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국제학석사학위논문

**The US-China Trade War on
Multinational Business**
The Case of Hyundai Motor Company's Production
Shifts in China

미중 무역전쟁이 다국적 기업에 미치는 영향:
현대자동차 중국 공장의 생산 변화 추이

2020년 2월

서울대학교 국제대학원

국제학과 국제통상전공

김 세 연

Master's Thesis

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**The US-China Trade War on
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The Case of Hyundai Motor Company's Production
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Abstract

The US-China Trade War on Multinational Business The Case of Hyundai Motor Company's Production Shifts in China

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The US-China Trade War, that officially began from March 22nd of 2018, raised serious tensions between the two-digit economies^①, triggering a knock-on effect across the world. Moreover, the THAAD dispute, between Korea and China, which officially began in July of 2016, raised greater concerns for Korean companies that operate in China. One of the Korean multinational businesses that received the greatest damage is Hyundai Motor Company. These political disputes triggered nationalistic spending behavior among the Chinese consumers, which induced consumers to divert their consumption away from politically disputing nations' brands, such as Hyundai or Ford, to non-politically disputing nations' brands, such as Toyota or Mercedes Benz. This thesis aims to find, that during the direct and indirect political crisis, whether the nationalistic spending behavior had a greater impact on Hyundai's production flexibility in China, rather than the

^① Two-digit economies are nations with GDP of over two digit trillion USD, the United States and China

effects coming from Hyundai's faulty management.

The results have found that, despite the political disputes, automobile market demand was increasing with greater market optimism by consumers. However, Hyundai along with American brands have suffered serious damage in sales, market share, and average monthly production in China, which increased Hyundai's production flexibility to react to the decreasing demand. Hyundai and American brands' market shares were absorbed by non-politically disputing nations' brands such as Japanese and German brands. Moreover, Hyundai's global factories, located outside of China, faced increased average monthly production with stable production flexibility, contrary to those of Chinese factories. Hyundai even started to export its products from China to global markets, as their demand sharply decreased in China.

In order to prove that Hyundai's sharp changes in production flexibility and decreased market share is due to nationalistic spending behavior, which was triggered by political disputes, this thesis tests three most compelling faulty managements suggested by the experts, such as lack of NEV investment, failing to fulfill SUV demand, and fall in brand value. Upon the test, all three faulty management arguments were effectively refuted, making a strong argument that the chief cause behind Hyundai's significant changes

in production flexibility is due to the nationalistic spending behavior caused by indirect and direct political disputes, the US-China Trade War and THAAD dispute, respectively.

Keyword : Production Flexibility, The US-China Trade War, The THAAD Dispute, NEV, Nationalistic Spending, Natural Hedge

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Abstract (English)

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Chapter 1. Introduction

1.1. Study Background

South Korea will be heavily impacted by the recent US-China Trade War. As the negotiations are continuously failing to reach an agreement, and even if the agreements between the two giants are reached, South Korean exporting businesses are prone to negative shocks. As an export-oriented economy, South Korea's export composes 43% of its GDP in 2017, and relies heavily on trades with China and the United States (World Bank Indicators, 2017). According to KITA's K-statistics, Korean exports to China and the United States account for 24.8% and 11.9%, respectively, of total Korean exports. One noticeable feature is that 78.9% of total exports to China is an intermediate good such as semi-conductor and electronic chips, and these are also linked to American imports (UN Comtrade, 2019). KITA announced that upon the full-blown trade war, Korean exports will drop by 6.5%, amounting to losses of \$36.7 billion. Considering that the Korean GDP is \$1.53 trillion in 2017, it drops the total GDP by 2.5%, an alarming amount considering South Korea's GDP growth is consistently decreasing over recent years (World Bank Indicators, 2017).

Even if the negotiations are reached between The United States and

China, which seems unlikely at the moment, South Korea is not free from the export sector shocks, as Chinese may politically and forcefully import semiconductors from the United States, losing comparative advantage in the Chinese market for political reasons, incurring \$4 billion annual loss for the South Korean chip exports, lowering 0.7% of the total Korean exports (Lee, 2018). A semiconductor is South Korea's main exporting product, which has a superior comparative advantage over the American products. According to the Institute for International Trade research, semiconductor amounted for 25.3% of total exports to China, which is \$65.5 billion. The same research revealed that China only imported 4% of total chip imports from the United States, having a value of only \$10.5 billion, showing the dominance of the Korean chip exports in the Chinese market. The Trump Administration intends to politically pressure China to give a forceful comparative advantage to American chips manufacturers over Korean manufacturers, hence it is their second agenda to negotiate on the terms of electronics and semiconductor deals with China.

However, shocks in the export sector do not impact Hyundai Motor Company, because Hyundai employs what is known as 'natural hedge', which basically means that they produce at where they sell. Hyundai currently operate 9 different headquarters producing all over the world:

India, Turkey, China, the US, Russia, Brazil, the European Union, Czechia, and Vietnam. Among these 9 headquarters and factories, Hyundai produces the largest volume of automobiles in China, which only fulfills the Chinese domestic demand, without exporting to other countries. Only in recent years, upon the political disputes, Hyundai started to export their automobiles from China to other countries. Therefore, despite the negative export sector shocks, Hyundai is considered to be safe from the trade disputes, without accounting the effects of shrinking domestic demand and nationalistic spending behavior.

However, most of the South Korean companies will face another shock coming from the lowered Chinese economic growth, caused by lowered demand upon the trade war (Lee, 2018). As the Korean and Chinese market is closely tied, and so as other Asian countries to the Chinese market, the trade war will cause knock-on effects across all Asia. For instance, the KITA report suggested that the Chinese private demand will fall due to trade war, hurting the Lotte retailers located in Chinese cities in Chengdu, Tianjin, Weihai, and Shenyang. The trade war will hurt the Chinese middle class, resulting from a slowing economy, decreasing Lotte's potential profits (Lee, 2018).

Moreover, Shilla's duty-free shops will also face long-term negative

shocks. Chinese customers make up 90% of Shilla's total sales at stores located in South Korea and Japan (Lee, 2018). It is inevitable that the two retailers, Lotte and Shilla, will incur serious damage. Despite the Chinese economic growth experiences a dampening growth, the Chinese automobile industry is experiencing positive growth, illustrating that the negative shocks coming from lowered demand upon Trade War are irreverent to Hyundai Motor Company. Their pool of automotive market is expanding, while consumers in the market feel greater optimism, contrary traits compared to the retailers.

Benefits could be realized by producers of styrene monomer like Lotte Chemical (Lee, 2018). China's recent investigation on the anti-dumping case has given Lotte Chemical comparative advantage over the American companies. The investigation finalized with imposing 55.7% tariffs on American chemicals, while 7.5% and 6.6% tariffs were imposed on Lotte Chemical and SK Global Chemical, respectively (Lee, 2018). This will boost Korean chemical companies' comparative advantages in the Chinese market.

The uncertainties arising from the US-China Trade Wars shift Korean exporting companies to seek another lucrative market. Following the Trump Administration's \$34 billion duties on Chinese goods, which took

effect on July 6th, 2018, Korean President met with the Russian President regarding the free trade agreements (Lee, 2018). It is critical for the Korean government to seek new markets to negotiate free trade agreements on behalf of Korean exporting companies to lower the damage of the trade war, hence lowering the damage to the Korean economy.

Although Hyundai is relatively safe from export sector shocks and Chinese demand reduction, due to the positive expansion of automobile market demand in China, Hyundai faces the nationalistic spending behavior that will trigger the Chinese consumers to reduce the consumption of politically disputing nations' brands and divert to non-politically disputing nations' brands, which were also faced by Lotte retailers. The rest of the thesis is dedicated to find out whether the nationalistic spending behavior by Chinese consumers, which were triggered by the political crisis, is the key cause behind Hyundai's increased production flexibility and decreased market share in China.

1.2. Purpose of Study

The US-China Trade War is an ongoing international political dispute that could have an immense impact on the world economy, especially on the contending parties of the United States and China, and the

third parties that conduct business in those conflicting areas, such as South Korea. Today, corporates employ high degree of the global value chain to manage the demand of the globe, gaining increased profit from a widened world of 21st century. One of the most important management tools to enhance the value of the company is through increasing operational flexibility, especially in supply chain management (Dong et al., 2014). And operation flexibility could negate the detrimental effect of such instances of nationalistic consumption behavior caused by the Trade War and the THAAD dispute.

Hyundai Motor Company is one of the few Korean companies that operate within China, which uses a ‘natural hedge’ (Dong et al., 2014) management, which is producing at where they sell, and despite some authors in the literature disagree with the effectiveness of the natural hedge management, it is hard to prove the aftermath of political disputes, the US-China Trade war and the THAAD dispute, on Hyundai Motor Company, since Hyundai is not affected by the shocks coming from the trade sector.

Despite the fact that Hyundai is safe from the export shock, the company is still heavily damaged by the nationalistic spending behavior among Chinese consumers, which is triggered by the political disputes. Nationalistic spending behavior would cause serious damage in Hyundai’s

sales within China, thereby increasing its production flexibility to lower monthly production, as consumers would divert consumption away from politically disputing nations' brands, such as Hyundai or General Motors, to non-politically disputing nations' brands, such as Toyota or Mercedes Benz.

However, simply diverting consumption patterns cannot prove that nationalistic spending behavior exists or be blamed as the main cause behind Hyundai's drop in sales in China, or changes in production flexibility. Thus, this thesis aims to find whether nationalistic spending behavior, triggered by the political disputes, had a greater impact on Hyundai's production flexibility, rather than the effects coming from the faulty management by the Hyundai Motor Company in China. By effectively proving the quantitative results of the nationalistic spending behavior, while refuting the faulty management argument, this thesis concludes that the nationalistic spending behavior, triggered by the political shocks, increased production flexibility in Chinese factories to reduce average monthly production.

