Abstract

Purpose: The hegemony competition between the United States and China is one of the most crucial topics of world politics in the 21st century. As China’s innovation in science, technology, and high-tech industries grow rapidly, the United States is enacting restrictions to regulate this critical situation. This paper searched for the motives for their political actions, the primary differences between the U.S.-China competition for technological hegemony, and their national policies.

Method: This paper examined the differences in U.S.-China national policies through geopolitics. The usefulness of geopolitics, the characteristics of continental and maritime countries, and the Huawei incident which clearly indicates the cross-section of the U.S.-China technological competition, these factors were analyzed to find the answer to the research question.

Results: The contrast in technology competition and technology policies between the U.S. and China can be summarized as a difference in culture and perception. The difference comes from China’s ‘Confucian and family like discussion’ and America’s ‘individualistic, bottom-up, and democratic’ lifestyle. In addition, the Huawei issue is a conflict of economic ideology between the United States and China with regards to the relationship between business and state.

Conclusion: The difference in policy between the U.S. and China can be defined as a difference in basic culture and perception. Therefore if the main reason that the United States suspects Huawei comes from the aforementioned fundamental differences in national thought, this could not only be a problem that is difficult to solve, but also a starting point of a dispute that could continue to be a problem in the future.

[Keywords] Geopolitics, Huawei, Continental Nation, Maritime Nation, Technology Competition

1. Introduction

The hegemony competition between the United States and China is an important topic of world politics in the 21st century, especially since the United States is implementing sanctions against China for its rapidly growing technological innovations and high-tech industries. The United States believes that the main reason for China’s rapid growth is because of illegal activities such as stealing intellectual property rights from foreign companies, and theft of technology transfers. The U.S. identifies China’s actions as a threat to its own economy and security, hence sanctioned China by giving legal sanctions to prevent technology leakage, thereby intensifying the technology competition between the U.S. and China. However, the key reason China has achieved rapid growth is because of its government-led massive R&D investment and full support for corporate activities. While in the U.S. R&D and investment activities are mainly driven by companies. Then where does the difference in government policy come from? This paper uses geopolitics to examine the differences in policies that
shape the technological competition between the U.S. and China i.e. policy motives and backgrounds.

2. Geopolitics Theory and Characteristics of Continental and Maritime States

2.1. The effectiveness of geopolitical theory

Research regarding the hegemony in international politics have been discussed by the Hegemonic Stability Theory and the Power Transition Theory. According to the Hegemonic stability theory, when a hegemony state dominates the world, the international political and economic order is stabilized[1]. and according to Power transition theory, If The gap between the superpower and the second-power become narrow, conflicts and wars may arise, and eventually the hegemony will be replaced[2].

Although these theories do not fully explain the answer "why", they explain the question "How" instead. Geopolitics can be used as a method of reinterpreting today's globalization, regionalism, and culture[3]. It is a powerful tool that can connect and explain actors, perspectives, and policies in the real world's domestic, foreign politics and international security[4]. It can provide a useful framework to analyze the dynamics and tendencies of competition for hegemony.

Geopolitics does not analyze how people or states behave, but why states decide on such policies. In other words, in geopolitics, the state is not an artificial thing made of territories and citizens, but an instinctive object of nature, whose characteristics are determined based by its natural environment[5]. Geopolitics is an important tool in international politics and can be the most effective analytical method or formal system in determining foreign policy through the interaction of material capabilities, ideas, and institutions[6].

2.2. The characteristics of a maritime state

The main characteristic of a maritime state is a nation that borders the sea and is characterized by water, which is contrary to that of a continental state that has characteristics of land. According to Rachel, "the endless horizons have given great features of bodness, perseverance, and ambition to the spirit and individuality of the maritime people[7]." However, the size of the territory of a maritime country has fundamental limitations such as its lack of living space and resources because of a dense population. Limited territories allow the maritime state to have a macroscopic and wider view rather than settling with the given environment. Their accessibility to the open sea paved the way for activities such as opening up new ports and trade routes. Therefore maritime state's people have a flexible life based on commercialism, such as trade and manufacturing, rather than settling in an area and living as a group[8]. Due to the nature of the sea, individuals who are more flexible are respected in maritime countries, and thus ethical and legal standards are more relative and flexible than continental countries.

