Structure Realism in Power Transition Relationship: Is Relative Gain the Pattern of Dominant Power and Will it End up the Same Results?

US's Response to the Rising of Japan and China, Particularly in High-tech Sector

A Research Paper presented by:

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in partial fulfilment of the requirements for obtaining the degree of
MASTER OF ARTS IN DEVELOPMENT STUDIES

Major:

Governance and Development Policy
GDP

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The Hague, The Netherlands
December 2019

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List of Acronyms

ANPRM	Advance Notice of Proposed Rulemaking
CoCom	Coordinating Committee for Multilateral Export Controls
DRAM	Dynamic Random-Access Memory
FIRRMA	Foreign Investment Risk Review Modernization Act
GATT	General Agreement on Tariffs and Trade
IC	Integrated Circuits
IPR	Intellectual Property Right
MFN	Most-Favoured-Nation
MIIT	Ministry of Industry and Information Technology
NDRC	National development and Reform Commission and the Ministry of Science and Technology
OECD	Organization for Economic Co-Operation and Development
OMAs	Orderly Marketing Agreements
RAN	Radio Access Network
SEP	Standard Essential Patents
SIA	Semiconductor Industry Association
USTR	United States Trade Representative

USSR	Union of Soviet Socialist Republics
UNCTAD	United Nations Conference on Trade and Development
VLSI	Very Large Scale Integrated
VERs	Voluntary Export Restraints

Acknowledgements

I would like to thank to my supervisor, Sunil Tankha for his suggestions on the topic and comments later on in the writing process. I wish to express my gratitude to my second reader, Wil Hout for his help, especially in international relation field. Without them, this paper would not be as it is now.

I also benefited from my discussants, Roberto and Mo. Their support supported me a lot through this.

Thanks to my parents for everything.

Abstract

The paper presents a comparative case study about the relationship and interaction between the dominant power and the rising powers in the international society under structure realism framework. It finds out that the dominant power, in this paper the United States, is likely to pursue its relative gains when facing the rising power's challenge. Some similarities of the strategies which conducted by the US are discovered by comparing US-Japan case and US-China case. However, the result may vary depending on the rising power's capability although the strategies from the dominant power share common points.

Relevance to Development Studies

Development study is an interdisciplinary subject and it includes many aspects. Although it has been discussed to weight more on the alternative development, the economy is still a major topic. Given globalization has made its way to a very important position since World War II, nation's development is deeply interwoven with each other. Great powers relationship influences heavily on the international order, which is paramount for other nation's development. Therefore, the study of great power's relationship and their interactions will provide us another angel to look at development studies.

Keywords

Great power, relationship, structure realism, relative gains, strategies, high-tech sectors.

Chapter 1 **Introduction**

Over the centuries, the change of global order brought about by rising powers challenging the existing power has generated worldwide influence, and it also drew significant attention in literature. It was mostly talked in the International Relationship Theory fields, where different schools hold different views: Realism thinks that it has high tendency for great powers ending up with conflict in the anarchic international world(Allison 2017; John Mearsheimer 2001;Aaron Friedberg 2018); and liberalism emphasises that the conflict or "hot war" between great powers is less likely to happen given the economic interdependence and international institutions(Doyle 1997; Russett and Oneal 2003; Robert 2001). Richard Cobden advocated that "free trade would be drawing men together, thrusting aside the antagonism of race, and creed, and language, and uniting us in the bonds of eternal peace." "John Stuart Mill was even more optimistic, declaring that the expansion of commerce was rapidly rendering war obsolete" (James 2015). Despite holding different views, both schools share the same thought that international order will change when clashes happen. The consequences varied in different cases under diverse circumstance. Similarly, how existing powers interacted and dealt with rising power, including the maneuverers and actions taken by each economically, politically, socially, militarily, defensively and offensively could also spawn various results. Among all the factors, how the dominant power firstly reacts to the rising power weighs more significant, and how the rising power handles the reaction of the dominant power depends on its own comprehensive capabilities and the results would vary accordingly.

The United States, after the Second World War, became an unquestionably and comprehensively super power in the world. Over time, it has faced two challenges from the rising powers mainly, Japan's rising in the 1980s and China's currently. Although US-Japan relation and US-China relation have been studies quiet a lot, few has been done to compare the two cases together, particularly how US has reacted to both rising powers, why US deployed certain strategies, and what were the results. Given the long peaceful time after the World War II, the focal challenge the US faced is from the economic side despite the nuclear standoff with Soviet Union. Therefore, its response and strategies have mostly been economically. However, it still remains uncertain whether there has been any propensity for the US to pursue particular policies when faced with the challenge of the rising powers and a comparatively declining relative position. Are there any patterns behind incumbent power's policies? What is the theoretical support behind the policies? Have the strategies conducted by US shared some similarities between the two cases? What the result, if so, would be for US-China case? Would it be different with US-Japan case?

This paper addresses these questions by arguing that the US, as the dominant power, pursues its relative gain or position against the rising power when it faces the emerging challenge and the declining relative position of itself under the changing international structure, and the strategies are inclined to be similar in pursuing its relative gains. Nevertheless, the ultimate result depends on the rising power's comprehensive capabilities. US is concerned about its relative position and gains when it faces the economic challenge because it may lose its relative economic advantage position. It worries that, although both can benefit from the mutual relationship, China and Japan will benefit more, and thus develop faster than US, which will lead to these nations acquiring more influence, larger market share, and even outpace the US in come critical advanced technology. In the long term, the US will face the threat posed by the rising power in economic welfare, political autonomy, and perhaps even its military security because of such development. Such concerns are the dark side of the US-Japan and US-China relationship. Although it is not frequently discussed, it

is part of the American's concerns. Therefore, the research question of this paper is if we can find evidence to champion the argument that the US tends to conduct strategies to harness the rising power and to pursue its relative gains when it encounters with rising powers under structure realism analytical framework; if so, what would be the result and what factors would play a decisive role for the result.

This research paper will seek to answer the questions by examining American's strategies on rising power, particularly semiconductor of Japan and telecommunication of China, and comparing the rising power's various capability against the dominant power. The article will take the view that how the collective discourse has been formulated in the United States looking at Japan and China as a "rising threat" in great power transition process and the strategies and policies towards Japan and China have been conducted in order to pursue relative gains. By mostly applying the realism theories, this article argues that the similarities in articulating Japan and China as a "rising threat" come from Japan and China developing the critical industrial sectors which challenge, or even threaten the United States position as "Number One" and "great power" despite the differences in their bilateral relationship with the United States. And this "threat" causes the further strategies and policies to suppress and harness the "rising threat" from the relative gains perspective of the structure realism theory. The general finding of the paper is that the dominant power, the US in this case, tends to pursue its relative gain and position when it faces the threat of rising powers, and will adopt certain strategies based on the relative gain theory. Furthermore, the result of the relationship between the US and Japan and China diversifies given the different capabilities the rising powers possess.

The argument is embedded in the international competition between great powers and the changing international structure the rising power causes. The comprehensive catch-up, even the outpacing in advanced technology such as semiconductor by the Japan after World War II, and the overall rapid development, especially some critical high technologies such as telecommunication by China draw the backdrop, which increase the sensitivity of US to consider relative gains.

The next part of the paper will illustrate the literature review on great power relationship, and apply structure realism to analyse relative and absolute gains in particular, in the theoretical framework. It will be followed with the discuss about Japan and China development and the repercussion they spawned to the international structure and order. The following section will analyse the strategical policies that the US has used in pursuing its relative advantage position and gains against Japan in 1980s and China currently. Finally, the article will summarize the similarities and differences from the rising power and raise the question of whether China case will end up the same as Japan.

Chapter 2 **Review of Related Literature and Methodology**

2.1 Power transition, Realism, and Relative Gain

The relationship between great powers has always been a hot topic in the international relationship arena. Among this, the implications caused by emerging power to the existing power has been the fascinating issue that many international relationship scholars try to address. Realism theory has become one of the dominate theories applied to analyse the relation and policy between great powers, and it has been nourishing from all kinds of knowledge in the history. Among this, Thucydides (The History of the Peloponnesian War), Niccolo Machiavelli (The Prince) and Thomas Hobbes (Leviathan) had the most profound influence on the establishment of the modern realism theory. One of the well-studied case of great power competition was thoroughly discussed in Anglo-German relationship back before World War I. It demonstrated the transferring process from liberalism to realism when analysing great powers. Once Germany freed itself from the low-value traditional technologies and upgraded to more advanced industrial manufacturing, it took the lead against Britain and made some products the most vulnerable to strategies of import substitution of Germany.[1] Germany had become a leading exporter of chemicals, steel, transport equipment, and electrical machinery to the most advanced economies. As Crowe illustrated, once Germany's economy surpassed Britain's, Germany would not only develop the strongest army on the continent but also build a powerful navy. And this was the main reason the two nations ended up with an armed conflict. The naval challenge, attempting to change the international order, and yearning to exert its influence collided with Great Britain's benefits. "Underpinning all of this was the growth of German power—the fruit of unification and industrialization—that in a short time made it capable of mounting an assault on British hegemony" (Paul, 1984). The result turned out to be more realism than liberalism, just as James argued "peace was only in the minds of many liberalists.[2]

After the Second World War, realism became the dominate theory and paradigm in international relationship area. It evolved out different schools over time with disputes over some issues. Defensive realism, also referred as "structural realism", emerged in Waltz's book "Theory of international politics". He assumed the state merely aims to survive, and above all they seek security. The structure of the international system forces great powers to pay careful attention to the balance of power. Particularly, international anarchy drives states to compete for power. For defensive realists, the international structure provides states with little incentive to seek additional increments of power; instead it pushes them to maintain the existing balance of power. Offensive realism by John Mearsheimer, coined in the book "The Tragedy of Great Power", is another branch of realism theory. The theory is based on five 'bedrock assumptions. They are all reasonable points of departure, for realists of any stripe: 1) anarchy — that is, it is a self-help system with no guaranteed limits on how others will behave; 2) states inevitably possess some offensive capability — therefore, they are potentially dangerous; 3) intentions are uncertain — that is, you can never know

[1] Aldcroft, 1968. Toronto: University of Toronto Press, p11-36. John H. Maurer, "The Anglo-German Naval Rivalry and Informal Arms Control, 1912–1914," Journal of Conflict Resolution, Vol. 36, No. 2 (June 1992), p. 284.

[2] Macdonald, J., 2015. *When globalization fails: The rise and fall of Pax Americana*. Farrar, Straus and Giroux.

for sure what other states are going to do, especially in the future; 4) the survival goal — this is crucial: 'survival is the primary goal of great powers. Specifically, states seek to maintain their territorial integrity and the autonomy of their domestic political order'; 5) rationality — this is also vitally important: the 'fifth assumption is that great powers are rational actors' (Mearsheimer 2001; Jonathan 2012). Offensive realists believe that status quo powers are rarely found in world politics, because the international system creates powerful incentives for states to look for opportunities to gain power at the expense of rivals, and to take advantage of those situations when the benefits outweigh the costs. A state's ultimate goal is to be the hegemon in the system. Offensive realists also reject Morgenthau's claim that states are naturally endowed with insatiable desire of power. On the contrary, they think the international system -external force- drives great powers to maximize their relative power because that is the optimal way to maximize their security. Human nature realism, sometimes also called "classical realism", coined by Morgenthau in his book "Politics among nations", which claims that states have an insatiable appetite for power and it is hardwired into them at birth. The principal driving force in international relationship is the will to power inherent in every state in the system, and it pushes each to strive for supremacy.