The first part of the result illustrates the expansion of the Chinese automobile industry despite the political shocks. The second part provides evidences of the nationalistic spending behavior by the Chinese consumers. The third part explains the consumption diversion to non-politically

disputing nations' brands, strengthening the argument of the second part. The fourth part compares the nationalistic spending behavior's effects on Hyundai's global factories and Chinese factories. The last part tests the validity of the faulty management argument.

Chapter 2. The Literature Review

These papers share similarities in the first part of the thesis, which examines whether the changing production volume of Hyundai is due to the economic uncertainties such as trade war in the Chinese market.

Lee et al. (2017) illustrates that firms make plant relocation and inventory level decisions based on sunk cost, labor cost, exchange rates, and transportation costs. Lee et al. (2017) seek to find economic uncertainty, competition production cost, sunk cost, exchange rate, transportation cost has any relations with the Korean FDI, both outward and inward. The first part of this thesis seeks to find if there is a relationship between shrinking market size in China and the production level changes in the Hyundai global supply chain. Therefore, this paper is highly similar to the first part of this thesis. However, there is a fundamental difference since this paper engages empirical validation based on an industry level, and the given circumstances for Lee et al. (2017)'s paper was economic uncertainty, which was increasing the standard deviation of economic growth. This thesis analyzes the impact of third-country effects on how the US-China trade war, thereby causing economic uncertainties, has any effects on specific company's, Hyundai's, 'production volume'. Related studies are summarized below.

Dong et al. (2014) discuss how operational flexibility minimizes the

risk of exchange rate volatility for the firms, and thereby even profit from it. It has found that operational flexibility allows global firms to benefit from the exchange rate fluctuations through selling aggressively upon favorable exchange rate conditions, and sell conservatively upon unfavorable exchange rate conditions. Moreover, they have found that the ‘natural hedge’ management, which is a construction of the supply chain in the same location of its demand fulfilling market, is not an effective profit maximization policy. Despite this result, Hyundai is employing a localized strategic model, creating local consumer tailored products within Chinese domestic soil, which method is supported by Sturgeon et al. (2011).

Sturgeon et al. (2011) expresses the importance of local-consumer tailored products, yet Dong et al. (2014), effectively opposes it. Hyundai does employ a high degree of natural hedge management, as well as producing local-consumer tailored products, staying true to their major strategic directions, which are “*optimizing global operation*” and “*realizing smart scale*”. Hyundai currently operates 11 production facilities across 9 different nations and most of these production facilities are established in nations with a high demand for Hyundai’s automobile.

According to Dong et al. (2014), Hyundai’s current management strategy is outdated and inefficient management. Their research suggests

that Hyundai's worsening situation in the Chinese market is due to a lack of operational flexibility. Operational flexibility is a management strategy that maximizes the usage of multinational business' global value chain, to reduce the risks of economic shocks, incurring minimum damage to the firms.

However, Hyundai employs natural hedge management, which is a completely contrary management strategy, as its global value chain is rather stuck in the location of their primary market. Dong et al. (2014) argue against the natural hedge management, suggesting that it is not a profit-maximizing strategy by the multinational firms. However, their research accepts the fact that competitive exposure is a serious risk for firms, that could only be reduced by natural hedge management.

Thus, according to Dong et al. (2014), Hyundai is in a serious dilemma, as it faces difficulties in the Chinese market upon economic uncertainties, fluctuations in Chinese currency, and best policy choice for Hyundai is to increase operational flexibility rather than pursuing a natural hedge management, or even pull out from the shrinking market of China, and set up diverse global value chains across more nations. Although similar, this thesis specifically aims to find whether a political shock, which triggered nationalistic behavior, is a chief cause behind the changes in production flexibility in Hyundai's Chinese factories.

Dong et al. (2013) have given a meaningful pool of other literatures concerning the possible effects of economic uncertainties and exchange rate fluctuations. All of these papers cover the effectiveness of operational flexibility upon possible damages incurring from the exchange rate fluctuations. Dong et al. (2013) explain that exchange rate uncertainties are a serious concern for an exporting firm since it could deteriorate firm's profit and revenues, and even the competitive position of the firm. Therefore, in order to examine the effects of the nationalistic spending behavior on Hyundai's production flexibility in China, it is critical to rule out the argument that the automobile market is shrinking, and the fault lies heavily on economic uncertainties and exchange rate uncertainties. If the automobile market is shrinking, the nationalistic spending behavior is hard to prove, since the fall in Hyundai's demand may simply be due to the fall in automobile demand by the general Chinese consumers. However, if the automobile market is expanding, despite the increasing economic uncertainties and exchange rate fluctuations, it is possible to examine the nationalistic spending behavior effects on Hyundai's production flexibility, while effectively refuting the shrinking market argument, as well as lack of operational flexibility argument. The following researches deal with similar arguments provided by Dong et al. (2013).

Boyabatli and Toktay (2004) examines the list of several different operational hedging strategies and figures out two definitions of operational hedging, which is a real option view and counterbalancing-action view. Real option view considers operational hedging as an effective measure to counterbalance the demand fluctuations, price and exchange rates. These real options include the use of postponement of allocation in the foreign market, and acquisitions. Similar studies were done by Ding et al (2007), Kazaz et al (2005), Hankins (2011), and Cohen and Huchzermeier (1999).

Kogut and Kulatilaka (1994) uses stochastic dynamic programming model to figure out the possible options for switching production facilities located in different countries upon exchange rate uncertainties. Similar to their study, Aytekin and Birge (2004) argue that the use of financial hedging is preferable upon mild exchange rate uncertainty; however, upon serious exchange rate uncertainty, operation hedging is preferable, which is similar to the conclusion given by the Dong et al. (2014).

Kouvelis et al. (2001) study on the general management choices regarding how the exchange rate fluctuation impacts the ownership strategies of production facilities of firms that engage business in foreign soil. Thereby, this paper provides prospects on how Hyundai may also undergo different ownership strategies for its production facilities in China.

Kazaz et al. (2005) provide how the firms may undergo operational hedging under the exchange rate uncertainties. Firms may produce under capacity, as may be seen in the case of Hyundai in the Chinese market upon exchange rate uncertainty, or even use allocation hedging to under-serve the volatile market. Discussed papers assume the effects of exchange rate uncertainties on the firm's production, however, this thesis will look into the nationalistic spending behavior upon political shocks as the main indicator for the production flexibility changes of Hyundai.

Dong et al. (2013) examine the facility network design problems for the global firms that are monopolistic in the domestic market, yet face competition in the foreign market. This is similar to Hyundai's case. Global firms tend to produce regardless of the exchange rate and demand uncertainties, but may postpone production until the uncertainties are resolved. Dong et al. (2013) may explain why Hyundai is currently not producing to its full capacity, or postponing the production level in the Chinese market, however, this thesis will delve into how much the production flexibility has changed due to the nationalistic spending behavior. Dong et al. (2010) also suggest studies on how the exchange rate uncertainty and responsive pricing may affect the firm's facility network decisions. Exchange rate uncertainty or response pricing could increase the value of

central production, which lacks similarity in the focus of this thesis.

The following papers share light into the effects of political shocks on the industry and national level, as well as briefly covering the nationalistic spending behavior. Li et al. (2018) calculated the possible economic impact -using the production of manufacturing sectors, employment, trade, export and import- upon trade war to both the United States and China, and even to third countries like South Korea, which economy inevitably suffers, but not as much as the participating countries. Especially, Amiti et al. (2018) is an interesting paper and somewhat most critical to this thesis. It has found that \$165 billion worth of trade was redirected due to the trade war. This suggests that multinational corporations' global supply chains were dramatically shifted to minimize the damage. Amiti et al. (2018) went to this conclusion by figuring out the elasticity of the U.S. export values with respect to the foreign tariffs and multiplied it with the tariffs to show a possible decrease in the US exports, which was considered to be \$165 billion over the trade war until the end of 2018. This means that \$165 billion was redirected, shifting the supply chain, as American multinational corporations tried to avoid the increased tariffs. Haiou et. al (2019) also supported Li et al. (2018)'s argument by illustrating that the significant value of increased tariffs is transferred to the

multinational firms, and eventually suffer from the increased costs, decreasing their markups and profits, decreasing the overall value of the export sector.

Moreover, Sturgeon et al. (2011) also discuss that the automobile industry is often 'nationalistic' by giving examples regarding Opel, which shares the light on parts 2 and 3 of this thesis. The study argues that as larger the targeting market gets, it's attractive for firms to establish design centers in that market, and create a localized customer-tailored product. Hyundai is effectively employing this strategy, as its one of the 3 major strategic directions is to *"to find new growth opportunities through launching localized strategic models, and improving sales channels"* (Hyundai Motor Company, 2020). Moreover, the study discusses the general trend of the global value chain, and how value chain location decisions are critical for the developing firm's competitiveness.

Chapter 3. The US-China Trade War Timeline

The United States aims to correct the trade imbalance it has faced for a long period of time with China. It is important to realize that the threat itself could constitute action. Therefore, it is safe to say that before the official statement from the White House, which would be the beginning of the official trade war, the US-China Trade War has already begun as Donald Trump became the President of the United States on Tuesday, November 8th of 2016. This is the timeline that highlights the crucial moments of the Trade War (Market Insider, 2019). Key dates are highlighted.

