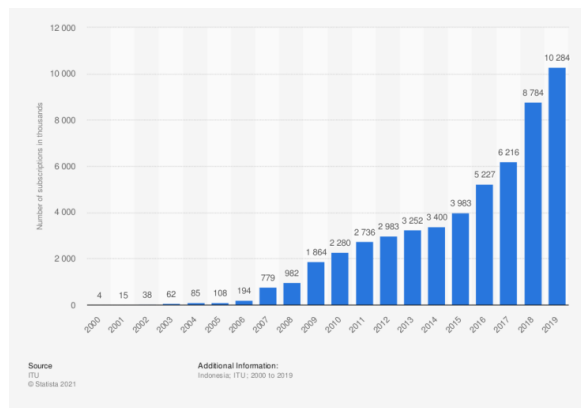


Picture 1.4 Total Subscribe of PT Telkom Indonesia (Persero) Tbk (Data that has been processed from Telkom Indonesia Annual Report)

The development of telecommunications is also supported by the event that shocked the world at the end of 2019, namely the spread of the covid-19 virus. These events forced the telecommunications sector to continue to grow rapidly. This can be seen from the transition from offline to online systems. Even in terms of education, they have carried out teaching and learning activities using the internet connection to other platforms that support learning activities. Without realizing it, indirectly, telecommunications is very useful, especially in the Covid-19 pandemic. Due to the increasing number of telecommunications users, a good telecommunications network is needed. So that with a good network all internet users can connect to each other.

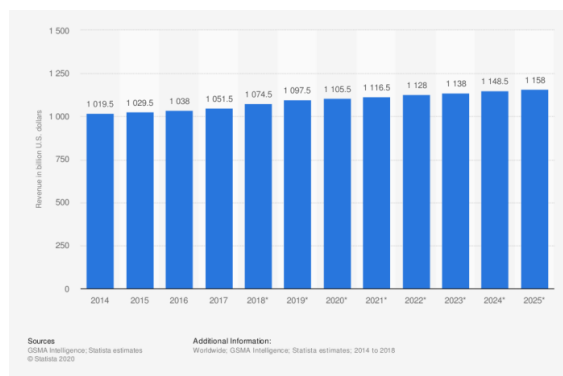
The telecommunications sector must continuously adapt by improving quality telecommunications networks and services. Director-General of SDPPI (Sumber Daya dan Perangkat Pos dan Informatika) of the Ministry of Communication and Information Ismail said employment in the telecommunications sector experienced extraordinary growth in 2020 due to the

increase and change in the configuration of internet use concerning traffic through telecommunications networks. Internet traffic is mostly used in offices, buildings, and schools in normal conditions. And during the Covid-19 emergency, the Internet was mainly used in housing complexes, state areas, and residential areas. And because of that, it takes a huge bandwidth requirement acceleration due to an increase in traffic in this Industry.



Picture 1.5 Number of fixed broadband subscription in Indonesia from 2000 to 2019 (Statista, 2021)

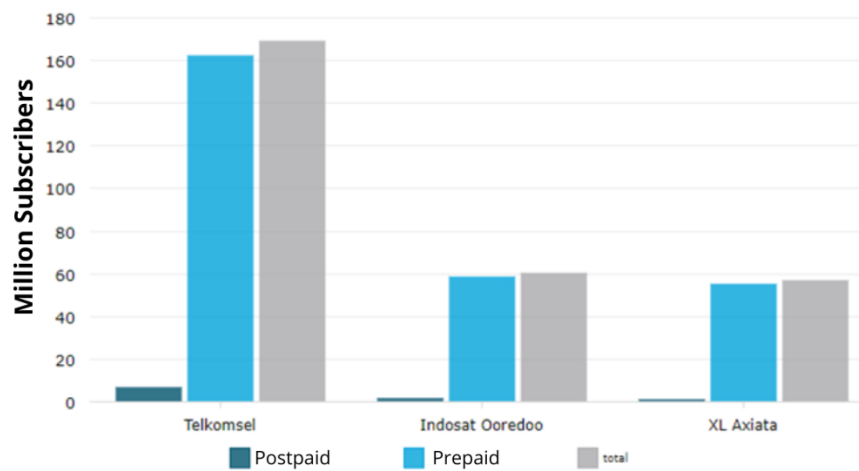
Of course, this is related to the current expansion of the 4G network. With some of these improvements, telecommunications sector companies have confidence in the opportunities that exist today, giving rise to the desire to offer their newest network, 5G (Business Wire, 2020). This can be seen from the number of mobile telecommunications revenues globally, which continues to rise and is even predicted to continue to grow in the coming years.