The rising of Japan after the Second World War, the challenge it brought to US, the relationship between Japan and US, and the US policies has been discussed in international relation theory. Traditionalists hold the view that the economic interaction and the deep interdependence will benefit both nations and make sure that neither side can take advantage at the expense of the others. The relationship could lead to a destructive situation if the US deploy protectionist and nationalist strategy. Under structure realism, as Mastanduno (1991) said, is at best misguided, and at worst, potentially destructive to the US-Japan relationship.[3] However, Revisionists are concerned by Japan's growth model and the detriment it could have for America's national interests.[4]

The rising of China in the last three decades and the repercussions it has brought out in the world arena, particularly with the United States as the number one incumbent power, has become one of the most urgent issues. The world has entered an era of significant ambiguity. The foremost among the causes of the ambiguity is the rapid economic growth of China, a development that has made US experience a new challenge which serves as a reminder of history. There are already some scholars writing articles to address this problem and contribute to the academic analyse. Graham Allison (2017) in his book "Destined for war: Can America and China escape Thucydides' Trap" states that through history there is deadly pattern of structural stress that results, Thucydides' Trap, when a rising power challenges a ruling one. About the Peloponnesian War that devastated ancient Greece, the historian Thucydides explained: "It was the rise of Athens and the fear that this instilled in Sparta that made war inevitable." Over the past 500 years, these conditions have occurred sixteen times. War broke out in twelve of them. Today, as an unstoppable China approaches an immovable America and both Xi Jinping and Donald Trump promise to make their countries "great again," the seventeenth case looks grim. Graham Allison showed us in his

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[3] See Destler and Michael Nacht, "Beyond Mutual Recrimination: Building a Solid U.S.-Japan Relationship in the 1990s," International Security, Vol. 15, No. 3 (Winter 19901 91), pp. 92-119; Philip Tresize, "Japan, the Enemy?" The Brookings Review (Winter 1989190), pp. 3-13; Kan Ito, "Trans-Pacific Anger," Foreign Policy, No. 78 (Spring 1990), pp. 131-52; David Brock, "The Theory and Practice of Japan-Bashing," The National Interest, No. 17 (Fall 1989), pp. 17-28;

[4] James Fallows, "Containing Japan," The Atlantic Monthly, May 1989, pp. 40-54; Clyde Prestowitz, Jr., Trading Places: How We Are Giving Our Future to Japan And How to Reclaim It, rev. ed. (New York: Basic Books, 1990).

book how we can understand and foresee the potential relationship between rising power and how the dominant power is close to history. He also illustrated how the great powers should react and what actions should be taken to avoid this clash happening.

John Mearsheimer (2001) drew conclusion that China's peaceful rising is not likely to happen. Instead, it will become an aggressive state determined to achieve regional hegemony. He argued that the United States must reverse its policy towards China from "engagement" to "containment" and "do whatever it can do to slow the rise of China". It was also argued, from a self-consciously realist orientation, not just for simple containment, but for a determined costly effort to take down China's emerging power and influence (Mearsheimer 2001). Aaron Friedberg (2018) stated that the previous US strategy and policy towards China has failed and an alternative approach is now pressingly required. He said that China has become a strategic competitor to the United States. "The intensifying competition between the United States and China is thus driven not only by the traditional dynamics of power politics – that is, by the narrowing gap between a preponderant hegemon and a fast-rising challenger – but also by a wide and deep divergence in values between their respective regimes" (Friedberg 2018). China will act more aggressive and will influence and inspire other regimes in the world politics when it becomes stronger and richer which will undermine the established world order and values. It is time to unite with its allies to take actions together to contain and harness China's rising and threat.

The realism theories tried to offer their own views on the great power relationship, especially in power transition process. They gave the theoretical explanation and analysed how the relationship evolved, how and why the policy was enacted. They also influenced the establishment of policy of the existing power. Different strands of the theory offer different explanations and solutions for the dominant power to counter the rising challenge, and on the contrary, it also gives the perspective to understand the behaviour of the rising power. Among this, the absolute and relative gains theory offers the perspective to examine the policy of dominant power towards rising power. Neoliberal institutionalism believes that states care more about their own absolute gains rather than focusing on others. The nation's preference is solely about its own absolute gain whether cooperation bring about a relative gain or loss. On the contrary, structural realism assumes that states consider primarily relative gains instead of absolute gains. As Waltz (1959) stated "relative gain is more important than absolute gain in the anarchy of international politics". He argued that it is harder to maintain what the neoliberal institutionalism proposes. Structural realism thinks that the anarchical situation in the international politics can generate the disrobing concern of worrying that partners might gain relatively more out of cooperation and, thus become more strengthened, creating formidable adversaries in the future.

This paper will use "structural realism" as a lens, particularly through relative gain and absolute gain, to analyze how the existing power, the United States, use particular policy to constrain or harness the rising powers, in this case Japan and China, over time along with the dynamics of variations in economic growth and power relations. As Robert Gilpin (1981:93) wrote the most important factor for understanding world politics is not the static distribution of power, but dynamics of power relations over time. "Changes in relative power, which ultimately derive from long-run variations in economic growth, are a mainspring of international political conflict. Economic change redistributes relative power over time, creating a natural tendency for divergences to emerge between power and privilege in world politics, which encourages rising states to challenge the status quo" (Kirshner 2010). This paper will examine how the United States gradually see Japan and China as a challenger in power transition process and to some extend a threat over time. The paper will also investigate the critical industry development of Japan and China and try to explain why the US see these countries as threats and then take actions accordingly by using relative gain

theory. At last, it will conclude that in great power transition processes, the dominant power facing the challenge of rising power would shift over time, and tend to conduct strategies and policies which based on the concern of relative gain to keep its position and inhibit the rising power development. How the rising power react based on its own realistic power will make a significant difference to the results.

We would be able to find out supporting evidence or behavioral pattern if structural realism was the useful theory to great power' behavior. The specific strategies and measures would vary in pursuing relative gains according to the sensitivity of dominant power. If existing powers feel that economic interdependence and interaction will enhance the rising power's capability of military, they might conduct more comprehensive measures including economic containment, military trade prohibition, and financial policies etc. If the concern is that "economic interaction will endanger a country's competitive position economically, we would expect officials to contemplate and adopt measures associated with strategic trade policy, such as the targeting or promotion of strategic industries, or the disruption of efforts by other governments to lend their industries a competitive advantage.[5]

[5] J. David Richardson, "The Political Economy of Strategic Trade Policy," International Organization, Vol. 44, No. 1 (Winter 1990), pp. 107-135.

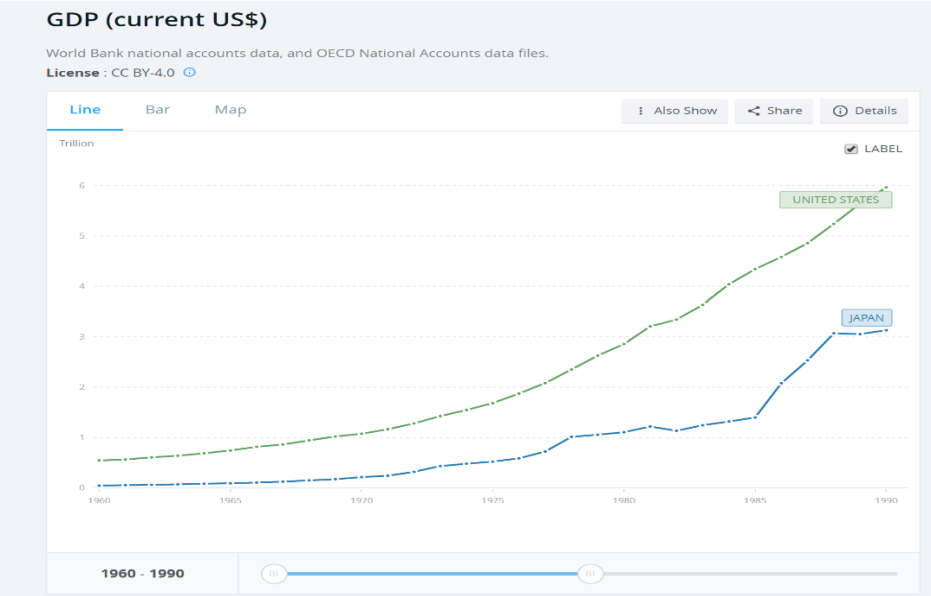
Chapter 3 **Rising Power and the Challenge for Dominant Power**

Since World War II, the world has enjoyed a long-term peaceful growth overall. The US, as the dominant power, has not faced any emerging power's challenge since then despite the long-run military and ideology standoff. Economically, there were not any nations developing rapid and strong enough to challenge the US's relative advantage position until the 1980s Japan's rising. The same situation continued after the US's negotiation with Japan and the collapse of Soviet Union until China's rising, first economically, later comprehensively. The Japan and China case in this paper, therefore, will be used from a comparative perspective to examine whether the US tends to adopt the strategies in favour of its relative gains when it faces the challenge. What make the difference for the result of rising powers when the US is pursuing its relative gains.

3.1 Japan's Rising and the Development of the Semiconductor Industry

Economic factors have been placed at foremost position in great power competition, and it is also fundamental for political and military competition. Japan's rapid economic growth after the Second World War drew significant attention from the US as it started challenging the dominated position of the US. After the Second World War, Japan experienced remarkable economic growth specifically under the help of the United States. From the mid-1950s to the early 1970s, its average real growth rate was approximately 10 percent. This very high and sustained growth transformed the Japanese economy and society significantly. Japan's GDP increased from 44.307 Billion in 1950s to 3.133 Trillion in 1990s. GDP Per capital rose up from $ 2,000 in 1950 to $ 10,000 in 1970s. By around 1970, Japan overtook West Germany and became the second largest economy in the capitalist world, as measured by GNP, after the US. Japan's catching-up process with the West was finally over.

Figure 1. GDP growth of Japan and U.S. from 1960-1990



Source: World Bank

In 1985, the GDP of Japan was 1.399 trillion, 3 trillion less than the US. Japan accounted for 32.2% of the U.S. GDP. It rose up to 45.3% in 1986. And it peaked at 71% in 1995 as the second largest economy in the world. In 1980s, Japan became a strong economic power against the US after three decades rapid economic growth post World War II. Along its catch-up road, the relationship with the US played a dominate role and the economic ties between two countries was strengthened over time. Since then the trade balance of two countries has been unstable. The trade deficit of the US has been increasing while Japan rising. It was because Japan conducted the export-led economic strategy and most of the products were sold to the US, so that the general trade deficit of US expanded since 1950s and became a serious problem for the US in the 1980s when the Japanese advanced technology products flooded the US market. As Hynes (1986) stated that "The United States recently experienced unprecedented balance of trade deficits. The merchandise trade deficit reached an all-time high of over $61 billion in 1983, and for 1984 was $108 billion. Japan is often singled out as the major contributor to this deficit. In 1984, roughly one-third of the U.S. merchandise trade deficit and over one-half of the U.S. manufacturing trade deficit was with Japan".[6]

Table 1 Bilateral United States-Japan Trade Balances, 1981-89

	U.S. Bilateral Deficit ($ billion)	U.S. Imports from Japan ($ billion)	U.S. Exports to Japan ($ billion)
1981	15.8	37.6	21.8
1982	16.7	37.7	21.0
1983	19.3	41.2	21.9
1984	33.6	57.1	23.6

[6] Haynes, S.E., Hutchison, M.M. and Mikesell, R.F., 1986. US-Japanese bilateral trade and the yen-dollar exchange rate: an empirical analysis. Southern Economic Journal, pp.923-932.

1985	46.2	68.8	22.6
1986	55.0	81.8	26.9
1987	56.3	84.6	28.2
1988	52.1	89.8	37.7
1989	49.6	93.8	44.2

As Japan became stronger with economic growth, the Japanese government considered that the high value-added industries, semiconductor at that time for example (what the US called state-of-the-art semiconductor), needed to be developed if Japan wanted to be recognized as strong industrial country rather than still producing "the assembly line products including motor vehicles, electrical goods such as television receivers, radios and domestic electrical appliances) and capital goods industries directly reliant on imported raw materials and fuels (iron and steel, oil refining, petrochemicals)" (John 1987). The Japanese were aware that as a late enterer to this area where the US dominated, it would be hard for them. Cho, Kim and Kee (1998) put it that "In an international context, underdeveloped domestic markets, lagging scientific knowledge in local settings, poorly developed or nonexistent related industries, and other environmental elements at the country level often constrain indigenous firms in certain countries from moving first in the world market". Therefore, after the first three decades of development in low valued industrial sectors, Japan started to aim at the high-value products and industries, such semiconductors and telecommunications in 1970s. The government poured huge resources, capital and human, to help and develop those sectors, and it initiated the whole plan which would integrate the official resources and private resources together to promote the semiconductor industry in Japan.

In 1968, an ultra-high-performance computer research association under the government's industrial development measures(政府の産業育成策で超高性能電子計算機研究組合の設立) was established, which aimed at strengthening the domestic manufacturers. Then Japan first massively produced the Integrated Circuits (IC), and made great breakthroughs in consumer products, such as color TVs, calculators, electronic watches, etc. In 1975, the Japanese government established Very Large Scale Integrated (VLSI) Technology Research Association, which aimed at developing cutting-edge manufacturing processes. Five companies - Fujitsu, Hitachi, Mitsubishi Electric, NEC and Toshiba participated in the project, and established a collaborative laboratory with the Electro Technical Laboratories. To the Japanese government, a presence in semiconductor industries was necessary to enhance Japan's position in the world and would also promote other high technology sectors to develop. It would also offer an opportunity for Japanese heavy industries that faced slower growth and overseas competition to expand. The government subsidies, 29 billion yen, constituted of more than one-third of the total fund, 70 billion yen, for the semiconductor industry. John (1987) wrote that "perhaps the most striking feature of Japan's industrial structure since 1975 has been the emergence and rapid growth of a third major category of manufacturing: that of the high-technology industries". Tanaka, a professor at the University of Tokyo, said that "I thought there would be no other way than national projects to achieve mastery of this technology." In 1970, the global semiconductor market is 870 billion yen. Among the suppliers, TI was first, Motorola second, Fairchild third, and no Japanese manufacturers. In the overall market, the ratio of consumer products that Japanese manufacturers are good at was still low. US share was 48%, Japan's 25%, Europe's 26% and others 1%.