- November 8th, 2016: Donald Trump became the President of the United States
- March 22nd, 2018: The United States release plans to impose 25% tariff on \$50 billion Chinese goods, which made China to react with retaliatory tariffs on US steel and aluminum
- April 4th, 2018: China releases the list of more than 100 US goods that faces \$50 billion retaliatory tariffs
- June 18th, 2018: President Trump threatens 10% tariff on another \$200 billion worth of Chinese imports

- **July 6th, 2018: \$34 billion worth of Chinese goods now face 25% tariff. And China imposes an equivalent amount of tariffs on American goods**
- July 24th, 2018: The Trump administration announces \$12 billion bailouts for farmers who are affected by the Chinese retaliatory tariffs on agricultural products
- August 1, 2018: The White House threatens 25% of addition tariffs on \$200 billion worth of Chinese imports
- August 3rd, 2018: China announces warning of retaliatory tariff of \$60 billion worth of US goods if the US goes with their announcement made in August 1st
- **August 23rd. 2018: The US imposed 25% tariff on \$16 billion worth of Chinese goods. China retaliates with an equivalent amount.**
- September 7th, 2018: Trump threatens the imminent coming of tariff on \$200 billion worth of Chinese goods are subject to tariffs, and another tariff on \$267 billion goods
- December 1st, 2018: Presidents Trump and Xi declares truce, postponing the trade war

- **February 24th, 2019: President Trump announces that US won't increase the tariffs in coming March**
- April 1st, 2019: Hong Kong protest begins
- May 5th, 2019: Trump threatens to increase tariffs on \$300 billion worth of Chinese imports due to lack of commitment
- **May 10th, 2019: The US increases tariffs to 25% on \$200 billion worth of Chinese goods**
- May 13th, 2019: China issues that it will increase tariff rates on \$60 billion worth of American goods
- **May 15, 2019: The President of the US issues executive order to restrict American companies from using foreign companies' telecommunication gear, adding many Chinese companies in the entity list, including Huawei**
- June 4th, 2019: Chinese government announces travel warnings for the US as it accuses the US that Chinese travelers were abused by the police force, a retaliatory action against State of Secretary's blame on Chinese government's action during Tiananmen Square protests.
- June 17th, 2019: During the hearing held by USTR, hundreds of

companies appeal that the tariff on \$300 billion worth of Chinese goods will produce an adversary effect on their companies

- June 29, 2019: President Trump and Xi met in G20, postponing the recent tariff threats made by the States
- **July 3rd, 2019: President Trump accuses China of currency manipulation**
- **August 1st, 2019: Trump announces that the US will go through with tariffs on all of the Chinese goods, including automobile**
- August 5th, 2019: The USTR lists China as a currency manipulator and China retaliates by announcing to stop the purchase of American agricultural product.
- August 23rd, 2019: China prepares retaliatory tariffs on \$75 billion worth of US products
 - The US financial market receive serious shock as the trade war heightens
- **September 1, 2019: The US imposed tariffs on \$112 billion worth of Chinese goods**
 - **China also imposed tariffs on the US goods**

- September 4th, 2019: Under the circumstances of the no-trade war, Trump expresses concerns that Dow Jones Industrial Average could be 10,000 points higher
- September 20, 2019: The US exempts tariffs on 400 Chinese goods
- September 21st, 2019: The USTR looks forward to meet with Chinese delegations for negotiations
- October 7th, 2019: The US includes 28 Chinese tech company in the blacklist
- October 11th, 2019: The Whitehouse announces ‘phase-one trade agreement’ with China
- October 31st, 2019: Chile didn’t host the global summit, which was the stage for both Presidents to sign on the trade negotiation

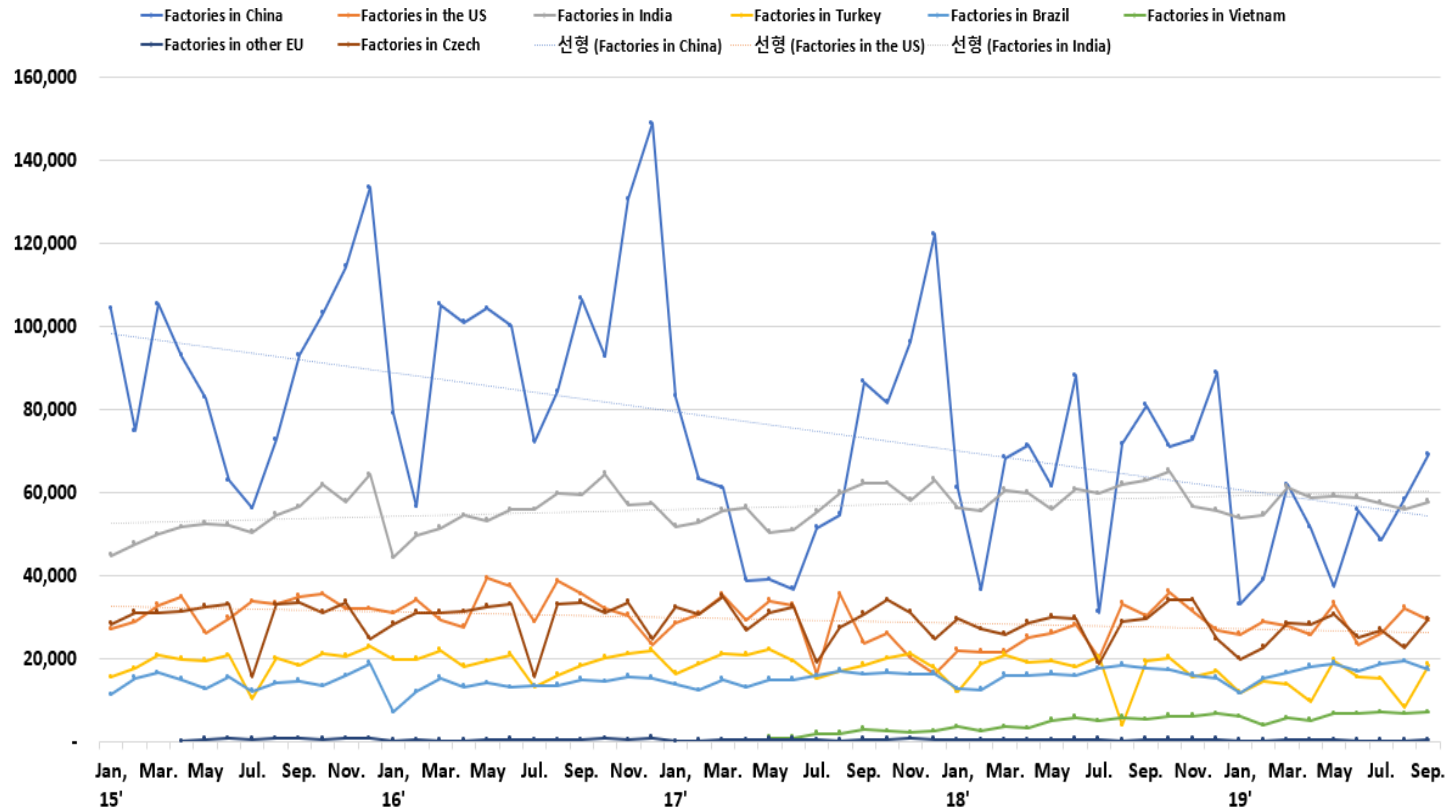
Chapter 4. Hyundai Company Overview

Hyundai Motor Company is one of the backbones of South Korean economy, having 11 production factories across 9 different nations: India, Turkey, China, the United States, Russia, Brazil, European Union, Czechia, and Vietnam, effectively employing the natural hedging management discussed by Dong et al. (2014). Hyundai Motor Company produces its products within its primary markets, but it does export a small portion of its production to other foreign secondary markets.

Hyundai was chosen as the main focus of this thesis due to the fact that its primary markets are North America and China. As of September 2019, Hyundai has sold over 72,500 vehicles in North America and 67,000 in China (Hyundai Motor Company, 2020). In those two markets alone, Hyundai sold over 42% of its total overseas sales. These two countries are Hyundai's main production sites as they employ 'natural hedge' management. Hyundai produces the largest number of units in China, followed by India, and the United States.

The US-China Trade war, a clash between the two-digit economies, that are also Hyundai's two largest primary markets, will seriously impact Hyundai's production flexibility, as these two giants may show nationalistic spending behavior in their domestic market upon political disputes.

Figure 4.1 Hyundai Motor Company's Production Volumes by Global Factories



Source: Hyundai Motor Company

In the North American and Chinese markets, it has experienced 17.8%, -16.3% growth over the last year, respectively (Hyundai Motor Company, 2020). Hence it is evident that both markets are highly volatile and experienced significant changes during the Trade War. Therefore, this thesis looks into how Hyundai, a South Korean automobile giant is affected by the US-China Trade War through nationalistic spending behavior since Hyundai serves the contending parties as their primary business markets, making the company an ideal model for this thesis.

Hyundai Motor Company, headquartered in Seoul was found in 1967 by Chairman Chung Juyung. The company serves worldwide demand, except for North Korea, producing a variety of products including automobiles, luxury and commercial vehicles, and mechanical engines. Its most popular domestic brand is Sonata, selling over 7,156 units, during September of 2019 showing an increase of 62.8% compared to that of last year (Hyundai Motor Company, 2020). At 2018, the company has sold over 4,587,000 unites of products, of which 63% of its sales are generated in the overseas market, thereby constituting Hyundai as a global multinational company of South Korea in the automobile industry (Hyundai Motors Company, 2020).

At 2018, its asset reached over 180,656 billion won, having a

liability of 106,760 billion won, showing an aggressive investment trend for the upcoming future of the eco-friendly, AI, and self-driving automobile industry (Hyundai Motor Company, 2020). It has experienced a total asset growth of 1.4% in the year 2018, after negative growth in 2017 (Hyundai Motor Company, 2020).

From 2016 to 2019, the company is suffering significant loss in terms of its balance sheet. However, Hyundai's sales revenue did not experience significant changes. But the company's profit has seen tremendous degradation during the years between 2016 and 2018, in which it experienced the worst damage in the year 2018, when the Trade War was at its highlight. Sales growth is also slowing as well as its pre-taxed income. It could be well argued from reviewing the company's financial statement, Hyundai is currently in a business turmoil during the dawn of the Trade War.