Picture 1.6 Revenue from mobile telecommunication worldwide from 2015 to 2025 (Statista, 2020)

In all countries, the telecommunications industry certainly has very different revenues. Especially in Indonesia itself, the information and communication sector enters three sectors that continue to grow when the Indonesian economy is experiencing a downturn. In the second quarter of 2020, this sector grew by 3.44% compared to the previous quarter. Based on the calculation of the market share squared from each cellular operator, the HHI value of the Indonesian telecommunications industry can be calculated. The basis of the data to calculate market share in this study is gross revenue and the number of customers. Based on the Herfindahl Hirschman Index (HHI) calculation, it can be seen that the Indonesian telecommunications industry is an industry with a high market concentration.

The telecommunications services sector currently has at least some of the largest telecommunications companies in Indonesia listed on the IDX, namely PT Telkom Indonesia, PT XL Axiata, and PT Indosat. Telecommunications networks in Indonesia have several variations, some of which use a wired or wireless communication network or what users usually call wireless or cellular users. There are three largest telecommunication companies in Indonesia, and PT Telkom is the largest cellular operator in Indonesia in June 2021. Customers at PT Telkom Indonesia increased 5.7% from the previous year, including prepaid and postpaid subscribers. Followed by PT Indosat Ooredoo Hutchison with a growth in the number of subscribers reaching 5.3% of the prior year, and after that, there is PT XL Axiata Tbk. with a customer growth of 1.96% from the previous year (Katadata, 2021)



Picture 1.7 Total Customer of the biggest 3 of Celluler Operator in Indonesia (Katadata, 2021)

In 2020 PT Telkom Indonesia achieved revenues of around 136 billion rupiah. PT Telkom Indonesia also received several awards in 2020, one of which was "Innovative Company for Digital Edutainment Service category Telecommunication" and "The best SOE in National Building" (CNBC, 2020). So from the achievements that have been achieved, PT Telkom Indonesia claims to be the largest telecommunications company in Indonesia, with 15 million fixed telephone subscribers and 104 million cellular telephone subscribers.

From the explanation above, it can be seen that a company can be said to be good if we look at its financial performance. A well-developed telecommunications system is key to a country's economic growth and development. (Dutta, 2015). If the company's performance is good, investors will be interested in investing. When looking at a company's financial performance through its financial statements, which will be analyzed using financial ratios, it may be said that the company's financial performance is good. Analyzing financial statements has several benefits, namely being able to find out how a company's financial position is in a certain period, to know the productivity of a company. And to know what improvements should be made in the future. Increasing productivity is one of the key factors for the development of a

company so that it can progress, and productivity is one of the keys to encouraging optimal economic growth (Supriyanto & Brodoastuti, 2012).

When viewed from the development of technology at this time, the telecommunications sector can indeed be said to be in good condition. However, despite these conditions, the company's performance must be appropriately maintained. According to Octrina (2020), company performance is related to how the level of profitability of the company, how the company can work productively, and how efficient the company is in managing its inputs and outputs. One measurement of financial performance is seen from profitability and how they manage their inputs and outputs productively and efficiently, where companies are expected to minimize inputs with optimal output.

Productivity is one of the key factors in promoting optimal economic growth. To produce good company productivity requires employees who have a good work ethic, caring attitude, and discipline. Companies need to pay attention to knowledge, skills, abilities, behavior, and workforce satisfaction to ensure high employee productivity. The definition of productivity itself is the relationship between labor, materials, and money to produce a good form or value (Supriyanto & Brodoastuti, 2012).