2.3. The characteristics of continental states

Continental countries that use land as basic living spaces have been affected by their spatial fixedness and their non-changing solid nature. The interior of a continental state is formed by a wide stretch of land, therefore political expansion and migration were easy, but the borders were easily exposed to enemies due to frequent invasion and attacks from neighboring enemies[9]. The absence of natural barriers led to anxiety in the bordering areas, which led to many continental countries creating an empire to stabilize the border. In this process, the continental countries had to integrate the vast space, cultures and identities into one national identity, and for this, a centralized political system was formed. In other words, all the qualities needed to effectively integrate geopolitical space, namely his-
torical will, unity, and mission to civilization, are expressed in continental characteristics. Continental countries are interested in forming large groups, such as families, races, ethnicities, nations, and empires. In terms of how they run a civilization, they have a stubborn nature in ethics, social traditions, characterizing settlement, conservative tendencies, and strict legal discipline. Most of the continental countries settled in a single area, established agriculture as their main business, and had a strong tendency of collectivism and hierarchies, which often resulted in a dictatorship political system. Continental idealisms developed eventually with submissiveness towards dictatorship, and collectivism have both emerged from it[10].

3. China's Economic Growth and the United States Policy Against China

3.1. China's innovation in science and technology and the development of advanced industries

From the Mao Zedong era to the Xi Jinping era, China has continuously pursued “science and technology innovation” through government support and deregulation to achieve significant growth. China is striving for the growth of their manufacturing and high-tech industries through the “Made in China 2025” and “Internet Plus Policy” initiatives as it seeks to be at the forefront of the 4th Industrial Revolution. China is pushing for industrial advancement over the next 30 years in three stages, through the "China Manufacturing 2025" initiative with the main goal of "enhancing manufacturing economic power through the convergence of existing manufacturing and the Internet." every 10 years. As shown in the following <Table 1>. 

Table 1. China Manufacturing 2025[11].

<table>
<thead>
<tr>
<th>Phase 1(2015 - 2025)</th>
<th>Phase 2(2025 - 2035)</th>
<th>Phase 3(2035 - 2049)</th>
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<td>Entry into the group of advanced manufacturing countries (U.K., France, Korea standards)</td>
<td>Leap into the mid-level within the group of advanced manufacturing countries (Germany, Japan standards)</td>
<td>Achieve leading status within the group of advanced manufacturing countries (above the United States in 2049)</td>
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Since the announcement of the “Made in China 2025” policy, China has been constantly growing and showing remarkable results in next-generation communication technologies, new energy vehicles, and robots(Drones). China is striving to improve its industrial structure by integrating the traditional manufacturing industry with the internet platforms through the “Internet Plus Policy”. The Internet Plus policy encourages rapid growth of the digital economy and accelerates the establishment of wired and wireless platforms. With this, the number of wired and wireless communication network users in China is expanding to the world's largest, overtaking the U.S. and EU.

China continues to invest and support the field of science and technology to be recognized as an innovative country. It is achieving its desired results because of a strategy that revolves around technology and high-tech industries. To expound its capabilities even further, the personal information of 1.4 billion Chinese people are used as readily available data[12]. China's research and development investment is the world's second-largest after the United States with a total research and development investment of 1.76 trillion Yuan(259.745 trillion Won) in 2017, achieving 2.13 percent of GDP as of 2019. 48,882 international patents were issued, which makes China second in the world after the United States, and 26,000 international papers were published in 2018, making China the world's number one, even above the United States. Additionally, the number of graduates from science and engineering colleges in China is the world's number one(4.7 million ), which is overwhelmingly higher.
than the second place India (2.6 million) and the third place United States (568,000). China is achieving significant growth through government support and deregulation.

3.2. United states policy to surpress the growth of china's science and technology

The United States believes that China's technological innovation and rapid growth of high-tech industries are due to illegal activities led by the Chinese government such as stealing intellectual property rights and forcing technology transfers. The US recognizes China's infringement of intellectual property rights as a threat to its own economy and security, hence it is sanctioning China through any possible means, including legal sanctions to prevent technology leakage. The U.S. Department of Commerce announced in May 2019 that Huawei and 68 affiliates were declared as restricted trading companies and that U.S. companies must obtain government permission to trade with Huawei. Later on Google, Intel, Qualcomm, and Panasonic of Japan declared suspension of trading with Huawei. The United States also enforced sanctions on “Made in China 2025” related Chinese science and technology researchers, and university students by limiting their visa in the U.S. to just one year[13]. The goal of the United States is to change China's 2025 policy[14], or in other words, it is trying to suppress China's threat of achieving technology hegemony. The main point though is that the US policy of deterring the growth of China will be prolonged.