Chapter 5. Hypothesis

Hypothesis 1: *Hyundai Motor Company increases production flexibility in the Chinese factories due to the nationalistic spending behavior by the Chinese consumers, which behavior was triggered by both direct and indirect political disputes.*

Hypothesis 2: *Faulty management has a negligent impact on Hyundai motor's production flexibility in China.*

The direct dispute is the THAAD dispute between Korea and China; and the indirect dispute is the US-China Trade War. These two political disputes would cause nationalistic spending behavior by the Chinese consumers, lowering the demand for Korean automobile brands, specifically the Hyundai Motor Company, thereby forcing Hyundai to sharply increase production flexibility to reduce the monthly production, effectively reacting to the decreasing demand, while lowering the inventory costs. Throughout this thesis, increasing production flexibility implies that Hyundai is rapidly reducing its production to react to the decreasing demand for Hyundai automobiles in the Chinese market.

It is important to understand that the nationalistic spending behavior has two forms. The first form is simply increasing the domestic brand consumption while reducing the politically disputing nations' products, thereby increasing the demand for the Chinese automobiles. The second form is 'diverting', or reducing, consumption from the politically disputing nations' brands without increasing the consumption of the domestic products. In China, nationalistic spending behavior would be characterized in the second form, in which the Chinese consumers would simply divert consumption away from American and Korean automobile brands to other foreign vehicles, with less direct political disputes.

Chapter 6. Methodology

To test the first hypothesis, this thesis must first establish that the Chinese demand of the automobile is either expanding or at a stalemate. If the Chinese demand for automobile is decreasing, it suggests that Hyundai's production flexibility is increasing to rapidly reduce its monthly production to effectively react to the shrinking market, which nullifies the first hypothesis. Therefore, by establishing that the Chinese automobile industry is increasing, it sets a clearer argument that Hyundai is increasing production flexibility due to either the nationalistic spending behavior exhibited by the Chinese consumers or its faulty management.

Once, establishing that increasing production flexibility is not caused by shrinking market demand, this thesis examines the volume of sales of both American and Korean automobile brands in China. If the volume of both American and Korean automobiles is decreased significantly during the periods of direct and indirect political disputes, relative to its pre-political dispute periods, it could be argued that there exists the second form of nationalistic spending behavior in the Chinese automobile market. Four key periods are selected within the THAAD disputes and the US-China Trade War. For direct dispute (the THAAD dispute), the following periods are selected:

1. Total period capturing both before THAAD crisis and during THAAD crisis (2015, January – 2019, September)
2. Before THAAD crisis (2016, January – 2016, December)
3. Official THAAD crisis (2016, July – 2017, December)
4. After THAAD crisis and beginning of the official Trade War (2018, January – 2019, September)

For indirect dispute (the US-China Trade War):

1. Total period capturing both before and after Trade War (2015, January – 2019, September)
2. Before the election of President Trump (2015, January – 2016, November)
3. During the Trump Administration (2016, November – 2019, September)
4. The official Trade War (2018, January – 2019, October)

Using these four periods for both direct and indirect political disputes, it would give a clearer view on how the nationalistic spending behavior forms a shape upon the political disputes.

After illustrating that nationalistic spending are caused by the

political disputes, this thesis examines and compares Hyundai's production flexibility in each selected period. Production flexibility must increase in the Chinese factories, to reduce the monthly production volume, since nationalistic spending behavior would decrease the demand of Korean automobiles, as well as American automobiles. Importantly, production flexibility is measured in terms of both variance and standard deviation of monthly production growths within the selected periods. Higher the variance and standard deviation, the higher production flexibility. Moreover, this thesis will compare the production flexibilities of the Chinese factories to those of its global factories, providing a clearer view on how Hyundai is suffering from the nationalistic spending behavior, especially in the Chinese market, while global headquarters and factories are unaffected from both direct and indirect political disputes, thereby untouched from the nationalistic spending behavior.

The second hypothesis is the examination of faulty management, or marketing, by Hyundai Motors in China, and whether these effects has a more prominent impact on its production flexibility. Here are three faulty managements, handpicked by the experts on Hyundai's weakening position in the Chinese market:

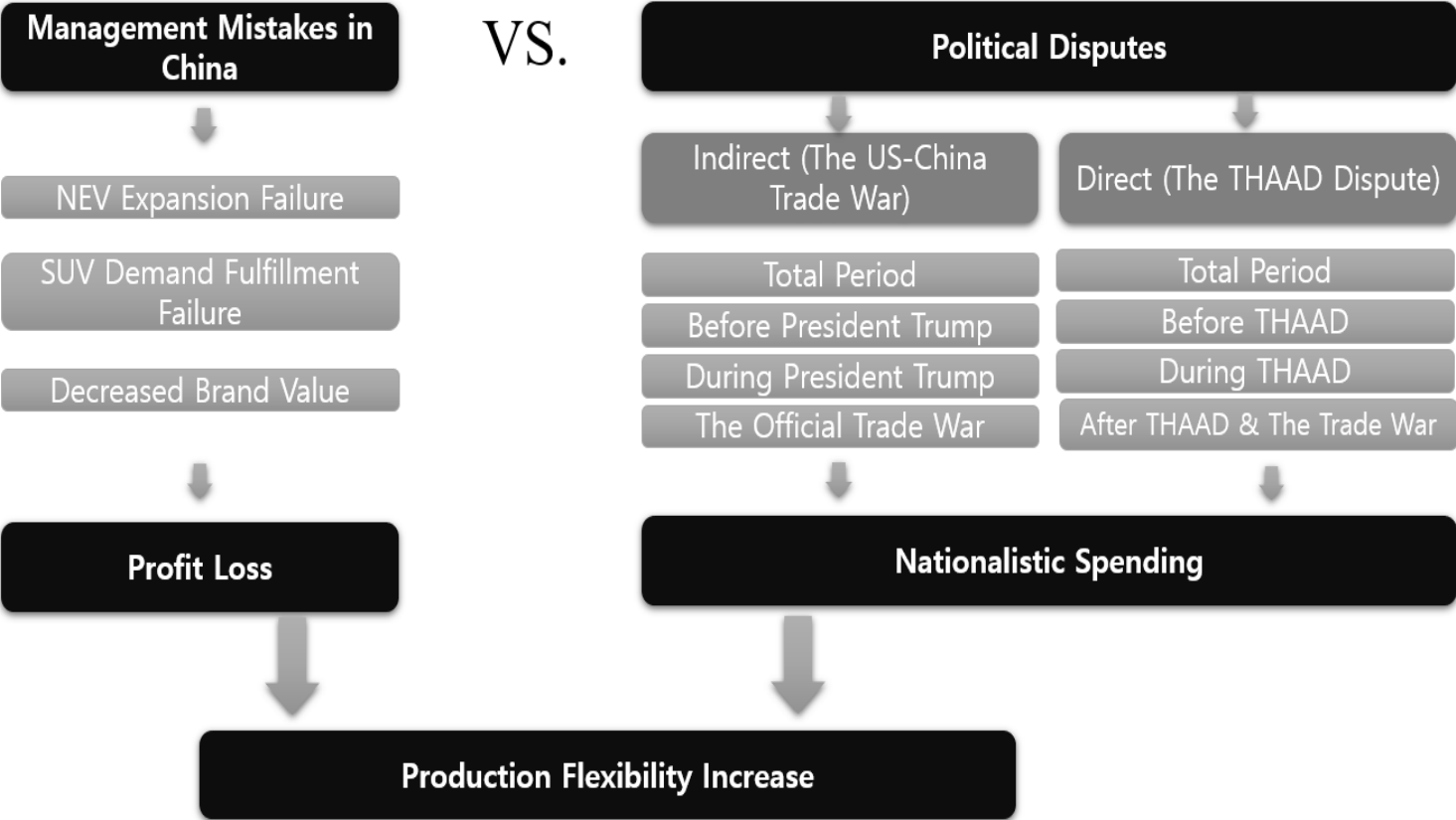
1. New Energy Vehicle expansion failure

2. SUV demand fulfillment failure

3. Decreased brand value

By validating and analyzing these three faulty managements in detail, this thesis shall prove whether faulty management is the key reason behind the increasing production flexibility, or the nationalistic spending behavior, triggered by political disputes, is the chief cause behind the increasing production flexibility. If the latter is true, that it could be concluded that both direct and indirect political disputes caused the second form of the nationalistic spending behavior among the Chinese consumers, and thereby Hyundai increased the production flexibility to sharply reduce the monthly production in China, to effectively react against the lowered demand for Korean automobiles. The general outline of the thesis follows the steps shown in figure 6.1

Figure 6.1 General Outline of the Thesis



Chapter 7. Result and Analysis

7.1. China's Automobile Market Expansion: Increasing production flexibility is independent from the decreasing market demand

Despite the US-China Trade War and the THAAD dispute within China, Chinese automobile industry is expanding, experiencing an increased total sale, having an average growth rate of 2.08% throughout the entire period from January, 2015 to September, 2019 (CACM, 2020). However, the industry is growing at a slower rate and instability of the growths have increased. Before the election of Donald Trump, a Republican candidate who was in favor of protectionism in trade, the Chinese automobile industry is growing at an average rate of 3.14% with monthly growth variance of 4.46%; however, during the Trump administration, which is inclusive of both the Trade War and THAAD dispute, Chinese automobile industry grew at a rate of 1.67% with monthly growth variance of 4.68%, almost half of its pre-Trade War era growth rate with increased instability of monthly growths (CACM, 2019).

During the official Trade War, which began from the January, 2018, the Chinese automobile demand grew only 1.36% significantly lower than that of the pre-trade war period (CACM, 2019). Therefore, despite the fact that Chinese auto-industry is expanding, it is expanding at a much slower

rate, less than half of its growth rate of the pre-Trade War era. Also, the monthly growth variance sharply increased to 6.4%, illustrating that upon the Trade War, instability of the monthly growths increased. This could mean Trade War is dampening the Chinese auto-industry with higher instability, and worse, the Trade War could also cause the nationalistic spending behavior among the Chinese consumers, which is the characteristics of the auto-industry described by Sturgeon et al. (2011), that could worsen politically disputing nations' brands market position in China, specifically American and Korean brands. Despite that the growth direction is unchanged, the Chinese automobile industry is experiencing a dampening growth.

