

CHAPTER I

INTRODUCTION

1.1. Background

5G is the fifth generation of wireless networking technology, with significant advancements from previous generations, including extremely high connectivity speeds, near-zero latency (better responsiveness), and great connection capacity, allowing multiple devices to be connected at the same time. The technology advancement allows for continuous innovation in a wide range of industries. Mobile networks are designed for a super-connected world in which data generated are contextualised, constructed and processed across over the cloud, creating continuous value. Self-driving cars, virtual reality, smart manufacturing, global logistics tracking, smart agriculture, smart home and other applications are some of the first and most promising areas for IoT to focus on. These applications are expected to grow rapidly in the 5G era. (Looper, 2020)

China is one of the countries that is concerned to developing 5G network technology. Since China joined the world trade organization (WTO) in 2001, it has further strengthened China's position as part of the world's manufacturing and trade center. (Economist T. , 2018) Now Chinese technology companies have become important players in the global market as they embrace innovation and improve quality and affordable product costs. Huawei is an example of China's technological superiority. In recent years the company has grown to become the world's largest producer of telecommunications equipment. In the first quarter of 2019, Huawei surpassed Apple as the second-largest smartphone manufacturer after Samsung. Huawei managed to ship 59.1 million units of smartphones and control 19% of the smartphone market in the world, while in the first position was taken by a

company from South Korea, Samsung with 71.9 million units controlled 23.1% of the world smartphone market. The third was Apple managed to ship 36.4 million smartphone units control 11.7% of the world's smartphone market. (IDC, 2020)

Currently, the only company that can produce 'at scale and cost' all the elements of a 5G network is Huawei, with its closest competitors Nokia and Ericsson, unable to offer a viable alternative. (Horowitz, 2018) Huawei has acquired a visible and active role in developing global 5G standards and has acquired most of the core patents for 5G. Huawei's ambition is to dominate the 5G wireless communications market, and has collaborated with telecommunications companies in a many countries in Europe and the world. (Kaska, 2019)

From the advantages offered by Huawei, it is seen differently by the United States under Donald Trump's administration. Since Donald Trump won the election and became President of the US, it negatively impacted The US relations with China, especially in the term of economics. On March 22, 2018, the Trump administration made a policy to increase the import tariffs for some Chinese products. This policy is believed as the right step to turn the US economy into protectionism to improve the domestic economy and reduce the trade balance deficit of both the US and China. (Adrini, 2018)

Based on the bad bilateral background of China and US relations. On May 15, 2019, Donald Trump signed an executive order to enforce Huawei's 5G Technology Ban Policy and put Huawei on a trade blacklist. (Debora, 2019) This policy includes prohibiting the development of Huawei's 5G technology in the US, as well as cutting off the trade affiliations of The US companies that cooperate with Huawei such as Google, which provides its "Android" software as the operating system used by Huawei smartphones, Windows which provide operating system for Huawei Laptops then Intel which provides

chips. Computing for Huawei laptops; and Broadcom, which provides spare parts for Huawei network devices.

1.2. Research Question

Based on the background, the main issue raised in this research is, "Why did the US administration ban the application (adoption) of the Huawei 5G network technology?"

1.3. Theoretical Framework

1.3.1. National Security

In the traditional view, security is defined in military terms, with a major focus on protecting the state from threats to national interests. When Hans Kelsen broadcast about Collective Security within the framework of International Law in 1957, Hans limited his study of security to 'protecting people against the use of force by others. (Nasu, 2019) This is closely related to national security, which means protecting the territory from external military threats and attacks that are recognized as the *raison d'être* of the sovereign states. However, the traditional notion of security as defined by reference to national survival, physical protection of state territory, and military power has expanded in scope since the end of the Cold War.

After the cold war, various new things appear to influence the conception of national security. These issues include human rights, globalization and technology, and terrorism. The result is the concept of national security becoming expanded.

Globalization impacts capacity and autonomy, which means that the state's relative strength vs. non-state actors, social forces, and market forces. The most obvious thing about the impact of globalization is the disappearance of state sovereignty's power and influence. This can be seen in the decline in macroeconomic policies' autonomy in terms of management related to production. (Krishner, 2018)

The dramatic expansion in communication technology such as TV, satellites, mobile phones, computers, and the internet, which is commonly referred to as the 'hypermedia environment', shows an example where the traditional state influence has decreased. (Krishner, 2018) This has also led the state to upgrade technology for its benefit in terms of monitoring technology. The hypermedia environment also influences the relative strength of a country. Globalization can also reshape conflicts and styles and patterns of organized political violence. Globalization undoubtedly increases the opportunities and possibilities of terrorism, inter-ethnic conflict and makes weaker states more vulnerable being attacks from inside and outside.

Stanley Hoffman stated that "Globalization, far from spreading peace, thus seems to foster conflicts and resentments." (Hoffman, 2002) From the changes that have occurred, the definition of a sovereign state's power does not mean that it disappears but is transformed into a different form in line with the threats faced and the risks that are more outside the country's borders.

According to Berkowitz, national security can very usefully be defined as a nation's ability to protect its internal values from outside threats. (Berkowitz, 1965) This concept developed more and more in the United States after World War II. Initially, it focused on military capabilities, which then developed into various non-military matters. The US passed a law relating to national security called The National Security Act of 1947. This law restructured many The US administration aspects in the military and intelligence services after World War II.