However, in 1986, Japan's share of the global semiconductor market became the world's largest supplier ahead of the United States. Japanese manufacturers expanded their

market share against the backdrop of expanding memory production, including DRAM (Dynamic Random-Access Memory), and strong consumer demand in Japan. In terms of supply by semiconductor manufacturer, the top three were NEC, Toshiba and Hitachi in 1986, and six of the top 10 were Japanese manufacturers. The strategy of Japanese semiconductor manufacturers in 1980s, was focusing on quality, improving price competitiveness through vigorous investment, and ensuring stable supply capabilities, greatly improving the status of Japanese semiconductors. The bomb remarks in March of 1980 of Anderson, who was at the position of General Manager of Hewlett-Packard's Data Systems Division, symbolized the process of such reversal game. On the occasion of the Japan-US semiconductor seminar held in Washington, he presented an extremely shocking data for US manufacturers, indicating that "When we adopted Japanese products due to the shortage of 16K DRAM, their quality was far superior to the US products". And the Japanese semiconductor industry's rapidly expanding market share increased the sense of crisis in the US industry, leading to a series of semiconductor friction problems between Japan and the United States.

Table 2 US-Japan semiconductor production (million dollars)

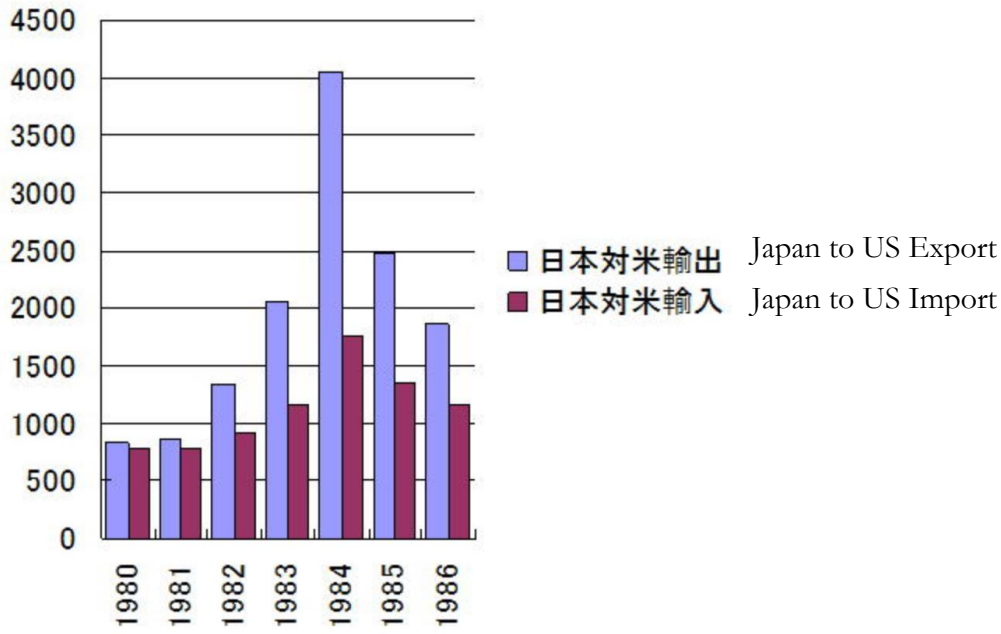


Table 1
Data on semiconductor trade with the United States (100 million yen) Prepared from Japan Trade Monthly Report

	1980	1981	1982	1983	1984	1985	1986
USA	9.1	10.3	10.7	12.5	17.8	13.9	14.6
Japan	3.8	4.8	4.8	6.6	10.9	10.2	13.9

Table 2 US-Japan semiconductor production (million dollars)
data USA: US Department Commerce Japan: Simple comparison based on annual mechanical statistics

By the 1980s, Japan had become a strong competitor in semiconductor industry against the United States. The US faced strong pressures from the Japanese and the general policy, particularly trade policy at that time started to change under the circumstance. Japan's rising made the US start to consider the final results of economic interaction and interdependence, trying to increase the relative gains of the US. It was disturbing for US that the general benefits of their economic activities with Japan had decreased, say, financial dependence and trade deficit on Japan were two of the many trends, which reduced the real benefits of US and granted Japan the leverage over US behaviour. As the Japanese firms surpassed the US companies not only in the traditional sectors, but also in high technology industries, such as semiconductor, it caused more concerns to US because of the relative decline in high technology. Japan conducted its industrial policies by using institutionalized state-capitalism which was a partnership of government and business driving the technological and commercial development, considered adversarial to the US to some extent, and drove the US to adjust its policy to keep its position by gaining more relative benefits. As Chalmers Johnson put: "recognizing that Japan has replaced the USSR as America's most important foreign policy problem and adopt policies to get the United States back into consumer electronics and other industries of the future."[7] As Japan's rising and US's relative economic power declining, US became unlikely to tolerate the economic benefits Japan gained to its relative economic disadvantage. US's attitude towards Japan changed significantly given the structural conditions that has changed from US absolute hegemony to Japan's challenge, and its policy reflected more to relative gains.

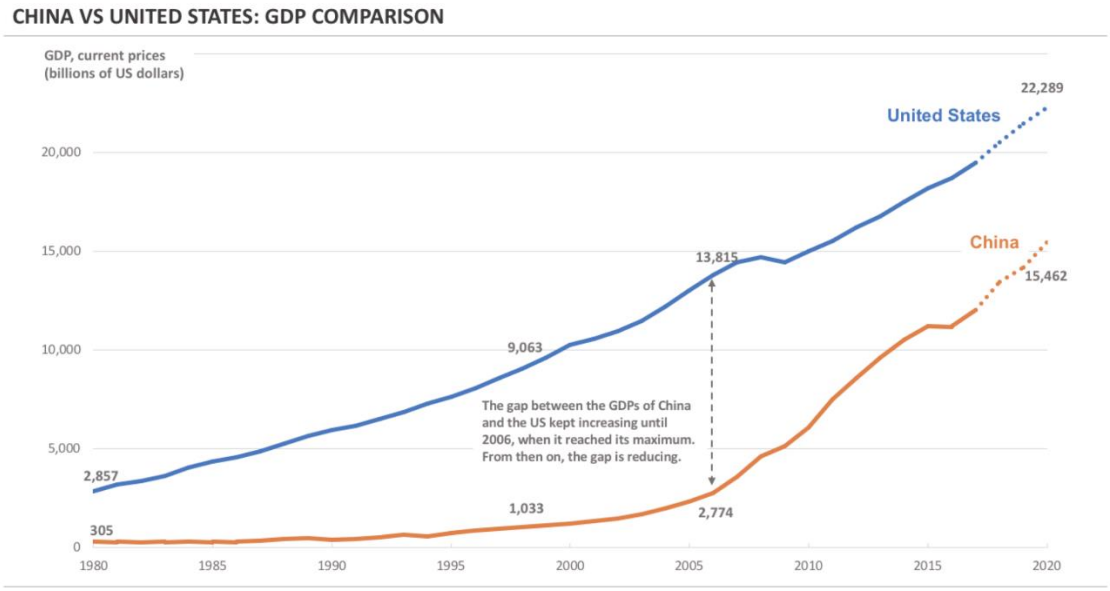
3.2 China's Rising and the Development of Telecommunication

Since the reform and open-up policy was implemented in 1980, China has seen rapid and dramatic economic growth. "GDP growth has averaged nearly 10% a year, which is the fastest sustained expansion by a major economy in history" (World Bank 2019). In 1980s China's GDP was $305 billion, compared to US GDP of $2.8 trillion. By 2015, it was $11 trillion, consisting 61% of the United States GDP. In 1980s, the total amount trade of China with the rest of the world was less than $40 billion. It then reached $4 trillion in 2015(Allison 2015). By the end of 2020, IMF forecasts that China GDP will reach $15.5 trillion, whereas the US GDP will reach $22.3 trillion. This implies an increment GDP of $12.7 trillion for China and $8.5 trillion for the US, from 2006 to 2020.[8] The International Monetary Fund use the Purchase Power Parity (PPP) to measure China's GDP which showed China had surpassed US as the largest economy in 2014. On a PPP basis, China GDP's reached $18.3 trillion in 2014, whereas the US GDP was $17.5 trillion at that time. IMF forecasts that the China GDP PPP will reach $29.7 trillion by 2020.

[7] Chalmers Johnson, "Their Behaviour, Our Policy," The National Interest, No. 17 (Fall 1989), p. 26.

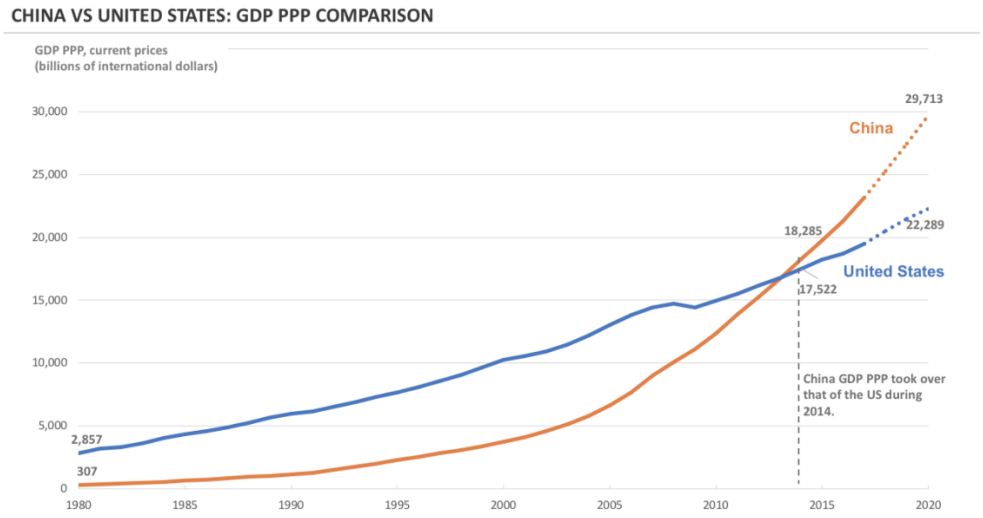
[8] See more on https://mgmresearch.com/china-vs-united-states-a-gdp-comparison/.

Figure 2 China VS US: GDP Comparison



Source: IMF

Figure 3 China VS US: GDP PPP Comparison



Source: IMF

Over the period of China's growth, the China-US relationship, especially in economic terms, led to the close interdependence between the countries. It was also because the low-cost massive labor that provided the fundamental factor for the fast growth together with foreign investment. The export-led growth strategy at that time largely contributed to the economy just like Japan, South Korea, and Singapore did especially after China's accession to the World Trade Organization. China benefited from the principle of comparative advantage by focusing on the low value-added products, largely from the low-skill, labor-intensive manufacturing industries while US benefitted with cheap import goods from China. The U.S. goods and services trade with China totaled an estimated $737.1 billion in 2018. Exports were $179.3 billion; imports were $557.9 billion. China became the largest goods trading partner with $659.8 billion in total (two way) goods trade during 2018. Goods exports totaled $120.3 billion; goods imports totaled $539.5 billion. The U.S. goods

trade deficit with China was $419.2 billion in 2018. Trade in services with China (exports and imports) totaled an estimated $77.3 billion in 2018. Services exports were $58.9 billion; services imports were $18.4 billion. The U.S. services trade surplus with China was $40.5 billion in 2018.[9] After the 1990s, China has gradually replaced Japan as the main trade partner with US, and the trade imbalance between two countries has been growing largely since then, making it the new challenger towards US.