Table 7.1 China's Total Automobile Demand during the Trade War
Periods

China's Total Demand (The Trade War)	Domestic Market Data			
	Variance	SD	Mean	Average Monthly Sales
Total Period (Jan 15' - Sept 19')	4.50%	21.22%	2.08%	2,242,761
Before President Trump (Jan 15' - Nov 16')	4.46%	21.11%	3.14%	2,149,764
During Trump Administration (Nov 16' - Sept 19')	4.68%	21.62%	1.67%	2,323,756
The Official Trade War (Jan 18' - Oct 19')	6.40%	25.29%	1.36%	2,209,242

Source: China Association of Automobile Manufacturers(CACM)

During the THAAD dispute, the Chinese automobile industry grew at a rate of 2.35%, having an average monthly sale volume of 2,448,573 vehicles with a monthly growth variance of 2.2% (CACM, 2019). Before the THAAD dispute, when there were no direct nor indirect political disputes, the average growth rate was much lower at a 1.75% with average monthly sales of 2,076,054 with monthly growth variance of 4.6% (CACM, 2019). Despite THAAD dispute also shows similar trends to those of the US-China Trade War, the industry is still growing at a positive average monthly growth rate, expanding against the political disputes.

Table 7.2 China’s Total Automobile Demand during THAAD Dispute Periods

China's Total Demand (THAAD Dispute)	Domestic Market Data			
	Variance	SD	Mean	Average Monthly Sales
Total Period (Jan 15' -Sept 19')	4.6%	21.4%	2.08%	2,242,761
Before THAAD (Jan 15'-June 16')	5.4%	23.1%	1.75%	2,076,054
During THAAD (July 16' - Dec 17')	2.2%	15.0%	2.35%	2,448,573
AFTER THAAD & The Trade War Begins (Jan 18' - Sept 19')	6.4%	25.3%	1.36%	2,209,242

Source: China Association of Automobile Manufacturers

Consumer confidence index (CCI) monthly growth also experienced growth, especially during the Trade War. Unlike expectation,

Chinese consumers felt optimistic about their market in general, and this could be the reason why automobile sales are constantly increasing. Before Trump period, China had an average CCI growth rate at -0.16%, suggesting that the consumers were seriously worried about their economy (CEIC, 2020). However, CCI growth rate significantly increased during the Trump administration at a 6.84% level and decreases slightly during the official Trade War period (CEIC, 2020). However, it is important to understand that CCI growth was more volatile during the Trade War than before the inauguration of President Trump. Both variance and standard deviation of CCI growth increased relative to the pre-Trump period, suggesting that consumers' optimism for their market are highly volatile and susceptible to significant changes during the Trade War.

Table 7.3 China's Consumer Confidence Index Growth During the Trade War

China's Consumer Confidence Index Growth (The Trade War)	Data		
	Variance	SD	Mean
Total Period (Jan 15' - Sept 19')	0.35%	5.89%	4.06%
Before President Trump (Jan 15' - Nov 16')	0.19%	4.34%	-0.16%
During Trump Administration (Nov 16' - Sept 19')	0.26%	5.09%	6.84%
The Official Trade War (Jan 18' - Oct 19')	0.21%	4.63%	4.59%

Source: CEIC data

Same trends exist during the THAAD disputes. Consumer confidence index increased during the height of the THAAD dispute within china, having a mean CCI monthly growth rate of 8.3%, which is well higher than the pre-THAAD crisis, which was -0.8% (CEIC, 2020). Despite that aggregated period of softened THAAD dispute and Trade War faced a significant drop in the average CCI growth rate, its growth is still significantly higher than pre-Trade War and pre-THAAD dispute. Thus, it could be well-argued that despite the direct and indirect political disputes faced by the Chinese consumers, China is still experiencing an increasing automobile market demand and consumer confidence, suggesting that consumers still buy more automobiles while feeling optimistic about their market.

Table 7.4 China’s Consumer Confidence Index Growth during the THAAD Dispute

China's Consumer Confidence Index (THAAD Dispute)	Data		
	Variance	SD	Mean
Total Period (Jan 15' -Sept 19')	0.35%	5.89%	4.06%
Before THAAD (Jan 15'-June 16')	0.21%	4.62%	-0.80%
During THAAD (July 16' - Dec 17')	0.25%	5.03%	8.30%
AFTER THAAD & The Trade War Begins (Jan 18' - Sept 19')	0.21%	4.63%	4.59%

Source: CEIC data

This is an important implication, because the falling demands of politically disputing nations' brands, such as Hyundai, is not due to the falling automobile market demand in general, or due to Chinese consumers being doubtful of the general market, but due to some reason else. Hence, Hyundai's falling demand in China is independent of falling Chinese automobile market demand and consumer confidence. By establishing that the automobile market is growing with optimistic consumers, this thesis was able to rule out the most plausible causes behind Hyundai's falling sales, while making the case for the nationalistic spending behavior and faulty management as the chief possible causes.

7.2. Increased Nationalistic Spending Behavior Upon “Indirect” Political Disputes

After establishing that the Chinese automobile market demand is increasing at a positive level, the following parts of the thesis will test the two most plausible causes behind Hyundai's increasing production flexibility, which are the nationalistic spending behavior triggered by the political disputes and the faulty management. Throughout the four key periods of the indirect political disputes, the US-China Trade War, the

American and Korean automobile in the Chinese market is decreasing at an alarming level, especially during the official Trade War period.

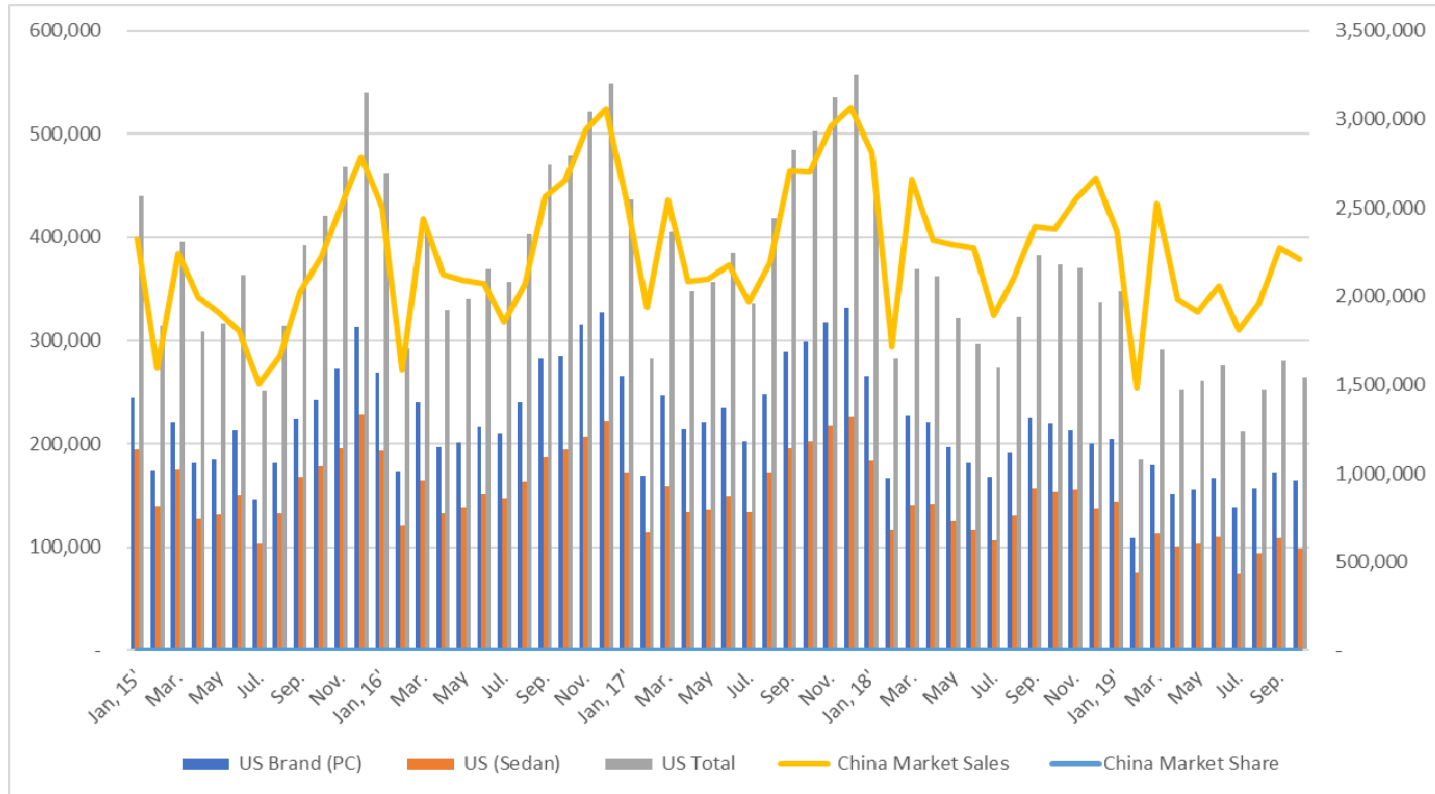
Table 7.5 American Automobile Brands' Market Share during Indirect Political Dispute (The US-China Trade War)

The US-China Trade War Periods	American Automobile Market Share in China			
	Variance	SD	Average Market Share	Average Monthly Sales
Total Period (Jan 15' - Sept 19')	0.06%	2.37%	16.35%	367,476
Before President Trump (Jan 15' - Nov 16')	0.02%	1.35%	18.11%	399,795
During Trump Administration (Nov 16' - Sept 19')	0.05%	2.23%	15.26%	357,883
The Official Trade War (Jan 18' - Oct 19')	0.02%	1.52%	13.87%	307,415

Source: China Association of Automobile Manufacturers, CEIC

The result illustrates that before the Trade War, period between January 2015 and November 2016, American automobile sales experienced growth, and has an average monthly market share of 18.11% (CEIC, 2020). However, during the official trade war, the same figure decreased to 13.87%, losing a significant portion of its market share (CEIC, 2020). The effect of the Trade War is slowly causing damage to the American automobiles in China, showing a nationalistic spending behavior of Chinese consumers diverting the purchase away from American vehicles. Figure 7.1 illustrates the performance of American brands during both direct and indirect political disputes.