Based on the relationship between the US and China, which is in bad condition due to a trade war, made The US is in a threatened position if China succeeds in developing 5G technology with Huawei because higher use of virtualization in 5G will, at the same time, arguably lead to the further evolution

of security threats and a broader, multifaceted attack surface. Linking increasing billions of intercommunicating devices, 5G will entail an exponential rise in the number of potential targets and means for espionage, not to mention its potential for emerging signals intelligence platforms to enable massive collecting parsing of telemetry data. In grim but not unrealistic prognoses, these developments will lead to the emergence of a potential 'surveillance web' over much of the planet'. (Woods, 2018) The US believes that equipment supplied by Huawei can be used by the government of China or by the Chinese Communist Party (CCP) to spy on individuals, firms, and governments in foreign countries and that – if ordered – the manufacturer would be able to shut down foreign networks that use its equipment. (Fazzini, 2018) For this reason, the US considers Huawei's 5G technology to be a national security threat.

1.3.2 Trade War

In the perspective of mercantilism, a trade war is a situation where a country or region tries to harm each other's trade through a country taking policies that can hinder trade as a punishment for other countries. But such a move usually prompts the other country to respond with retaliation. Frequently used policies include imposing import quotas, increasing import duty rates, restricting investment, belittling, or under-manipulating other countries' currencies to avoid foreign goods and protect local companies (mercantilism).

The trade war initiated by Trump is an attempt to reduce the United States' trade deficit. Trump officially declared a trade war by raising high tariffs on some imported products from China in early March 2018, especially steel and aluminum worth \$50-60 billion, and will carry out the plan to limit investment in China's technology industry right on March 22. (Diamond J. , 2018)

The US imports steel and aluminum to support the industries growing and developing in the US for years. The US is unable to produce steel and aluminum domestically because it cannot operate optimally. So far, at least the US needs steel and aluminum imports of up to 100 million tons to run its domestic industries. With this amount, the US must import approximately 90% of its total needs. (Statista, 2019) The large supply of foreign steel and aluminum from various countries such as China, Canada, South Korea, and Mexico. However, China, which has become a strong country and able to supply the needs of The US steel and aluminum imports, is because its products are relatively cheap compared to importing steel and aluminum from other countries. The application of import tariffs is a good choice for the US to reduce domestic demand through imports of steel and aluminum. Trump announced that the US government was imposing a 25% tariff on steel imports and a 10% tariff on aluminum imports. (ITI, 2020)

In his campaign, Trump pledged to protect the national economic interests of the United States. American First is also a commitment that Trump promised in the campaign intending to restore the glory of the US as the sole superpower in the world. By realizing American First, various efforts must be made in the national economy's interests by taking into account the country's trade balance deficit. In the case of the US and China, China is a country that has contributed to the largest deficit in the US. The recorded trade deficit value of The US exports to China was \$130.36 billion. Meanwhile, according to the data, the trade deficit on the scale of The US imports from China was larger, reaching \$505.59 billion. The comparison of exports and imports reached -\$375.23 billion in a trade deficit borne by the US government. (Relations, 2017) This caused the US to take steps for China as the main target in terms of the trade balance deficit.

According to the research director for CORE Indonesia, Piter Abdullah, the impact of the trade war between China and

the US is the increasing tension between the two countries where each other imposes tariffs on imported goods from the two countries. (Laucereno, 2019) Besides that, the impact of the trade war weakens the global economy in the World Economic Outlook, the IMF said that the projection shows economic growth in 2019 is 3 percent, where the value is down from 3.2 percent in July's estimate. (Fauzia, 2019) The existence of a trade war also has an impact on other countries, for example, the occurrence of massive layoffs in cobalt and copper mines in Congo and Zambia because the demand from these two countries is getting smaller due to the imposition of import tariffs that enter the country so that the volume and price item is holding at a low level. (Nyabiage, 2019)

The tension between the US and China is not only in the trade sector but also in technology development, for example, the development of 5G technology. As we know, China's position is superior for 5G development because China is taking fast action through the Made in China 2025 initiative to transform China into a manufacturing country in the hi-tech sector capable of producing all its own domestic needs. This includes developing technology for everything from electric vehicles to smartphones and 5G equipment. The end goal is to catch up to and potentially surpass rivals in the West. (Reardon, 2020) The success of the US in developing 4G technology can increase GDP by \$100 billion, open up new jobs, and develop new technologies, making the US expects to do the same now with the 5G because 5G technology is predicted to provide even greater benefits than 4G. (Kratsios, 2018)

1.4. Hypothesis

1. The US banned Huawei 5G Network Technology because the technology has the potential to threaten US national security.

2. The US banned Huawei 5G Network Technology as a form of The US sentiment in the trade war with China, and the US wants to be a leader country develop 5G technology like before succeed to develop in 4G.

1.5. Purpose of Research

The purpose of this research is to explain the US ban policy on Huawei 5G Network Technology

1.6. Research Method

This research uses a qualitative approach where this research's data was conducted by looking at and looking for existing literature to obtain data related to analysis in research writing. Sources of data in this study come from journals, official websites, magazines, and newspapers.

1.7. Scope of Research

This research's limitation starts from 2018 until 2020, where the trade war policy will take effect in March 2018 and 2021, where Joe Biden has replaced the US President Donald Trump as the next The US President.

1.8. Writing System

In chapter I, there is a basic explanation of this research, including the background, research question, theoretical frameworks, hypothesis, the purpose of research, research method, research scope, and writing system.

Chapter II describes and explains what 5G Technology is and the US ban policy toward Huawei 5G Network Technology. The authors discuss why the US banned the Huawei 5G Network Technology.

Chapter III, which is the last part of this research, explains the conclusions that the author has drawn from the answers to the problem formulations.