Based on the financial reports and events described above, it shows a probability of an increase in productivity at PT Telkom Indonesia. The Malmquist Productivity Index (MPI) method is used in this study to determine a company's productivity level. To compare the input and output to be calculated, the Malmquist Index is utilized. The Malmquist Index, which is part of the Data Envelopment Analysis (DEA) approach, can be used to see each business unit's productivity level so that improvements in efficiency and technology are based on specified inputs and outputs. MPI is also used to analyze performance change (Octrina et al., 2020).

Based on previous research, this study contributes to the existing literature on production economics by encouraging increased productivity and provides new empirical evidence of productivity growth and technological change that is constantly evolving in this business sector. In this study, several variables are used

as a reference to see the productivity of a telecommunications company, and the input variables can be seen from labor, capital, and materials. The output variables used are total revenue and earnings per share. Based on the results of previous research conducted by Majumdar & Asgari (2017), based on the variables used in the study, it shows that the above variables drive the productivity growth that occurs in the telecommunications industry.

Performance measurement is very important for any company in any sector, and determining its efficiency and achievement and comparing the company with other companies in the same industry, from previous research using one of the telecommunications companies in the world, namely Emirates Integrated Telecom. It has been compared from various sectors in the world using the Malmquist Productivity Index that the telecommunications sector is the first sector whose TFP is above the average TFP of other sectors. From this research, it is said that the telecommunications sector is also an improvement in both technological and technical efficiency. After seeing the phenomena described and collecting the necessary data, this research is entitled “Analysis of productivity level at PT Telkom Indonesia (Persero) Tbk. using Malmquist Productivity Index (MPI).”

1.3 Problem Statement

The telecommunications sector in Indonesia is growing rapidly. Therefore, people worldwide, especially in Indonesia, feel the importance of telecommunications today. All activities such as government, work, lectures, and so on are supported by the use of the internet.

In the background discussion, PT Telkom Indonesia is a company under the direct control of the government and a telecommunications company that has the most customers in Indonesia. Supported by the awards that have been achieved, the authors decided to conduct a performance analysis of the financial performance of this company. So, to analyze the performance of financial performance at PT Telkom Indonesia (Persero) Tbk, the questions to be studied are as follows:

1. How is the productivity level at PT Telkom Indonesia (Persero) Tbk. using Malmquist Productivity Index?

1.4 Research Purpose

Based on the title of the research and the formulation of the existing problems, the objectives of this research are as follows:

1. To find out the level of productivity at PT Telkom Indonesia (Persero) Tbk. using Malmquist Productivity Index.

1.5 Benefits of Research

Based on the objectives of the research, this research is expected to have direct and indirect benefits. The benefits of research are as follows:

1. Theoretical Aspect

For further researchers, it is expected to provide knowledge and understanding of productivity that is processed using input and output variables and examine the specific effect of the above variables on the productivity of the telecommunications sector. So that later it can provide broad ideas for further researchers regarding knowledge related to productivity levels with the Malmquist Productivity Index (MPI) approach in the Indonesian telecommunications industry.

2. Practical Aspect

For companies, providing important information for company management in making decisions to optimize the input and output variables.

1.6 Research Systematic

Writing in this study consists of 5 chapters consisting of several sub-chapters. The systematics of research writing in outline are as follows:

CHAPTER I : INTRODUCTION

In this section, the writer explain and describes the general description of the research object, the background of the research, the problem statement,

research purposes, the benefit of the research, and systematic od final project writing.

CHAPTER II: LITERATURE REVIEW

In this chapter, the author explains what theories have a relationship with the object under study, from references to previous research studies when examining this object. This literature review relates to the problem to be studied.

CHAPTER III : RESEARCH METHODS

This chapter contains the research methods that researchers will use in conducting their research to make it easier for researchers to answer questions related to this research problem.

CHAPTER IV: RESEARCH RESULTS AND DISCUSSION

Starting with the conception of the problem and ending with the study objectives, this chapter provides the discussion and description in order. Of course, the outcomes of research and analysis of a study based on the data collected will be presented in this chapter.

CHAPTER V: CONCLUSIONS AND SUGGESTIONS

This last chapter is the conclusion of the research that has been carried out as an answer to the research questions, which will become a suggestion and reference for future research.