Table 3 China, as a percentage of the United States

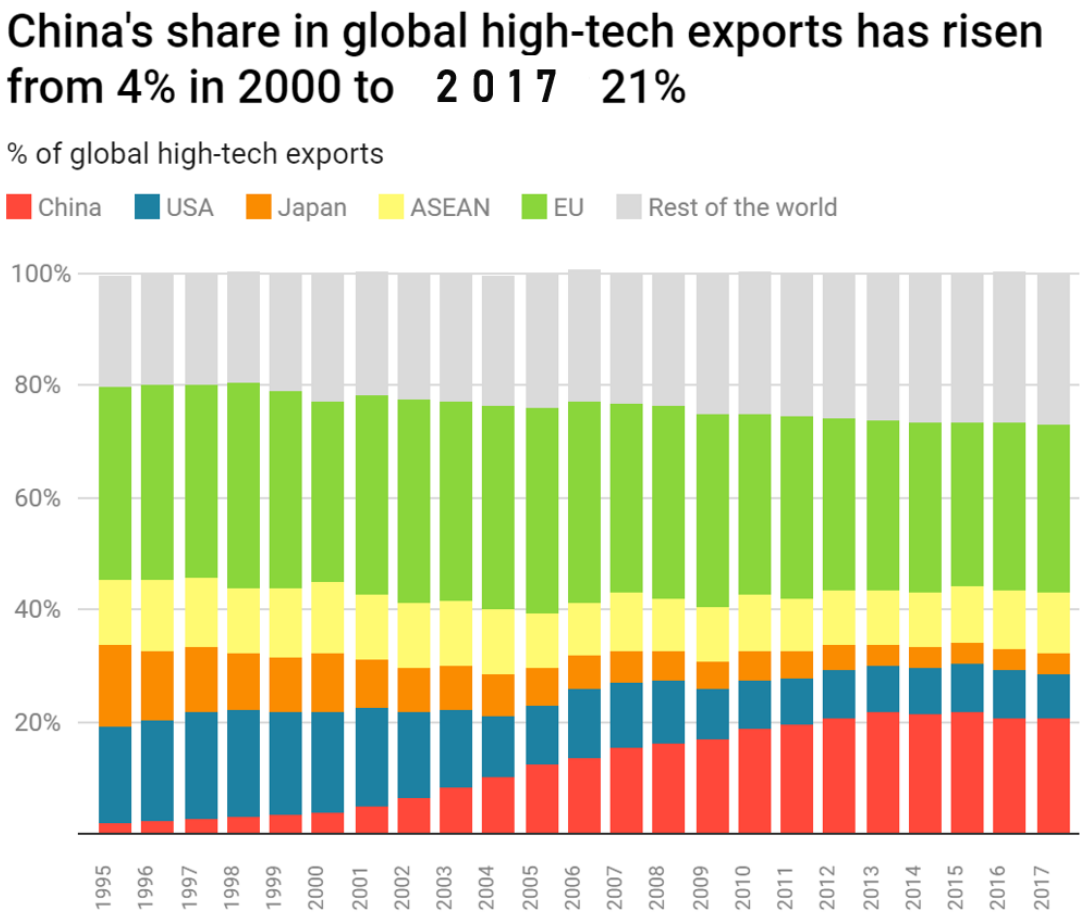
	1980	2015
GDP	7%	61%
Imports	8%	73%
Exports	8%	151%
Reserves	16%	3,140%

Source: World Bank cited from Allison 2015

However, in 2015, China issued the "Made in China 2025" plan, which is a strategic plan aiming to upgrade the manufacturing capabilities of China industries from the world factory (producing cheap and low-quality products) to produce higher value products and services. The plan lists out 10 core industries on which china will focus to become a world leader. The first is Information Technology, including AI, telecommunication, smart appliances, etc. Since 2000, high technology exports have been increasing significantly. China has long surpassed the US in exports of high-technology items such as telecommunication equipment, TV receivers, electrical machinery, optical instruments, etc. in 2005, an analysis of United Nations Conference on Trade and Development (UNCTAD) data shows. Over the three decades, China is expanding its share in the world's top supercomputers in comparison with the US. China is also increasing its share in telecommunication and information technology services exports.

[9] See more https://ustr.gov/countries-regions/china-mongolia-taiwan/peoples-republic-china.

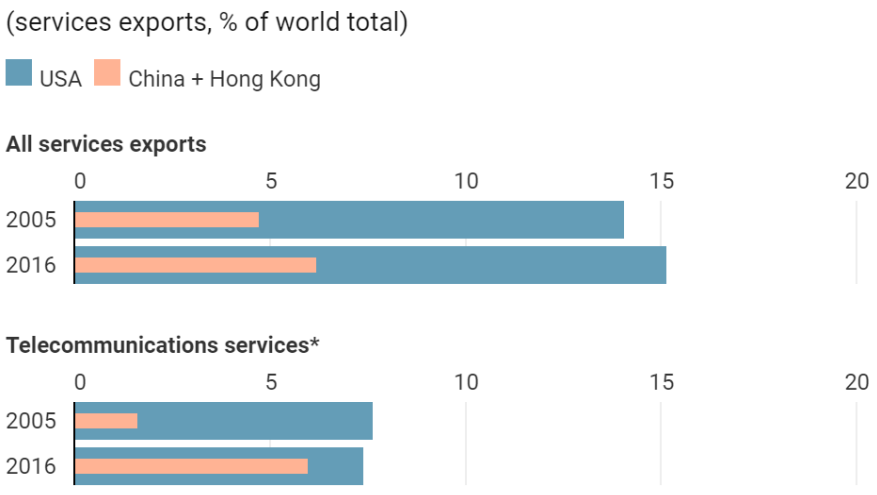
Figure 4 China's share in global high-tech exports has risen from 4% in 2000 to 21% in 2017



High tech exports include telecommunication equipment, TV receivers, electrical machinery, aircraft and associated equipment, etc., as classified by Lall (2000) and as provided by UNCTAD

Source: UNCTAD database

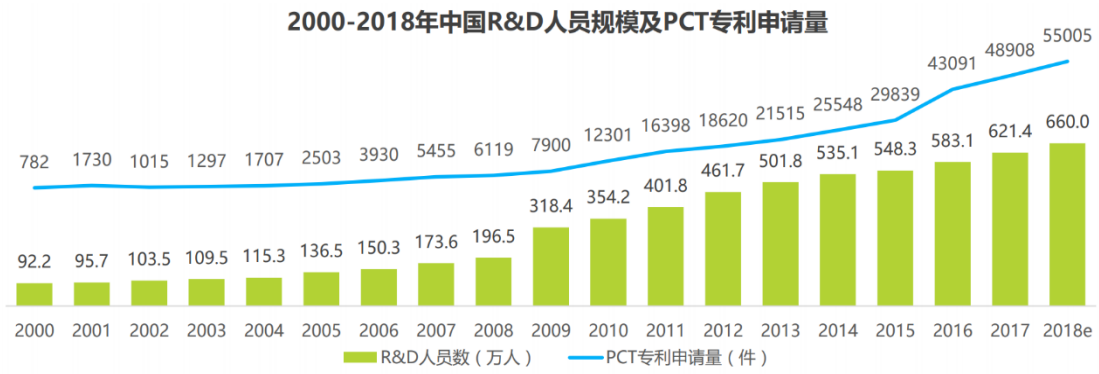
Figure 5 Telecommunication services exports between US and China



China has made remarkable progress in investing and developing its emerging industries. The ultimate goal is to move China into the competitive strong and innovative industrial country by possessing the next generation of high technology. According to the Organization for Economic Co-Operation and Development (OECD), "China's R&D spending accounted for just 0.72 percent of its GDP in 1991. At the time, China's economy was the 10th largest in the world, just behind Canada, which contributed 1.58 percent of its GDP to R&D in the same year. Economic leaders during the early 1990s, such as the US and Japan, averaged even higher R&D to GDP ratios, at 2.5 and 2.7 percent, respectively. By 2015, China's R&D expenditure had surged to 2.07 percent of its GDP" (China Power 2019).[10] "The 12th 5-year plan (2010 – 2015)" set an R&D spending target of 2.2 percent of GDP by 2015 and it was roughly fulfilled by reaching 2.1% of GDP in 2016 (China Daily 2017). "The 13th 5-Year Plan" (2015 – 2020) expresses a 2.5 percent goal by 2020 as its goal.

China is already making headway in pursuit of this goal. In 2017, its R&D expenditure reached 2.1 percent of GDP. China Daily reported in 2017 that the country ranked NO. 2 in the world in term of R&D expenditure. "Assuming 7.5-percent nominal GDP growth in China, by 2020, China's R&D expenditure will be 73 percent higher than it was in 2016. By that time, on a Purchasing Power Parity adjusted basis, China's R&D expenditure will exceed that of the United States," according to Vincent Chan, Head of China Macro Research at Credit Suisse, He expressed this in Shenzhen on the side-lines of the firm's annual China Investment Conference. [11]

Figure 6 R&D Population Scale and PCT patent application in 2000-2018



As mentioned above, telecommunication technology is one of the very important factors in the upgrading plan, and China has already been pouring resources into it. 5G is thought as the extremely important part of telecommunication, and its function does not limit it to communication industry, it also has enormous economic influence and potentially military capability. 5G is expected to transform mobile communications in the 2020 and thus become a "strategic resource." The Premier of China's State Council has highlighted 5G as one of the emerging industries to be accelerated in the latest Government Work Re-

[10] See more on https://strategicstudyindia.blogspot.com/2019/02/is-china-global-leader-in-research-and.html.
[11] https://www.chinadailyhk.com/articles/49/53/120/1509632867220.html.

port in March 2017. In 2013, the Ministry of Industry and Information Technology of China (MIIT), with the National development and Reform Commission and the Ministry of Science and Technology (NDRC) set up the IMT-2020(5G) Promotion Group to advocate and prompt the formulation of a 5G standard. Companies, including Huawei and ZTE and telecommunication operators will take part in the group and help to support the development of 5G standard. The Government has drawn up supporting policies under its national strategy including the 13th Five-Year Plan and Made in China 2025 to support industry R&D and strive for 5G commercialization in 2020. The MIIT has also constructed the 5G Development Guidance document aiming to make 5G important for China's economic and social development. The NDRC also released a guidance document on information infrastructure construction projects for 2018 that directs 5G networks to be built in at least five cities to form a continuous coverage.[12]

Table 4 Plans for 5G development

Year	Initiatives	Description
2013	Made in China 2025	The plan pointed out that China should break through the 5G mobile communication technology comprehensively
2015	13th Five-Year Plan (2016-2020)	The plan proposed that China should promote the development of 5G actively and launch it in 2020.
2014-2015	National 863 Program	▸ National major projects aimed to promote 5G key technologies development ▸ They looked to verify and improve 5G technical schemes ▸ The program supported the global unified 5G standardization
2015-2017	National Science and Technology Major Project	

Source: MIIT

China is one of the pioneers in 5G R&D, which sees the world's first 5G test being guided and planned by the Government. Ahead of schedule, the country has already started the third phase of 5G technology R&D tests, which both domestic and international companies have joined the field trials, aiming to get pre-commercial 5G products ready when the first version of 5G standards comes out by mid-2018. Meanwhile, the industry regulator has called for a bigger push for more 5G-enabled applications, with added focus on the integration of chips, systems and other instruments. Mainland telecom equipment manufacturers, already in a leading role of the global telecom equipment market, are investing heavily in 5G research and patent development-related projects. Their active engagements with global operators in supplying pre-5G mobile infrastructure show that they are making way to spearhead the 5G equipment market.[13] The report conducted by The Centre for Global Studies at the University of Bonn in 2019 pointed out that "The race for Intellectual Property Right (IPR), particularly the fight for Standard Essential Patents (SEP), is the

[12] https://www.readkong.com/page/china-is-poised-to-win-the-5g-race-8939010
[13] Ibid.

qualifying round of 5G race". Chinese and Korean companies are taking a slight lead in the race to 5G SEPs. "A shift from US and European to Chinese and Korean is happening quickly and tending upwards". There are in total 25 companies from different countries competing, four are Chinese companies, including Huawei, ZTE, CATT and OPPO holding 35.53%, while five US companies (QUALCOMM, Intel, InterDigital, Apple and Optis) take up 14.29% (Gu, Christiane, Huang, Philip and Hendrik 2019).

China is also building the necessary infrastructure for 5G on an unprecedented scale as the China Tower added approximately 460 sites per day, which gives it a competitive advantage. In financial terms, China has outspent the US by approximately 24 billion US dollars in wireless communications infrastructure and specified 400 billion US dollars in 5G-related investments in its five-year economic plan. Consequently, a GSM Association Intelligence report forecasted that Chinese 5G connections will reach 428 million by 2025. With the top-down national pledge and commitment, China is already leading in the 5G development, from setting the standard, R&D, network infrastructure technology, building the industry chain to engaging in focused use-case scenarios. Although far from surpassing or dominating the 5G standards-setting process where the US is still a big force, china has become an indispensable competitive player.

China's rising economic generates some concerns for US as the hegemonic power because the huge trade deficit and rapid high technology development make the US depend on China in many industrial sectors and make China less dependent in some crucial technology sectors. Many scholars (Mearsheimer 2001, Roy 1994, Shambaugh 1996)[14] have discussed China as a rising power who could potential threaten and challenge the US resulting in an inevitable power competition. It is indicated that China, after decades of development, including economic and military, is already competing and challenging the hegemonic position of the US. The absolute position of the US in economy has been shaken. The declining of relative economic power of the US and the challenges China posed in some critical high technology products change the sensitivity of relative gain of the US.