Figure 7.1 American Brands Performance in the Chinese Market during Direct and Indirect Political Disputes



Source: China Association of Automobile Manufacturers, CEIC

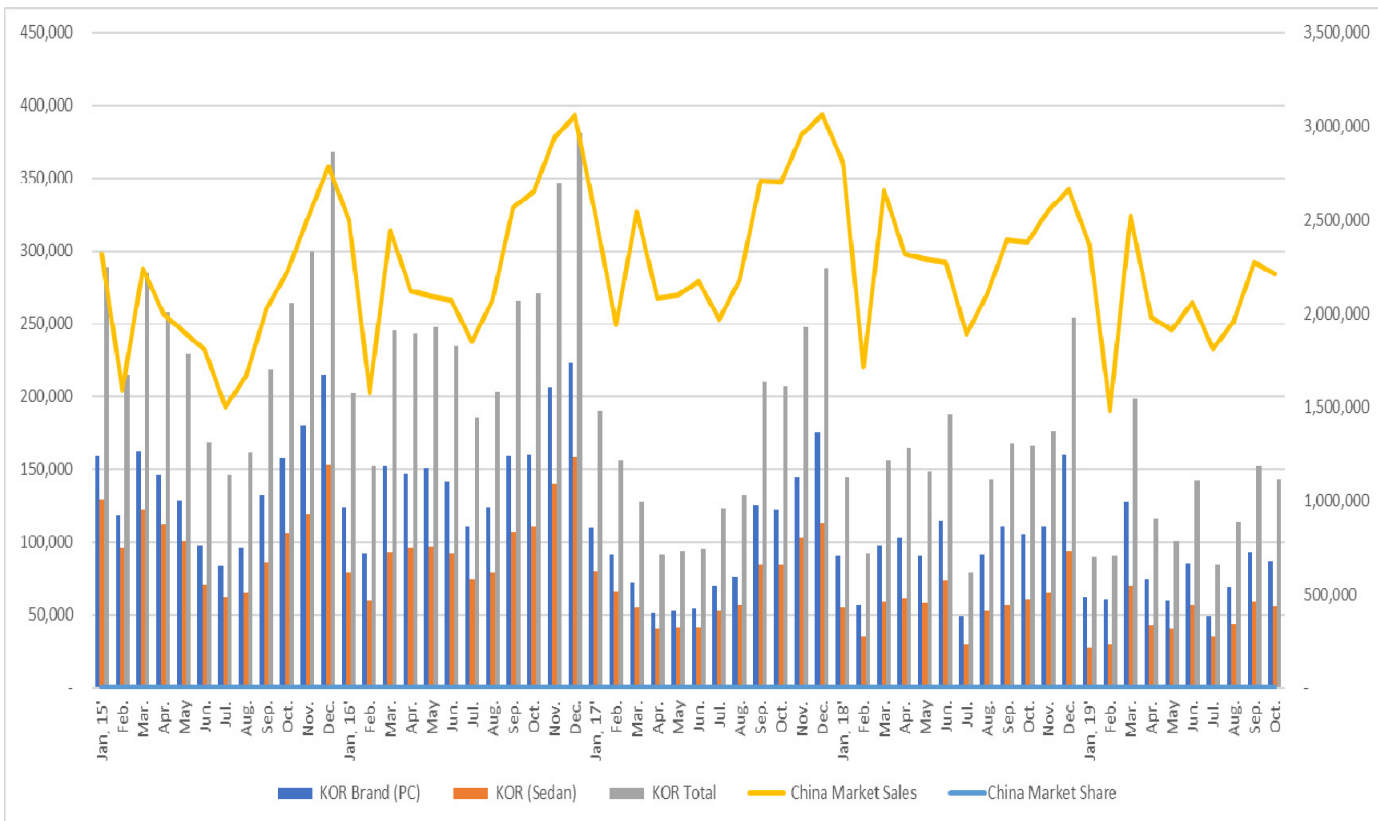
Korean automobile is taking a serious impact as well. From pre-Trade War to official Trade War, Korean market share dropped from 11.09% to 6.33%, almost half of its shares were reduced (CEIC, 2020). Moreover, market share received significantly higher variance during the Trade War, as it increased to 6.33% from 0.02% of the pre-trade war period. Monthly sales all decreased significantly from 216,004 to 141,604, illustrating a serious drop in the average monthly sales (CEIC, 2020). Hence during the official trade war, Korean automobile brands suffered from decreasing average monthly sales, average market share, and greater instability in its demands. Figure 7.2 illustrates Korean brands' performance during both the direct and indirect political disputes.

Table 7.6 Korean Automobile Brands' Market Share during Indirect Political Dispute (The US-China Trade War)

The US-China Trade War Periods	Korean Automobile Market Share in China			
	Variance	SD	Average Market Share	Average Monthly Sales
Total Period (Jan 15' - Sept 19')	0.07%	2.72%	8.38%	189,031
Before President Trump (Jan 15' - Nov 16')	0.02%	1.42%	11.09%	216,004
During Trump Administration (Nov 16' - Sept 19')	6.75%	1.95%	6.75%	161,333
The Official Trade War (Jan 18' - Oct 19')	6.33%	1.33%	6.33%	141,604

Source: China Association of Automobile Manufacturers, CEIC

Figure 7.2 Korean Brands Performance in the Chinese Market during Direct and Indirect Political Disputes



Source: China Association of Automobile Manufacturers, CEIC

7.3. Increased Nationalistic Spending Behavior Upon “Direct” Political Disputes (The THAAD Dispute)

There exists same pattern for the Korean automobiles during the THAAD period. During the THAAD dispute, Korean automobiles had an average market share dropped to 8.01% from 11.26% of pre-THAAD dispute period (CEIC, 2020). Upon the aggregated effects of both direct and indirect political disputes, which period is between January 2018 and September 2019, the average market share dropped to 6.33%, having a much severe negative impact on the Korean automobiles in China, dropping the average monthly sales by -93,385 vehicles compared to that of pre-direct and indirect political disputes (CEIC, 2020).

Table 7.7 Korean Automobile Brands’ Market Share during Direct Political Dispute (The THAAD Dispute)

THAAD Dispute Periods	Korean Automobile Market Share in China			
	Variance	SD	Average Market Share	Average Monthly Sales
Total Period (Jan 15' -Sept 19')	0.07%	2.72%	8.38%	189,031
Before THAAD (Jan 15'-June 16')	0.02%	1.53%	11.26%	234,989
During THAAD (July 16' - Dec 17')	0.06%	2.53%	8.01%	201,039
AFTER THAAD & The Trade War Begins (Jan 18' - Sept 19')	0.02%	1.33%	6.33%	141,604

Source: China Association of Automobile Manufacturers, CEIC

The results illustrate that both American and Korean brands suffered a serious decrease in both market share and average monthly sales, illustrating that the Chinese consumers were no longer consuming much of the American nor Korean vehicles, especially during the direct and indirect political disputes. Moreover, Korean automobile brands suffered severe damage during the aggregated periods that covers both the Trade War and the THAAD dispute time frame. It is hard to justify that within such a short time frame, and within increasing automobile market demand and consumer confidence, both Korean and American vehicles have lost their brand value to the degree of losing a significant total market share of -4.93% and -4.42%, respectively (CEIC, 2020). Therefore, it is compelling to assert that the nationalistic consumption behavior by the Chinese consumers in the automobile industry was triggered by direct and indirect political disputes, that caused negative stereotypes against Korean and American brands, inducing Chinese consumers to divert consumption away from these two countries' brands. And Hyundai Motor Company, a chief representative of Korean automobile, was the scapegoat that caught in the storms of political disputes, giving them no choice, but to increase production flexibility in the Chinese factories to sharply decrease its production, in order to minimize the inventory costs it may suffer from reduced demand.

7.4. Nationalistic Spending Behavior: Consumption diversion to non-politically disputing nations' brands

Upon the Trade War, Chinese consumers have diverted consumption away from politically disputing nations' brands, American and Korean, to other foreign brands that had no, or less, political disputes in recent years. Strengthening the nationalistic spending behavior in the second form, which was discussed during the methodology. The chief benefactors of the direct and indirect political disputes were Japanese and German automobiles. Especially, German automobiles gained a significant increase in average monthly sales, which government, as a leader of EU, continuously condemned the United States' protectionist policies.