3.3. United states sanctions on huawei

Huawei is one of the symbols of China's information and communication technology development. Currently, Huawei's smartphones are gaining popularity not only in China but also around the world. Huawei's telecommunication equipment market share is the world's number one and its smartphone market share is the world's second largest. As a matter of fact, one in three people in the world uses Huawei's equipment. Huawei has a competitive advantage because of its superior technology compared to its price, or in other words its cost-effectiveness. Not only is Huawei influential in the development of the next generation 5G, but it also known to be 20 to 30% cheaper than its competitors while having technology that is estimated to be three to six months ahead of its competitors.

The controversy over Huawei began in the early 2000s over intellectual property infringement between U.S. telecommunications companies. In 2003, United States telecommunications company Cisco sued Huawei for intellectual property infringement, and in 2017, United States telecommunications company T-Mobile USA sued Huawei for stealing the intellectual property rights and design of its phone experimental robot 'Tappy'. The U.S. officially filed a lawsuit against China's copyright violation with the WTO in March 2018, saying that the biggest reason for Huawei's sanctions was an infringement of intellectual property rights. The United States argues that cyber security breaches including copyright violations of copies distributed in China and violations of industrial property rights (patent rights, trademark rights, etc.) in the high-tech electronics industry are serious[15][16].

Some worry that the Huawei crisis is a short-sighted measure since it is only one of thousands of Chinese companies that may be stealing technology and intellectual properties[17], but some see this as a means necessary for protecting United States intellectual property rights and maintaining technological hegemony to keep the "Made in China 2025" at bay[18]. The U.S. says it will no longer tolerate the infringement of its intellectual property rights and its security of telecommunications equipment, the main reason is because China could emerge as a real threat to the U.S. in the high-tech sector. The United States is pressuring China with various measures such as expanding its investigation into Chinese spies and hackers[19], tightening export control, and imposing financial sanctions against Chinese companies.
4. Conclusion

The most important law in geopolitics is dualism which is expressed as the confrontation between maritime and continental forces. This can also be summarized as the confrontation between democracy centered on trade civilization and ideocracy centered on military power. The development of advanced technologies and the expansion of trade space have expanded beyond spatial factors of technological hegemony. Basically, it can be pointed out that the Huawei crisis started from a fundamental difference in economic ideology between the United States and China, where the root stems from the relationship between business and state. These differences in politics, economy, and society can be analyzed from a geopolitical perspective. To elaborate further, the natural environment of geopolitics is based on human history, values and lifestyles which affects the different institutions, military strategy and economic thought. The dualistic characteristics of countries based on geographical factors can be attributed to the property of 'solid' for land and 'liquid' for the ocean.

Therefore we can affirm that the economic ideology of the two countries is clearly separated. During the peak of the Enlightenment era at the end of the 18th century, the United States established a government based on the idea that the power of the state is based on the right of individual freedom. Uniquely, it is the first in the world that private corporations have the same basic rights as individuals. It also means that the government must recognize the economic and private freedoms of a private enterprises within the Constitution. The distinction between countries and private enterprise behaviour is therefore clearly defined. In the United States today, Americans believe that the division of government and private companies is the foundation of economic development. This is evident in the neoliberal economic reforms that have been around since the 1980s, namely deregulation and tax cuts[20].

On the other hand, China has a socialist mindset where the government can intervene in the activities of private companies for the sake of the national interest. In a socialist state, the government owns all of the state’s assets, and the distinction between politics and economy is thus vague. It is important to pay close attention to the contents of the constitution revised in March 2018, as it mentions the “Chinese Characteristic Socialist Idea for a New Era(2012)”, where the Xi Jinping administration claims its leadership is the most essential characteristic for Chinese-specific socialism. Following Marx's and Lenin's socialist ideas, China is still pursuing absolute economic power of the state, or in other words a setting where “the Communist Party of China has command of everything that happens in China,” which clearly contradicts the liberal concept of the United States. Under these laws, the CCP can justify actions such as kidnapping or arresting Chinese businessmen at any time if they are not faithful to the Communist Party of China and their national interests.

In conclusion, the difference between the U.S. and China stems from basic culture and perception. Specifically, China's Confucian and family like top-down life and the U.S. individualist, bottom-up, and democratic lifestyle. Thus, the competition for technological hegemony between the U.S. and China may not be a problem that can be solved simply through negotiations. Therefore if the main reason the United States suspects Huawei comes from the aforementioned fundamental differences in national thought, this could not only be a problem that is difficult to solve, but also a starting point of a dispute that could continue to be a problem in the future.

5. References

5.1. Journal articles


5.2. Books


5.3. Additional references


6. Appendix

6.1. Authors contribution
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<thead>
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<th>Initial name</th>
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<tr>
<td>Lead Author</td>
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<td>- Set of concepts ✔</td>
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<td>- Significant contributions to concepts, designs, practices, analysis and interpretation of data ✔</td>
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