The United States has secured the absolute hegemonic power since the Second World War. It deployed the policies to its allies, for example China in 1979s, during that period of time based on the absolute gain which it reckoned would benefit itself eventually. Hegemonic power could expect itself to be less sensitive to relative gains when they predominately possess the economic advantage in terms of economic size, productivity, high technology, financial capability and all kinds of resources. As Mastanduno stated that "These advantages afford hegemonic states the luxury of being more complacent about their relative economic position than non-hegemonic states, who may aspire to hegemonic status or at least fear slipping further behind"[15]. US economic policy towards Japan after the Second World War proved this theory. It looked for the absolute gains by reducing tariff barriers and adopting policies that discriminated against US.[16] Non-hegemonic states benefited and strengthened their capabilities because the US did not pursue relative gains. Instead, it facilitated those non-hegemonic nations by looking to absolute gains.

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[14] Roy, D. 1994. Hegemon on the horizon? China's threat to East Asian security. *International security*, 19(1): 149–168; Shambaugh, D. 1996. Containment or engagement of China? Calculating Beijing's responses. *International security*, 21(2): 180–209; Mearsheimer, J. 2001. *The tragedy of great power politics*, New York: Norton.

[15] Mastanduno, M., 1991. Do relative gains matter? America's response to Japanese industrial policy. *International Security*, *16*(1), pp.73-113.

[16] See Gilpin, U.S. Power; and Stephen D. Krasner, "American Policy and Global Economic Stability," in William P. Avery and David P. Rapkin, eds., America in a Changing World Political Economy (New York: Longman, 1982), pp. 29-48.

However, the US economic policies started to change to be more sensitive to the consideration of relative gains as its economic advantage declined. It felt it faced more risks because the non-hegemonic and emerging powers were catching up not only in traditional sectors, but also in critical high technology sectors which are paramount to the capability of competition.

One of the key features of realism in international relationship is that they believe nations have the tendency to consider relative gains and advantages. "Nation-states are consistently sensitive to considerations of relative gains and advantages" (Mastanduno, 1991). Once the general structure in international society evolved, per se becoming more anarchy, nation-states would be more inclined to pursue relative gains because the fear and distrust bred by anarchical status drive them to assure security from damage. Furthermore, states will concern their political and economic autonomy will be influenced, even undermined if their relative advantage declines to other states. Their hegemonic position and ability in international society will be lessened over time and might lose the leading position eventually.[17] As Robert Gilpin illustrated that nation-states are engaged in a never-ending struggle to improve or preserve their relative power positions.[18] Therefore, realists expect dominant power to change the strategy to relative gains and position change. "Realists anticipate that nation-states will react to shifts in relative military or economic power that disadvantage the, either by mobilizing resources internally or by devising some other means to lessen the impact or offset the consequences of such shifts."[19] The dominant power thus is inclined to adopt those policies that would inhibit rising power developing as realism anticipates. At the extreme case, it will end up with war as Thucydides wrote the growth of Athenian power and the fear it caused in Sparta caused the Peloponnesian War.[20] US strategy based on the calculation of relative gains against Japan's and China's rising will be examined and it shows the strategy was designed to harness the rising powers growth not merely the general economy but high technological progress. And the protectionism and nationalism incited by American and the responding sentiment by rising powers, such as America's Japan bashing" and Japan's "America bashing", America's "Sinophobia" and China's "America hegemonism", re-enhanced each other. Followed by policies and actions taken by US, the strategies adopted by US has been found in similarity. Whether it end up with cold war, including trade war or financial war, also depends on other factors military force for instance, other than just economic factor.

Moreover, since the semiconductor for Japan and the telecommunication for China has been targeted by the government as a critical asset to advance the country's economy and also military for China, which to some extend are successful and challenge the dominate position in these advanced technology sector, the US has faced more pressure and thus has more motivation to react and take actions from a relative gains realism standpoint.

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[17] Mastanduno, M., 1991. Do relative gains matter? America's response to Japanese industrial policy. *International Security*, *16*(1), pp.73-113.

[18] Robert Gilpin, U.S. Power and the Multinational Corporation (New York: Basic Books, 1975), p. 35.

[19] Michael Mastanduno, David A. Lake, and G. John Ikenberry, "Toward a Realist Theory of State Action," International Studies Quarterly, Vol. 33, No. 4 (December 1989), pp. 457-474.

[20] Thucydides, The Peloponnesian Wars, trans. Rex Warner (New York: Penguin, 1954), p. 49.

Chapter 4 **American's Strategy on Pursuing Relative Gains**

Green (2017) identifies some recurring dilemmas in the US's grand strategies over the centuries. These include whether to see China or Japan as the more important partner; and whether to emphasize the protection of American markets or the opening of Asian markets. He writes, "Over the course of this history, Americans have learned that the Pacific Ocean does not provide sanctuary against threats emanating from the Eurasian heartland if the United States is not holding the line at the Western Pacific." America has tended to extend the area that it regards as essential to its own security, so that this stretches all the way to the Korean peninsula and the South China Sea. The change of the national strategy of the US to Asia was influenced heavily by the relationship between US and Asia's rising nation. Michael Green observes in *By More Than Providence*, "If there is one central theme in American's strategic culture as it has applied to the Far East over time, is that the United States will not tolerate any other power establishing exclusive hegemonic control over Asia and the Pacific."[21]

4.1 Strategy on Japan

4.1.1 "Japan bashing"

The indication of US to pursue relative gains in its economic relationship with Japan started with the national concern and agitation with the semiconductor industry. The US officials, the media and the companies started to be sensitive to the relative concern posted by Japan and this reflected on the ensuing "Japan bashing" in the United States. The nationalism on semiconductor industry regarding to relative gains was ignited and paved the way for further ground actions through employing all sorts of policies, mostly trade weapon.

Japan's rising, particularly since the 1970s in some critical industrial sectors and technologies, challenged and threated U.S. national benefits. The United States considered that the American companies and products were excluded from Japanese market and competed with Japanese companies in an unfair condition because those industries were promoted and sponsored by Japanese national policies which conferred them privileges. In the meantime, the enormous and competitive uprising of Japanese semiconductor industry undermined U.S. position by entering into global market, especially American market with the advantage of low costs, low prices and high qualities.

This sentiment was felt directly by the semiconductor firms in the U.S. since there were in the frontline. In the overall semiconductor market, the ratio of market occupation for American companies was 25% in 1970s which was the largest in the world. However, in 1986, the share of the semiconductors of Japanese manufacturers in the world was 46%, overtaking the US. In the meantime, in terms of semiconductors, four of the top ten semiconductor suppliers in the world were Japanese manufacturers in 1981. However, six were in the top ten in 1986.

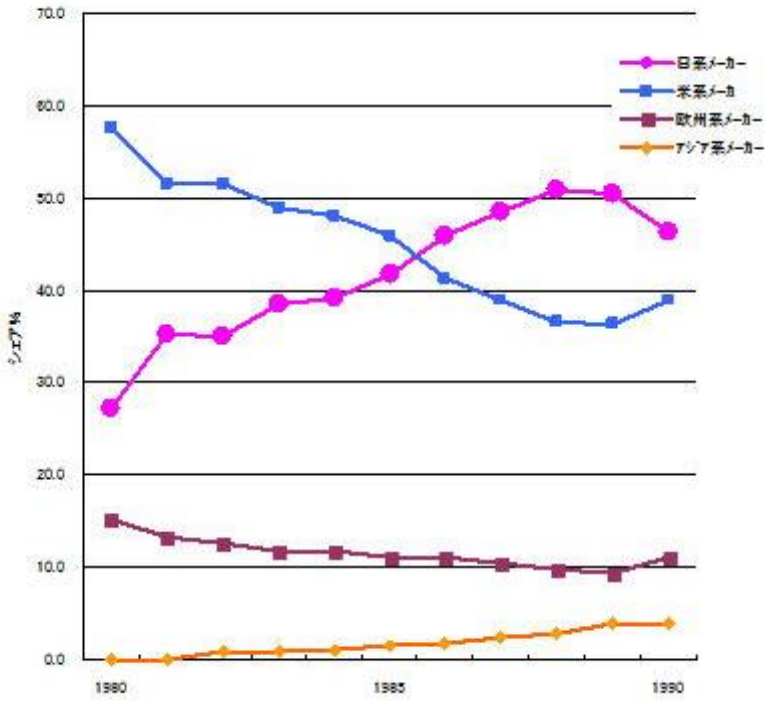
[21] See more on http://www.viet-studies.com/kinhte/destined_for_war_china.html.

Table 5 World sales ranking in 1980s

Rank	1981	1986	1989
1	TI (US)	NEC (Japan)	NEC (Japan)
2	Motorola (US)	Toshiba (Sun)	Toshiba (Sun)
Three	NEC (Japan)	Hitachi (Japan)	Hitachi (Japan)
Four	Philips (Europe)	Motorola (US)	Motorola (US)
Five	Hitachi (Japan)	TI (US)	TI (US)
6	Toshiba (Sun)	NSC (US)	Fujitsu (Sun)
7	NSC (US)	Fujitsu (Sun)	Mitsubishi Electric (Japan)
8	Intel (US)	Philips (Europe)	Intel (US)
9	Matsushita Electron-ics (Japan)	Matsushita Electron-ics (Japan)	Matsushita Electron-ics (Japan)
Ten	FCI (US)	Mitsubishi Electric (Japan)	Philips (Europe)

Sources: http://www.shmj.or.jp/museum2010/exhibi065.htm

Figure 7 Semiconductor share transition



Sources: http://www.shmj.or.jp/museum2010/exhibi065.htm

Given these changes the semiconductor industry of the US complained and filed case of unfair trade practices against Japanese companies. At that time, Intel Chairman Robert Noyce also commented that "they (the Japanese) are coming for our throats, and we must realize this and take countermeasures". The Semiconductor Industry Association (SIA), established in 1977 by officials including Noyce and others, set its goal as protecting the US semiconductor industry, and "played a pivotal role in the industry's successful effort to realize a number of its trade policy objectives between 1979 and 1986" (Zeng, 2004 131). It was taken as the US offensive against Japan's rapidly increase at that point. "In June 1985 the SIA submitted a Section 301 petition against Japan's unfair competitive tactics, which presented substantial evidence of market barriers in Japan: in 1984, the U.S. semiconductor industry captured 83 percent of sales in the American market, 55 percent in the European market, 47 percent in other (mostly Asian) markets, but only 11 percent in the Japanese market" (Irwin 1996, 39). "According to the SIA, American firms, which commanded a dominant position in all other semiconductor markets, had seen their market share in Japan hovering at the same 10 percent since 1975" (Ryan 1995, 97). Makimoto, who worked in Toshiba at that time, wrote that: "SIA initially conducted lobbying activities cantered on strengthening aid to the domestic semiconductor industry by the US government against the Japanese government's assistance policy for the semiconductor industry, such as the VLSI project. However, in 1980, the high competitiveness of Japanese DRAM was recognized and its adoption by users in the U.S. shocked American manufacturers. In fact, 64KDRAM had a reversal of market share with US products. A sense of crisis spread rapidly in the US semiconductor industry due to the poor performance of manufacturers. The possibility of a decline against Japan's competitiveness, especially in important industries such as computers and semiconductors, spurred protectionist movements in the US, and was recognized as a national defence issue. The Japanese government, which protected and promoted their industries through a range of policies and measures, was blamed by SIA with unfair trade. The rhetoric term "unfair trade", thus, appeared in the public.