Table 7.8 Japanese Automobile Brands' Market Share during Indirect Political Dispute (The US-China Trade War)

The US-China Trade War Periods	Japanese Automobile Market Share			
	Variance	SD	Average Market Share	Average Monthly Sales
Total Period (Jan 15' - Sept 19')	0.13%	3.59%	24.32%	542,833
Before President Trump (Jan 15' - Nov 16')	0.10%	3.13%	22.82%	482,660
During Trump Administration (Nov 16' - Sept 19')	0.11%	3.34%	26.42%	584,933
The Official Trade War (Jan 18' - Oct 19')	0.09%	3.07%	26.95%	592,935

Source: China Association of Automobile Manufacturers, CEIC

Table 7.9 German Automobile Brands' Market Share during Indirect Political Dispute (The US-China Trade War)

German Market Share in China	German Automobile Market Share in China			
	Variance	SD	Average Market Share	Average Monthly Sales
Total Period (Jan 15' - Sept 19')	0.10%	3.11%	31.18%	693,715
Before President Trump (Jan 15' - Nov 16')	0.06%	2.55%	30.33%	674,507
During Trump Administration (Nov 16' - Sept 19')	0.11%	3.25%	32.29%	727,338
The Official Trade War (Jan 18' - Oct 19')	0.06%	2.53%	32.90%	723,485

Source: China Association of Automobile Manufacturers, CEIC

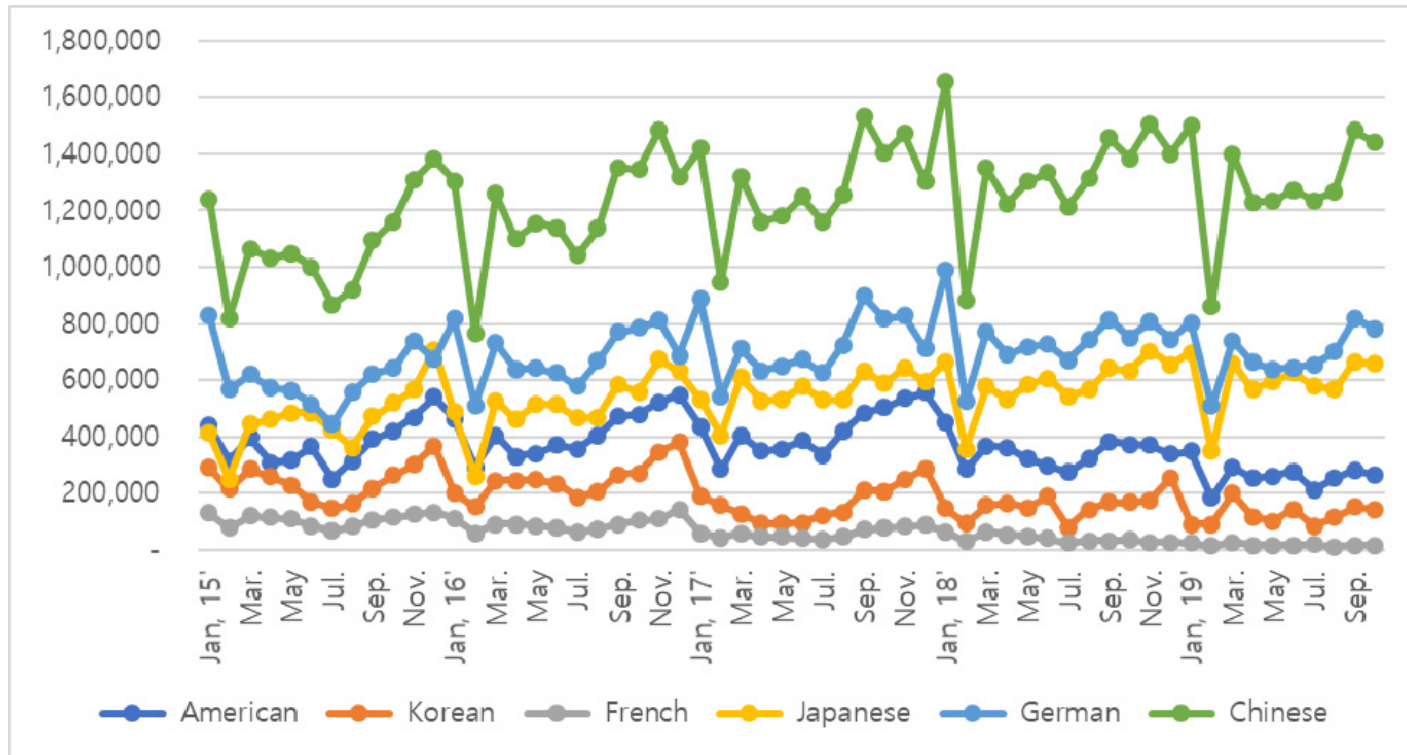
Before the Trade War, Japanese automobiles had an average market share of 22.82%, which is a significant market share, however, the same figure has increased to 26.95%, increasing at 18.1% level (CEIC, 2020). The average monthly share has also increased significantly to 592,935 from 482,660 vehicles, having a 22.8% growth. The average market share growth was less than the average monthly sales (CEIC, 2020).

For the German automobiles, from pre-trade war to official trade war, the average market share increased from 30.33% to 32.9%, having an 8.47% growth rate (CEIC, 2020). While the average monthly sales increased significantly to 723,485 from 674,507 vehicles, having a 7.26% growth (CEIC, 2020). Growth in average market share was higher than that of average monthly sales. Japanese and German vehicles, the two largest

foreign automobile brands in China, absorbed the lost shares of the Korean and American automobiles upon the political disputes, due to the nationalistic spending behavior exhibited by the Chinese consumers.

Below is the graph that shows the number of sales of different automobiles throughout the Trade War and THAAD dispute periods (Figure 7.3). The gap between Japanese and German vehicle to Korean and American vehicles is increasing throughout the direct and indirect political disputes.

Figure 7.3 Average Automobile Monthly Sales by National Brands



Source: China Association of Automobile Manufacturers, CEIC

7.5. Hyundai Motor Company's production flexibility in Chinese factories was higher than that of global factories.

Upon the Trade War and the THAAD dispute, Hyundai Motor Company in China has increased its production flexibility to sharply reduce its production to react to the lowered demand, as well as to reduce the inventory pileups. Moreover, Hyundai factories in China exhibited greater production flexibility than their global counterparts. Before the Trade War, Hyundai factory production in China experienced 8.89% variance and 11.88% standard deviation, having an average monthly production of 76,237 (Hyundai Motor Company, 2020). However, during the official Trade War against the United States, the same indicators increased to 23.81%, 48.79%, and 59,828, respectively (Hyundai Motor Company, 2020). Hyundai has increased its production flexibility dramatically upon the Trade War.

Moreover, their production to market demand has experienced a serious reduction from 4.29% to 2.69% from pre to post Trade War (Hyundai Motor Company, 2020). Despite the Chinese market demand for automobile is increasing, nationalistic spending behavior induced the Chinese consumers to divert consumption away from the Korean automobiles to German and Japanese vehicles, which caused a serious drop in production to demand. Hyundai, tied to the nationalistic spending

behavior, triggered by the political disputes, was unable to fulfill, or benefit, from the increasing Chinese automobile market demand.

Table 7.10 Hyundai’s Chinese Factories’ Aggregated Data during the Trade War Periods

Hyundai Factories in China (The US-China Trade War)	Production for both Domestic and Export Market				
	Variance	SD	Total Production	Average Monthly Production	Production/Demand
Total Period (Jan 15' - Sept 19')	13.93%	37.32%	4,345,514	76,237	3.39%
Before President Trump (Jan 15' - Nov 16')	8.89%	29.82%	2,126,524	92,458	4.29%
During Trump Administration (Nov 16' - Sept 19')	17.37%	41.68%	2,349,501	67,129	2.82%
The Official Trade War (Jan 18' - Oct 19')	23.81%	48.79%	1,256,381	59,828	2.69%

Source: The Hyundai Motor Company ,CEIC

Hyundai’s global factories, located outside China, share contrasting production flexibility to that of Hyundai’s factories in China. Hyundai’s global factories experienced a growth in average monthly production from pre to post Trade War, from 169,418 to 171,016 vehicles, while reducing its production flexibility from the variance of 2.09% to 0.65% and the standard deviation of 14.45% to 0.65% (Hyundai Motor Company, 2020). This suggests that global factories are producing at a much stable manner than that of Chinese factories.

This is possible due to global factories had no impact from the political disputes, but only due to subtle changes in the brand value, and

change in the brand value does not come in a short manner of time without a sudden shock, such as political disputes. Contrasting figures from the factories within the market that engage in a political disputes to factories within the market that does not engage in a political dispute, proves that nationalistic spending could be the main reason behind the drop in Hyundai's average monthly sales, market share, as well as increased production flexibility in China; since within such a short time frame, brand value cannot dramatically change without a sudden shock, as witnessed in Hyundai's global factories.

Table 7.11 Hyundai's Global Factories' Aggregated Data during THAAD Periods

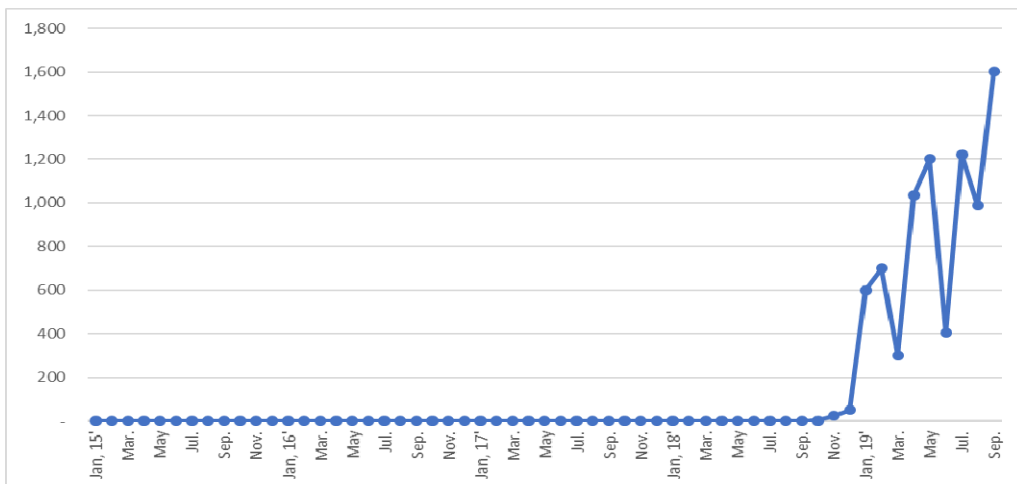
Hyundai's Global Factories (The THAAD Dispute Periods)	Production for both Domestic and Export Market			
	Variance	SD	Total Production	Average Monthly Production
Total Period (Jan 15' -Sept 19')	1.41%	11.88%	9,642,110	169,160
Before THAAD (Jan 15'-June 16')	2.09%	14.45%	3,867,660	169,418
During THAAD (July 16' - Dec 17')	1.03%	10.14%	5,951,992	170,057
AFTER THAAD & The Trade War Begins (Jan 18' - Sept 19')	0.65%	0.65%	3,591,337	171,016

Source: Hyundai Motor Company ,CEIC

Studies of Dong et al. (2014) expressed the importance of operational flexibility upon shocks, such as the interest rates. Since Hyundai

employs ‘natural hedge’ business management, producing at where they sell, interest rate is effectively hedged. However, whether their supply chain is ‘operationally flexible’ depends on their capability to expand the production volume, or in this case, decrease the production volume, not only in China, but across all of their factories. Moreover, it is also important to use supply chain management to minimize the damage of ‘political shocks’. And Hyundai, which never exported their products from China, started to export their vehicles to other markets, as their demand has dramatically reduced due to the nationalistic spending behavior. As seen from the graph, starting from November, 2018, Hyundai started to export its vehicles from China to elsewhere, which is the first export ever from China.