In the meantime, the media campaign was in parallel. Occasional accusations of industrial espionage had been used to against Japan after it became a major US competitor in some high-technology products by 1980s. "Japan bashing" was the main tone in the media and public life. "Fortune", an economic magazine in the U.S., reported an article titled "The Japanese Spies in Silicon Valley" in 1978, describing that the Japanese companies committed commercial attacks in Silicon Valley which led to the insecurity and anxiety in a peaceful and friendly place. "Japanese firms placed local branch offices in Silicon Valley, collecting information openly or confidentially and buying samples of innovative products, which they send to Japan." "Many of these Japanese people pretended to be legal in dealing with US manufacturers, and doubts rose that they are being too enthusiastic in their behaviours. They are new kind of people whom we should call 'semiconductor Samurai' and they are also called 'Tigers', severely criticizing the behaviour of Japanese companies".[22] Later in 1981 and 1983, the Fortune magazine posted multiple articles to report the matters. Makimoto recalled in 2006 about the press reports and the rhetoric, highlighting "war" was used for semiconductor competition between the two countries.[23]

Due to the interaction and evolvement between the companies and the medias, the tough tone on Japanese semiconductor companies spread wildly and rapidly in the US society. Therefore, unfair competition between US and Japanese semiconductor companies

[22] http://www.shmj.or.jp/shimura/shimura_E/ssis_shimura2_35E.html.
[23] http://www.shmj.or.jp/makimoto/en/pdf/makimoto_E_01_12.pdf.

began to dominate the rhetoric. Consequently, the enormous pressure from the semiconductor industry, the media and public voice, rose up the urgency for the US government to take measures to face the problem. It also rose up the key issue of the US government that its critical industry which was associated to the national security and state interest was challenged, or even overtaken by Japanese "unfair competition" which was believed as a result of state-led or sponsored industry against the free liberal economic model. It started to bear in the government official's mind that the Japanese government tended to place its economy on a comparative advantage place by exceeding the US in some critical high-technology industries. "As the U.S. semiconductor industry faced the possibility of extinction, American policymakers were becoming increasingly concerned about the impact of Japanese industrial targeting on the ability of U.S. industries to compete effectively in international markets. That the semiconductor industry, one of the most dynamic sectors of the U.S. economy capable of producing state-of-the-art technology, was turning to the government for help not only suggested the seriousness of the problem but also signalled the necessity of forging a close relationship with a critical domestic industry in an era when trade policy was having an increasingly important impact on industrial competitiveness" (Zeng, 2004 135). In the morning of July 2, 1987, the U.S. Congressman demonstrated their anger of the Japanese semiconductor company, Toshiba, by smashing a radio with sledgehammers at a press conference on Capitol Hill.

Judith Goldstein (1993) stated that the shift in government policy away from principled support for free trade toward the managed trade approach was justified and permitted by the domestic political realities. These realities include that various domestic laws could provide relief from unfair trade practices, the voices impatient with the disparities between the principle of free trade and persistent unfair foreign trade practices, and the ascendance of strategic trade advocates in the academic community, who argued that failure to adopt protective policies aimed at fostering strategic industries may seriously jeopardize national welfare. In her analysis of the ideational sources of trade policy, Judith Goldstein argues that ideas provide decision makers with strategies or road maps that serve to maximize their interests. While material interests provide a good basis for understanding the positions of various groups and coalitions, policy ideas, often embedded and encased in institutions, help to mould policy choices. Thus, the ascendance of the "strategic trade" argument provided a justification for addressing unfair trade within the context of a liberal trade regime" (Goldstein 1993, 176–80). "The U.S. Commerce Department initiated a claim on behalf of American producers that the Japanese dumping in the 256K DRAMS and 1M (one megabyte) DRAMS markets hurt the US. The Commerce Department's self-initiation without any industry petition was considered to be an unprecedented move. Since the Japanese dominated this product category, the threat of retaliation was intended to hurt the Japanese in the areas where they had the greatest strength" (Prestowitz 1988, 57).

From "the Trade Partner" to "National Interest Threat", Japan experienced the attitude and rhetoric from the US. It was the core critical industrial technology that the US did not want to lose its leading position. The US changed its policy under the umbrella of "liberal free market", harnessing policy under the national interest realism. By portraying Japan as a strong competitor stealing the advantages, especially in advanced technology, the US laid the foundation for the policies and strategies it would seek to take later to pursue its relative advantage position and gains. Once consensus for Japan was benefiting more through economic interaction and interdependence and the US losing its advantage position particular in advanced technology related to national interests, it was the right time to take measures. Thus, in line with the rhetoric, US resorted to well-known and controversial trade policy with Japan in order to destruct the Japanese government-led industrial programme and keep the American companies relative advantage position by hitting Japanese firms and "denying Japanese firms the strategic trade benefits of a protected home market".

4.1.2 Actions on Japan

Facing Japan's rising challenge, the US carried out actions trying to solve the "trade deficit" problem on the one hand, and hit the key and critical industry that would wreak damage to its core interest. By doing that, the key industries kept the US leading position globally protecting their existing position. As Kenneth and John argue the sectoral response to Japanese competition should vary according to the importance of the sector. Only those sectors critical to long-run U.S. economic growth and national security and those been targeted by Japan through aggressive industrial policies or export subsidies are in imminent danger of losing economies of scale or the opportunity to introduce new techniques. Therefore, the new strategy needs to be adopted and must incorporate and integrate economic and security interests, must have an institutional expression, both domestically and internationally, and be embedded in a broader strategic vision.[24]

In June 1985, SIA filed a dumping suit against Japanese DRAM in accordance with Article 301 of the Trade Act (Countermeasures against Unfair Trade Practices). At the same time, DRAM dumping lawsuits such as Micron (On 24 June 1985, an anti-dumping petition concerning 64K DRAMs from Japan was filed by Micron Technology Inc) occurred. In this case, the United States demanded that the Japanese government implement measures to prevent dumping. They stated that the domestic market was unfairly closed to foreign-made semiconductors and that free competition was hindered, while the domestic market was opened.

Chad and Rachel (2007) demonstrates that "While promoting the most-favoured-nation (MFN) principle in the General Agreement on Tariffs and Trade (GATT), US trade officials also pioneered the use of bilateral trade measures, including voluntary export restraints (VERs) and orderly marketing agreements (OMAs), to protect important domestic industries adversely affected by rapidly growing imports". Trade discrimination was fostered through negotiated voluntary import expansions with Japan and other trading partners. The first Japan-US semiconductor agreement was signed in September 1986 after a one-year discussion between the two governments (September 1986 to July 1991). The agreement agreed on three points: (1) improved access to the Japanese market, (2) prevention of dumping, and (3) the US government discontinuing anti-dumping research. It included "Recommendation to expand the purchase of foreign-made semiconductors" and "Determination of sales prices by the US government based on the disclosure of costs and sales data for Japanese-made semiconductors." However, the United State was not satisfied with what Japan had done after the signing of the Japan-US semiconductor agreement. It complained that the Japan market was still obstructed somehow, and Japanese semiconductors were still pouring into the U.S. market with low price. The U.S. asked Japan to do more about the trade deficit.

In 1987, the remarkable Toshiba incident happened and this directly fuelled the semiconductor war between the two countries. The Japanese semiconductor company was accused of illegally exporting machine tools that could be helpful for the Soviet Union submarine technology to the Soviet Union, which violated CoCom (Coordinating Committee for Multilateral Export Controls). This was revealed in May 1987 in the United State, which caused huge political and social upheavals. It was concerned that the American military secrets had been released and later some congressman smashed a Toshiba radio with sledgehammer. No similar demonstration was mounted against the Norwegians, and later, against

[24] Dam, K., Deutch, J., Nye Jr, J.S. and Rowe, D.M., 1993. Harnessing Japan: a US strategy for managing Japan's rise as a global power. Washington Quarterly, 16(2), pp.29-42.

a French arms company that sold similar equipment to the Soviets. The New York Times wrote in 1987: "Western security has been undercut by the avarice of two companies, Toshiba of Japan and Kongsberg Vaapenfabrikk of Norway, and by their Governments' lackadaisical supervision of militarily sensitive exports." The U.S. was not going to let it be without sterner reprisal. "In the Senate, Jake Garn suggests that we ought to really hurt Toshiba." However, the former Representative James R. Jones, a lawyer who represented Toshiba, stated that the event stands as an example of "Japan-bashing" - unwarranted, irrational, racially tinged hostility toward the Japanese, as the first non-Westerners to challenge America's supremacy in the world marketplace. "I think there is a certain amount of ethnic prejudice against the Japanese," said Mr. Jones, " with regards to the way this whole Toshiba case has been handled in Congress is an example."[25] Mr. Jones worked hard to get a ban lifted on all Toshiba imports that was added to the Senate version of the trade bill. Moreover, a retaliation tariff by the US government based on Article 301 of the Trade Act based on the failure to comply with the US-Japan Semiconductor Agreement was introduced in 1987. The U.S. government announced retaliation measures, which were a 100% tariff on Japanese computer and TV goods etc., due to foreign-made semiconductors not entering the Japanese market and dumping sales of Japanese products continued in the third country market. Additionally, "Japanese direct investments in US high-technology firms were subjected to scrutiny by a special federal agency, and at least one proposed Japanese acquisition of a US semiconductor producer failed to gain approval" (Chad Bown and Rachel McCullocb, 2007).

Japanese semiconductor, companies were singled out by the US for particular high-priority attention because America had noticed the pattern behind the development of Japanese semiconductor industry that conferring Japanese firms with relative advantages. High speed economic growth and excellent performance of some crucial industries was contained after the US conducted some trade policies, voluntary export restraints and orderly marketing agreements for instance. From the relative gains point of view, American companies were not only blocked out from the market, but also lost the relative gains against Japanese companies because its competitors became stronger. The relative gain strategy of US was obvious: "to seek to deny Japanese firms the luxury of that captive government market, and thereby pre-empt the execution of what was perceived as Japan's industrial strategy".[26] This strategy would secure US a relatively advantage position in its economic relationship with Japan and thus gain more benefits over long time instead of being outcompeted by Japanese companies.

4.2 Strategy on China

4.2.1 Sinophobia

China has advanced its technology and upgraded the industry capability, making it a rising threat to the US. The concern and agitation caused by China's rapid development, especially in critical high-tech sectors make the US consider thoroughly its relative gains and position in its economic relationship with China, despite the deeply interwoven economic ties between the two countries. The bilateral relationship with China has dominated American

[25] https://www.nytimes.com/1988/02/28/weekinreview/the-nation-japan-bashing-becomes-a-trade-bill-issue.html.
[26] See Richardson, "The Political Economy of Strategic Trade Policy," p. 130.

public and official views on globalization. Normally and officially, trade deficit, "intellectual property rights issues", and "unfair trade practices are on the list of American grievances. The sensitivity of relative gains and positions is high in American society because it is well observed by the US officials that the US is already outpaced by China in some critical areas. And this sensitivity is reflected in a 'Sinophobia' in the society. The "Sinophobia" sentiment is even more fierce compared with "Japan bashing" because the US consider the "authoritarian regime" of China as fundamentally hostile to the "democratic regime" of US. The disadvantage position of the US in the vital high technology would not merely affect the economic benefits, but also the military capability since those technologies are also significant elements for military forces. Moreover, the high-profile trade policies have conducted by the US also indicate the high sensitivity of consideration of relative gains. It is believed that the US could keep its advanced position and gains of relative benefits by deploying the new comprehensive strategy toward China, including trade weapon and some attacks on critical companies. The whole government push back strategy has its purpose on keeping the US as leading in high technology.

The next generation of industrial capability is the core fundamental cornerstone for great powers. The telecommunication technology is taken as a "national interest" and the US must be ahead of China. It is wildly believed that the national competitiveness depends on whether the power possess this capability and one step ahead of other great powers. Trump said in 2019 that "We cannot allow any other country to out-compete the United States in this powerful industry of the future. We are leading by so much in so many different industries of that type, and we just can't let that happen. The race to 5G is a race America must win."[27] China's rising, is coinciding with "many highly advanced technologies ranging from artificial intelligence to next generation telecommunication technology, that China is pursing with heavily governmental support policies making it a national competitor or even a threat to the US. In particular, the digital network competition, mainly spotting on telecommunication infrastructure capability, has become a focus of competition. Therefore, China becomes a treat needing to be dealt with by the US when it starts to catch up, or even overtake in some fields.

Chinese companies, such as Huawei and ZTE, pose the challenge against the United States. "China is advancing its Digital Silk Road and Chinese companies Huawei and ZTE are selling Radio Access Network (RAN) equipment that form a critical component of the 5G network" (Satoru 2019). The concern that US. would be edged out by China because "it would do for high-tech manufacturing what China did to low-cost manufacturing in the preceding two decades-vacuuming up a huge portion of global production and concentrating it in mainland China- if Made in China 2025 were to generally succeed" (Matt 2018).[28] Although it is stated that "China's relentless quest to be a technology leader has deep roots, stretching as far back as the 1950s, when Beijing first began to benchmark its capabilities and ambitions against overseas technology pacesetters" (Evan 2017). There are new features, including (1) China now has the money to simply buy up cutting-edge American firms; (2) Made in China 2025 aims for Chinese firms to dominate not just domestic markets, but also global markets that America counts on; and (3) after decades of doubting China's innovation potential, the United States now fears the rapid pace of China's technological catch-up, and sees Chinese technology as a major (perhaps even existential) threat to U.S. economic competitiveness.[29]

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[27] https://advanced-television.com/2019/04/15/trump-america-must-win-5g-race/.
[28] See more on https://supchina.com/2018/06/28/made-in-china-2025/.
[29] Ibid.

The report by the US. Department of Defence in 2018 noted that "although China 'government has revealed few details, it still can see multiple goals in efforts by Chinese enterprises such as Huawei and ZTE in investing or submitting bids globally in areas like 5G mobile technology, fibre optic links, undersea cables, remote sensing infrastructure connected to China's Beidou satellite navigation system, and other information and communications technology infrastructure". The US. Economic and Security Review Commission 2018 Annual Report also illustrated the concern on Internet of Things and 5G regarding "the dominance of Chinese firms and China-based manufacturing in global network equipment" (Satoru 2019).

The US. companies are now still leading and remaining the most cutting-edge technology on development of 5G, but "if Chinese ICT companies such as Huawei and ZTE lead in 5G technology, US firms will not only lose licensing and royalty payments currently streaming from 4G patents, but they will lose the ability to continue reinvesting in research and development in ICT" (Satoru 2019). Robert Lighthizer testified before the Senate Committee that "he is cline to impose tariffs on those industries in Made in China 2025 because These are things that China listed and said we're going to take technology, spend several hundred billion dollars and dominate the world. These are things that if China dominates the world, it's bad for America". Lorand Laskai (2018) analysed and wrote in the 301 report, conducted by the United States Trade Representative (USTR) that China has been using "forced technology transfers, discriminatory licensing requirements, overseas acquisitions, and illegal commercial hacking" to fulfil its goals.

China's leader is essentially seeking to return his country to the position it has traditionally exercised in Asia — as the dominant regional power, to which other countries must defer or pay tribute". "For the better part of two millennia, the norm for China, from its own perspective, was a natural dominion over everything under heaven" (Howard French 2017).[30] John Ikenberry captures this basic tendency: "As Germany unified and grew, so, too did its dissatisfactions and demands, and as it grew more powerful, it increasingly appeared as a threat to other great powers. … Many observers see this dynamic emerging in U.S.-Chinese relations." Regarding the concerns, it is widely discussed in the US that the strategy to China should change under the consensus of China being a competitor and national threat which would diminish the relative advantage position of US in critical high technology industries, which would further damage the national interest in the long term. The US's approach towards China before is no longer functioning, or put it bluntly failed, so the US should totally change its strategy and policy towards China. Campbell and Ratner (2018) wrote in the article "The China Reckoning: How Beijing Defied American Expectations" that "hopeful thinking about China's future, the United States finds itself confronting its most dynamic and formidable competitor in modern history". It was erred to believe that "free traders and financiers who foresaw inevitable and increasing openness in China, integrationists who argued that Beijing's ambitions would be tamed by greater interaction with the international community, and hawks who believed that China's power would be abated by perpetual American primacy" (Campbell and Ratner 2018).[31] Marco Rubio (2018) pointed out that "the US is facing an adversary which has unprecedented scale, scope and capacity". China did not go to the way the United States expected, and rather developing its own path towards development rose the concern that the existing power of the United States would be undermined. The US national interests would be damaged. Friedberg (2018)

[30] http://www.viet-studies.com/kinhte/destined_for_war_china.html.

[31] https://signal.supchina.com/the-u-s-sinophobia-tracker-how-america-is-becoming-unfriendly-to-chinese-students-scientists-and-scholars/.

said in the article "Competing with China" that "The two powers are separated not only by divergent interests, some of which could conceivably be reconciled, but by incompatible visions for the future of Asia and the world" and the US must ally with other countries to hurdle China's competitiveness. Mike Pompeo thought that the Huawei case is an ideological conflict, indicating the irreconcilable contradiction between "Western values" and "Communist values". Kiron Skinner (2019) stated that it is a "fight with a really different civilization and a different ideology".

Besides the ideological bashing, the "Sinophobia" paralleled in the society. Wray spoke on April 2018 that "No country poses a broader, more severe intelligence collection threat than China. China has pioneered a societal approach to stealing innovation in any way it can from a wide array of businesses, universities, and organizations. They're doing it through Chinese intelligence services, through state-owned enterprises, through ostensibly private companies, through graduate students and researchers, through a variety of actors all working on behalf of China. At the FBI there are economic espionage investigations that almost invariably lead back to China in nearly all fifty-six field offices, and they span just about every industry or sector…Put plainly, China seems determined to steal its way up the economic ladder at US's expense. To be clear, the US is by no means their only target." [32] Around the same time, another U.S. official stated that "This is a fight with a really different civilization and a different ideology and the United States hasn't had that before," Kiron Skinner, the director of policy planning at the State Department, said "It's the first time that we will have a great power competitor that is not Caucasian."[33] On July 20, the New York Times reported that "A new Red Scare is reshaping Washington," citing the increasing influence of the racist and xenophobic views of people like Stephen K. Bannon, President Trump's former chief strategist, and organizations like the Committee on the Present Danger, a Cold War relic whose revival Bannon has spearheaded. It is believed that the previous liberal policy has failed and made or contributed to the china's rising threat. The engagement policy by integrating China into global market and liberal world has been criticized and what measures and policies the US should take to hurdle, suppress and harness China's rising as a threat has been discussed, and likely has reached consensus.

4.2.2 Action on China

It is believed that China has become a strategical competitor after three decades of engagement policy. China has gained more benefits and developed rapidly and comprehensively from the economic interaction and interdependence, while US is losing its relative advantage position, particularly in advanced technology such as 5G telecommunication technology which is considered as very important for economic growth and military use. American firms that enjoyed a undoubtful lead are facing challenges from their Chinese competitors. A concern is observed by the US officials and this increase the sensitivity of pursuing relative gains and advantage position for American itself.

In response to the "national threat" concern brought from China, the United States has carried out some measures and policies. The US is also taking comprehensive measure in different areas to constrain China, including blocking Chinese efforts to transfer critical

[32] See more on https://www.fbi.gov/news/speeches/the-fbi-and-the-national-security-threat-landscape-the-next-paradigm-shift.
[33] https://signal.supchina.com/the-u-s-sinophobia-tracker-how-america-is-becoming-unfriendly-to-chinese-students-scientists-and-scholars/

technologies, imposing huge tariffs on Chinese goods etc. As Chad and Rachel put it "Just as US bilateral relations with Japan were characterized by a wide range of discriminatory policy initiatives, China is now the object of unprecedented discriminatory treatment in its bilateral relationship with the United States and also as a less-than-equal member of the World Trade Organization since its accession in 2001" (Chad Bown and Rachel McCullocb, 2007). The Trump administration imposed a series of tariffs on Chinese products to apply economic pressure on China while entering into negotiations with the Chinese government to take action to change problematic acts, policies and practices related to technology transfer, intellectual property and innovation. The Trump administration has imposed three rounds of tariffs—ranging from 10 to 25%—that have totalled US$253 billion. President Trump has threatened to impose tariffs on another US$267 billion worth of goods if US demands are not met. Against this backdrop Chinese authorities have entered into negotiations with the US government. It remains to be seen what kind of actions and promises President Xi will commit to when he concludes a deal with President Trump, but the series of tariffs has served to apply pressure on China to change its acts, policies, and practices". The trade war Trump waged and the precisely strike on Huawei and ZTE were mainly aiming to the critical industries and trying to hurt the capabilities of China. Moreover, the US export control regime is also used to narrow and tighten on important technologies exported with China. The Advance Notice of Proposed Rulemaking (ANPRM) indicated 14 "representative technology categories" in 2018 and explained that the purpose of the process was to update "the export control lists without impairing national security or hampering the ability of the US commercial sector to keep pace with international advances in emerging fields (BIS 2018).

The Treasury Department along with other financial institutions, such as Foreign Investment Risk Review Modernization Act (FIRRMA), tighten the scope of foreign investments that may cause some critical technology leak outside of US. The Department of Commerce "identified emerging and foundational technologies and regulate outbound technologies" and "the Department of Justice started the China Initiative that will counter economic espionage and consider measures to deal with "non-traditional collectors" who are researchers at laboratories and universities, among other efforts to counter illegal Chinese technology transfer" (Mori 2019). It is believed that it is the whole government countermeasures that try to protect US.

At the same time, US took action against the critical companies which represents China's strength on the critical industry besides the official trade talk and tariff. The U.S. cracked down Huawei in U.S. market by banning it from selling products and equipment. The US governmental department and private firm's combat against Chinese telecommunication companies have long existing. The U.S. congressional conducted an investigation in 2012-13 into Huawei and ZTE on their submission to offer telecommunication equipment to U.S. "The US National Security Agency (NSA) discovered that Huawei had developed reverse engineering proprietary software used in Cisco routers which were heavily used in the US" (Joye, 2013a). "Around the same time Cisco sued Huawei for source copying which became the 'incident' that would remain in the minds of US policy makers and government authorities which ultimately became one of the deciding factors" (Bruno and Chung, 2019). July 2013, NSA former Chief Michael Hayden stated: "My conclusion [of the Huawei submission] was that, 'No, it is simply not acceptable for Huawei to be creating the backbone of the domestic telecommunications network in the United States, period'. And frankly this is where I think the state has a role to play – to ensure we don't make de-

cisions that compromise the foundations of our national security" (Joye, 2013b). [34] Mike Rogers also spoke that "Find another vendor if you care about your intellectual property, if you care about your consumers' privacy, and you care about national security" (Stark, 2012). In 2018, the US banned the federal agencies from using Huawei's equipment. And later, AT&T stepped away from Huawei's business. In 2019, the Commerce Department put the company to the "entity list", which prohibited Huawei buying US goods without the government permit. And that crippled Huawei because it still largely relies on American chips and software. Other American companies, such as Google, also joined with the sanction by stopping providing service to Huawei. The United States even asked its allies to ban Huawei in their own countries. Not surprisingly, US also urged the Five Eyes Members to orchestrate together to push Huawei out of their 5G market. "The United States has also been waging an international campaign to urge other governments around the world especially, European states including Poland and Germany to ban Huawei and ZTE from 5G networks in order to avoid security risks and vulnerabilities caused by their equipment and systems that could be exploited for espionage" (David and Julian 2019).

[34] https://cyberinfocts.blogspot.com/2013/07/ex-cia-nsa-chief-eu-politicians-not.html.

Chapter 5 **Will China End up Different to Japan with Regards to the Relative Gain Strategy of the US?**

5.1 The American Bashing in Japan and the Military Alliance with the US

The rhetoric of Japan bashing and the measures US took in pursuing the relative gains caused Japan reaction to react accordingly. Japan thought that it was reasonable and logical to earn a position in the world as the rising power. What US did to keep its relative economic advantage position was against its notion of free and liberal economic market. Dissatisfaction arose in Japan against what the US was doing.

Japanese media reported articles and books about "Japan bashing" causing the arising of a "bitter, resentful, nationalistic American bashing" group in Japan. "When some Americans inject unnecessary racial elements into bilateral disputes, America bashers in Japan immediately seize this as proof that Americans will never treat the Japanese fairly because America is a racist country and white Americans cannot tolerate yellow Japanese becoming richer and more successful" (Ito 1990). Moreover, the Japanese thought they were unjustly targeted by the United States for the accusation of unfair trade. The Japanese media reported Japan as "the victim of racial discrimination by Americans who treat Europeans better". It was believed that Japan's market was more opened toward US, and Japan was not allowed to do what US and European countries could do, such as subsidies from governments on critical industries.[35]

There were also voices that argued the requirement outlined by US did not make much sense and the reason used by US were not sound. Ryutaro Komiya (小宮 隆太郎 1994)) held the view that the US was the main factor caused the huge trade deficit, pressuring Japan to compromise. He wrote that it does not make sense to him that the U.S. ask Japan to cut down the trade surplus and open the market at the same time. The heated talk about the trade dispute between U.S. and Japan was full of fallacies and were also so many mistakes about the trade deficit. He argued that he could not stand with the prejudices and biased opinion on Japan although he took himself as a liberalist rather than nationalist. He insisted that all the reasons that the U.S. stated on the trade deficit did not make sense in economic theory. Kenichi Ohmae (大前 研一 1983) also doubted the meaning of trade deficit figures. During the same time period, the U.S. had a trade deficit with countries including West Germany 27.4 billion, Canada 22.2 billion, South Korea 4.8 billion and Japan 49.7 billion. Kenichi Ohmae thought that it was pointless to talk about these figures merely. He believed that it was all about some figures without any concrete evidences and the U.S. trade problem was more due to its own issue rather than Japan's influence. Komiya advocated that "the main cause of the US trade deficit is its low savings rate and the great budget deficit," and he criticized the US government exerting unrestful pressure (economic sanctions). Komiya said "It is nonsense that economic powers like the United States are anxious about trade deficits." He thought that it was strange that the American society was riddled with "Japanese Threat" including politicians, medias, and ordinary people, and this compelled the trade policy of the country. 黒 田真 (1989, p7-21) wrote in his

[35] Ito, K., 1990. Trans-Pacific Anger. Foreign Policy, (78), pp.131-152.

book The United States Congress was the culprit of the hard-line theory against Japan at that time. They took Japan as a "conspicuous number two", and instigated "containment theory of Japan". However, he expressed his opinion further in the book that it was the U.S. that wanted to put Japan into the position where they should be responsible for the US's problem and it tended to suppress Japan. The US blamed the Japanese when things did not work out as expected resulting unfair sanction.

Although the voices in Japan were generally against the US and thought Japan should had its position and influence as the second largest economy, the officials who directly confronted with US forces made the realist decision. It was because under the circumstance that the paramount important military alliance relationship with US, Japan does not have military capability. The important goal for the MITI was to reach a deal with U.S. for certain issues. Under the heavy pressure of US, Japanese officials who took part in the negotiation process had to calculate all the factors and bend down to American demands. It was also the dominated voice in Japanese government. "The key objectives in this dispute—reaching a settlement and avoiding American retaliation—for MITI, the chief bureaucratic actor in this case, coincided with those of the prime minister and leaders of the Liberal Democratic Party" (Zeng, 2004 141). "Japanese were particularly concerned that the Americans were seriously considering naming Japan as an unfair trader and that they feared that if they were to get the "unfair trader" label this time, then they might get stuck with it in many other cases" (Prestowitz 1988, 64). Prestowitz (1988, 67) also wrote that a high position MITI official reportedly said that MITI ought to have taken American demands more seriously because the US government has chosen semiconductors as its preferred target, considering that it is necessary for the government to take a hard stand under the current law.[36] The political clout hanging over the Japanese government officials was to step back on the American's demands. Other officials believed that the U.S. was determined to punish Japan for its unfair trade. Farnsworth (1987) described that "Shintaro Abe, leader of the LDP, after his meeting with President Reagan in Washington commented that there was no concrete indication that would suggest that the sanctions would be lifted during Prime Minister Nakasone's upcoming visit to the United States and concluded that the political dynamics in Washington militated against any immediate action".

Therefore, generally the Japanese government responded by expanding imports of American-made semiconductors, raising prices of Japanese products to third countries, and improving the semiconductor market from time to time. Partially lifted retaliation was improvement in third country dumping. The Japanese manufacturer's share dropped dramatically to 28% at the end of 1990. The United States regained its top position with 43% of the world's semiconductor share, with Japan was second with 40%. Intel has made great strides, especially in the MPU, and became the world's top manufacturer, with NEC, Toshiba, Motorola and Hitachi ranked below. The 1986 semiconductor trade agreement was unprecedented for American trade policy in many respects. As authors such as Laura Tyson pointed out, not only was it the first time that the United States had threatened trade sanctions on Japan for failing to abide by the terms of a trade agreement, but it was also the first trade agreement the United States entered into in a high-technology, strategic industry aimed at improving market access and regulating trade in both Japan and the global market. In addition to setting the precedent for U.S. demands for VIE, the agreement showed that the United States, out of concerns about the possible erosion of American leadership in

[36] Prestowitz, Clyde V., Jr. Trading Places: How We Allowed Japan to Take the Lead. New York: Basic Books, 1988.

strategic high-technology industries, was increasingly willing to abandon the principle of free trade in favour of aggressive unilateralism and managed trade. The agreement therefore signalled a fundamental change in the U.S. government's approach toward competition in high-technology industries.

5.2 The "Anti-Hegemonism" in China and the "Structural Contradiction"

US's realistic strategy in pursuing the relative advantage position against China has brought out the counter sentiment in China. The request of stopping the subsidies from government to the targeted industries in "made in China 2025" in trade negotiation and the actions US has taken on Chinese company, Huawei, are considered as the abuse use of hegemonic power, trying to curb China's rising. It is nation-wild thought that the strategies US are using to gain its relative high position tend to harness China's plan of upgrading industrial capability, especially in some high technology critical sectors. What US is doing now reflects its hegemonism mentality and it is applying the "hegemonic strategy" again on China.[37]

American's "unfair" requirement on China and its fully comprehensive policies towards China's rising caused the "Anti-Hegemonism" sentiment in China, which is the destructive result when US deployed strategy to pursue the relative gains. The "nationalism" rhetoric of "China Threat" and "China is stealing our future" in US is in line with the "nationalism" of "US hegemonism" in China. The officials stated that "they will take the trade war no matter how long it will last if US tends to do that", and "Chinese will overcome any obstacles on its way to rejuvenation of the nation and will not bend down to the hegemonic power trying to inhibit."[38] As Jin (2019) emphasised that It is only because China is catching up in the high technology area which makes US manoeuvre all the resources to stop this trend. US would still be happy if China was still on the low-added value chain and pursued absolute long-term gains instead of looking for the relative gains. US has brought down many rising powers in the history, including Germany, Britain and Japan, and it is doing the same thing now on China. This clearly shows what US has done as the only hegemonic power.[39] Yan (2019) also argued that American's strategy on Huawei has purely one purpose to bridle its high technology development. Huawei is just one case, trade negotiation is also a means, the ultimate goal of US is to dominate the critical technology and keep its relative gain and position. The basic research of high technology must be dominated by US.[40] It is wildly discussed and the consensus has been reached that the policies and measures US are taking under the realism relative gain theory are intended to harm China's rising. Zhang (2018) described the US competitive strategies towards China as "Confinement". He contended that the main goal of the United States is to prevent China's moving

37 http://www.xinhuanet.com/world/2018-08/09/c_1123248448.html;
https://www.scio.gov.cn/37236/38180/Document/1638219/1638219.html;
38 http://www.xinhuanet.com/mrdx/2018-04/05/c_137089444.html;
http://www.xinhuanet.com/2019-05/17/c_1124505469.html.
39 http://opinion.people.com.cn/n1/2019/0902/c1003-31330263.html; 金灿荣, 2019. 观察 "当今世界百年未有之大变局" 的五个视角. 东北亚学刊, (3), p.3.
40 https://new.qq.com/omn/20190516/20190516A02Z9O.html.

up the global value chain to become an advanced manufacturing power.[41] Therefore, China should stand up to the hegemonic behaviour. In social media, anger is spreading fast and it is pervaded with the mood that China is the victim of US bully. Official outfits even compared the current trade dispute with the humiliation time in colonial era at the hands of foreign powers. In one of the most widely watched videos of China Central Television, the most official news outfit in China, said that the trade dispute is just a temporally blip in China's 5,000-year history and the country would "fight until the world is made new".[42]

The disruptive results of American's strategy of pursuing relative gain in Japan and China shared some similarities. The "American bashing" in Japan and the "Anti-hegemonism" in China demonstrates the dissatisfied sentiment against US's rhetoric and policies. Voices from inside of both countries showed that they have the willingness to fight for their relative interest, and make the trade negotiation favour their own interests. However, the structure environment including military capability, economic scale and interdependence, and ideology, play a vital role in the evolved relation between great powers. What contained Japan itself in the US-Japan case were that the lack of independent military capability and its military alliance statue, and those restrained Japanese's strategy that led to the "unhappy result" for Japan in the end. What makes China different in comparison with Japan is, despite the economic capabilities and influence which constitute the focal point of US-China strategic competition[43], the independent military capabilities and the ideological difference, which constitute the central points of the "structural contradictions" between China and US. Yan stated that "strategic competition is inevitable due to the structural contradictions between hegemon and the rising power and that China has been narrowing the gap between its comprehensive national strength and that of the US causing the growing competition between the two nations."[44] Subsequently, these factors will define the potential trajectory of US-China relations in the coming time. As Yan argues "if such ideological rivalry can be managed well, US-China strategic competition could concentrate on pursuing material power, mainly through economic competition and arms race. But if ideological rivalry were to become a core component of US-China strategic competition, proxy wars would break out between the two nations, similar to the US-USSR clashes during the Cold War era.[45] Shi also argues that "the structural contradictions between China and US might deepen and that the possibility of a US-China major confrontation and armed conflict is by no means be ruled out".[46] All these factors, other than the sole economic factor like US-Japan case, adds more uncertainties to the ending of US-China case.

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[41] Zhang Yuyan and Feng Weijiang, 'Cong jiechu dao guisuo: meiguo duihua zhanlu¨e yitu ji zhongmei boyi de sizhong qianjing' ('From Engagement to Confinement: US Strategic Intensions Towards China and Four Scenarios of Sino-US Competition'), Qinghua jinrongpinglun (Tsinghua Financial Review), No. 7 (2018), pp. 1–2.

[42] https://www.nytimes.com/2019/05/14/world/asia/china-propaganda-trade.html

[43] Gao Cheng, 'Zhongmei jingzheng shijiao xia dui wending fazhan zhongmei guanxi de zaishenshi' ('Reconsideration of "Developing Steady Sino-US Relations" from the Perspective of Sino-US Competition'), Zhanlu¨e juece yanjiu (Journal of Strategy and Decision-Making), No.2 (2018), p. 17.

[44] Yan Xuetong, 'Dui zhongmei guanxi buwendingxing de fenxi' ('The Instability of China-US Relations'), Shijie jingji yu zhengzhi (World Economic and Politics), No. 12 (2010), pp. 29–30.

[45] Yan Xuetong, 'Zhongmei liangjihua qushi de sikao' ('The Bipolarisation of China-US Relations'), Xiandai guoqi yanjiu (Modern SOEs Studies), No. 17 (2018), pp. 84–5.

[46] Shi Yinhong, 'Zhongmei guanxi de shuangchong xingshi' ('Two Trends in US-China Relations'), Guoji wenti yanjiu (China International Studies), No. 3 (2009), p. 3.

Chapter 6 **Conclusion**

In this paper, I start with the illustration of great powers relationship when dominant power encountering rising power. It is discussed that the hegemonic power normally would take measures and apply policies strategically to contain the rising power and mitigate the influence. The examples, Anglo-German and US-Japan used to bring out the topic of this dynamic relationship, shows that the policies and measures dominant power would take varies from comprehensive strategy to particular economic strategy. This depends on the circumstances in the particular period of time. The US-Japan military alliance and the hostile confrontation between Britain and Germany set the fundamental tone of how the great powers interact and where the relationship evolve into. The "trade dispute" within economic sector between US-Japan distinctly differentiated itself with the "hot war" between Britain and Germany.

Although the great powers relationships and its results vary in different time, this paper tries to argue that in the new era of globalization when dominant power faces the challenge of rising power and as the relative economic power declines, it has the propensity to pursue the relative gain in order to harness the rising power from the structure realism perspective. And why the difference of results would happen even when the hegemonic power conducts the same policy under realism theory. "States are inherently inclined to strive for relative advantage against like entities on the international scene, even if only by means other than force."[47] This paper examines two cases, semiconductor sector of Japan and telecommunication of China, to check if the relative gain realism theory apply to the realistic policies, whether the policy will work and what potential result it will lead to.

In Japan case, it was very clear in the 1980s when the US took Japan as a serious rising challenger, particularly after Japan's catching up and even outcompeting in some critical high-tech sectors, it started to change its policies and strategies to seek relative gains. The concern of the US was more about economic benefits rather than military security given the alliance they reached. Some American officials thought that the continuing economic policy and interaction with Japan, although both sides would benefit in absolute term, would eventually generate more relative economic gains and benefits to Japan and would be detriment to American's relative advantage position in developing and applying the advanced high technology. Some strategies and policies were made in response to the concern, from the "Japan bashing, 'unfair' trade negotiation, to even the sanction on particular company. The result of Japan was that the US kept its relative advantage position in semiconductor industries and its dominant position in the international society.

In China case, US faces the same "threatening challenge" from China as Japan's after being catching up or even outpaced in some vital advanced technological industries. The same concerns are permeated in American society that China is benefiting more in the former economic pattern with the US, and even surpassing the US in several critical technologies which undermine the relative advanced position and damage its interests. This concern is not only limited in economic area in China case because the independent capability of China and the crucial role those technologies plays in military application. The strategical policies the US is conducting in response to this concern includes "Sinophobia" propaganda, "trade war" and "war on particular company", which share a lot of similarities with Japan's. The case of China is still ongoing, and this paper think the result would be different based on the disparate capabilities in military.

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[47] Edward N. Luttwak, "From Geopolitics to Geo-Economics," The National Interest, No. 20 (Summer 1990), pp. 17-24, at 19.

The evidences from both cases indicate that when the international structure starts to change, it is likely for dominant power to seek relative gains. This realism perspective indeed explains the strategical relative gains-seeking behavior of the US. The result might be different in China case in comparison with Japan's given the international structure and circumstances, which in China case is the independent military capability, even though there are a lot of similarities in American's strategy and policy in pursuing its advantage position and relative gains, and in the domestic sentiment of "American bashing" in Japan and "Anti-hegemonism" in China. This might affect significantly to how the rising power deal with the relative gain strategical policies deployed by dominant power. However, further study needs to be done to prove the explicit relation between military factor and the result in the economic trade negotiation.

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