Figure 7.4 Hyundai’s Export from Chinese Factories



Source: Hyundai Motor Company

Hence, it could be argued that upon the political shocks in China, Hyundai is effectively employing both production and operational flexibilities in their supply chain, having a high level of changes in monthly production in China relative to that of their global production. Which is to minimize the damage from the political shocks as well as exporting the vehicles made from reducing demand markets to other global markets.

7.6. Faulty Management was not the main cause behind increased production flexibility

According to industry experts and journalists, especially from the journalist Jinsang Hoon (2019) from ChosunBiz, there exists three most compelling faulty management that may have caused drop in Hyundai's market sales, and thereby increased production flexibility to reduce its production in the Chinese market. This part tests whether these three following key faulty management is the reason behind the falling demand of Hyundai, which would effectively counter the nationalistic spending behavior argument.

1. New Energy Vehicle Expansion failure
2. Failing to Meet SUV Demand
3. Decreased Brand Value

If the faulty management argument is not compelling, or negligent, it could be well argued that the sole reason behind the decreasing demand for Hyundai automobiles in the Chinese market is due to the nationalistic spending behavior triggered by direct and indirect political disputes within the economy that is experiencing an increased automobile market demand and optimistic consumer confidence.

7.6.1 New Energy Vehicle Expansion Failure

The experts argue that the reason behind Hyundai Motor Company's sales and production drop is due to a lack of investment, hence expansion, of the new energy vehicles (NEV). In today's eco-friendly world, most of the automobile demand is a replacement demand, replacing their pre-existing diesel-run vehicles to new energy vehicles, thereby running their vehicles in clean energy, causing minimum damage to the atmosphere, as well as lowering the maintenance costs. This consumer trend exists all over the world in recent years, especially in Europe. Often governments give tax-cuts upon purchasing an eco-friendly vehicle. This trend has come to the Chinese automobile industry; over the last 5 years, the total NEV sales and production has sharply increased. If the purchase of NEV is an important new trend, and Hyundai is not following up to this trend, it would

incur serious demand damage, which could be the main reason behind the losing demand over the past political disputes, not due to the nationalistic spending behavior.

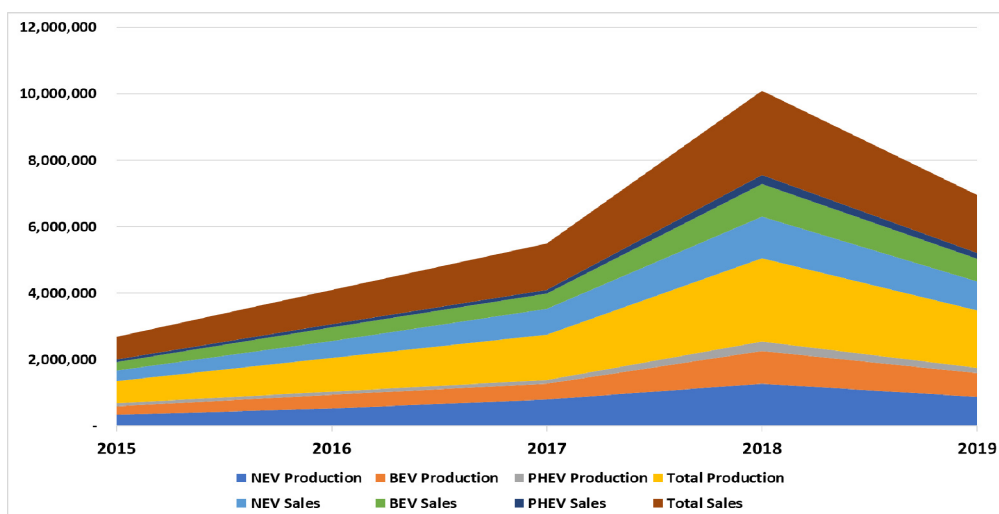
There are three main types of new energy vehicles. New energy vehicle (NEV), Battery electric vehicle (BEV), and Plug-in hybrid electric vehicle (PHEV). From the table below, Chinese demand for NEVs exceeds the rate of production, exceeding at an alarming rate, suggesting that the NEV is the new and popular industry that must be seriously considered by the automobile companies. Over the last 5 years, total production of NEV had a compound annual growth rate of 27.1%, increasing by 1,063,816 vehicles within just 5 years (CAAM, 2020). NEV sales also showed similar trends, which illustrates that NEV is becoming an important part of the industry.

Table 7.12 China’s NEV Production and Demand

P r o d u c t i o n	Classification	2015	2016	2017	2018	2019	CAGR
		NEV Production	340,471	517,000	794,000	1,270,000	877,000
	BEV Production	254,633	417,000	479,000	986,000	706,000	29.0%
	PHEV Production	85,838	99,000	114,000	283,000	170,000	18.6%
	Total Production	662,184	1,014,000	1,356,000	2,511,000	1,726,000	27.1%
S a l e s	NEV Sales	331,092	507,000	777,000	1,256,000	864,000	27.1%
	BEV Sales	247,482	409,000	468,000	984,000	683,000	28.9%
	PHEV Sales	83,610	98,000	111,000	271,000	179,000	21.0%
	Total Sales	680,942	1,033,000	1,387,000	2,539,000	1,753,000	26.7%

Source: China Association of Automobile Manufacturers

Figure 7.5 China’s NEV Production and Demand Trend



Source: China Association of Automobile Manufacturers

Throughout Hyundai’s entire production line in the Chinese factories, Hyundai only dedicated less than 1% of its production line on NEVs, which number suggests that Hyundai is not taking NEV market seriously, which may cause serious damage in its sales.

Table 7.13 Hyundai’s NEV Production

	2015	2016	2017	2018	2019	CAGR
NEV Production	-	1,115	2,454	2,053	3,464	45.9%
% of Total Production	-	0.1%	0.3%	0.3%	0.7%	91.3%

Source: Hyundai Motor Company

However, despite that the Chinese NEV industry is continuously growing, it does not take a large portion of the entire Chinese market. NEV sales share in the Chinese total market in 2015 was only 3.0%, not much different from Hyundai's NEV production share (CAAM, 2020). Despite that the total NEV market share reached up to 10.4% in 2019, the number is still inadequate to argue that Hyundai's demand drop is due to failing to invest and produce NEVs (CAAM, 2020).

If the NEV market share in the Chinese market was over 30-40% level, then it could be well argued that Hyundai's loss of demand in the Chinese market is due to NEV production shortage, but in the last five years, NEV share was only marginal in the Chinese market, suggesting that the NEV industry is not a major market. Over the span of pre-Trade War, Hyundai's NEV production was less than 0.05% on average (Hyundai Motor Company, 2020). Yet, their business was flourishing. Moreover, Hyundai has continuously increased NEV production over the past 5 years, following up to the NEV market trend. Despite that the NEV industry is increasing in China, its market share in the automobile industry is marginal to explain such a sudden drop in Hyundai's automobile sales, especially during the direct and indirect political dispute periods. Therefore, it could be argued that the NEV expansion failure is not the main cause behind

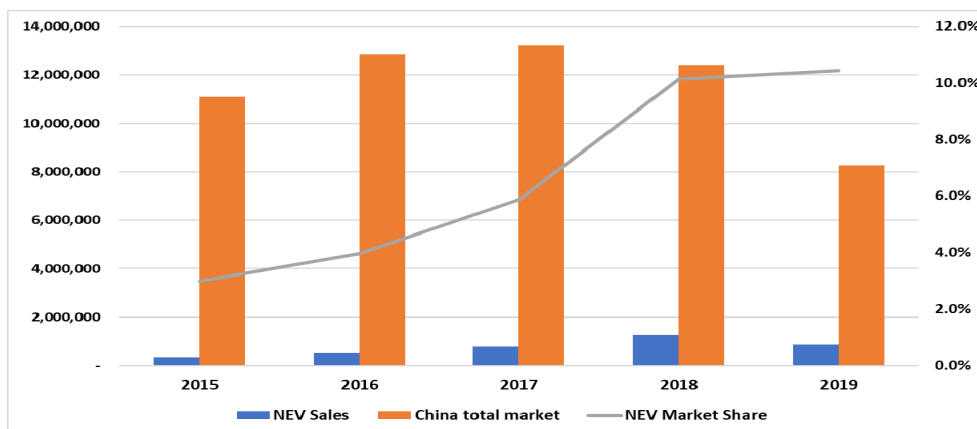
Hyundai’s falling market share during the politically disputing periods.

Table 7.14 China’s NEV Production and Demand

	2015	2016	2017	2018	2019
Total NEV Sales	331,092	507,000	777,000	1,256,000	864,000
China total market	11,106,235	12,844,168	13,225,995	12,384,751	8,275,196
Total NEV Market Share	3.0%	3.9%	5.9%	10.1%	10.4%

Source: China Association of Automobile Manufacturers

Figure 7.6 China’s NEV Production, Demand, and Market Share



Source: China Association of Automobile Manufacturers

7.6.2 Failing to Meet SUV Demand

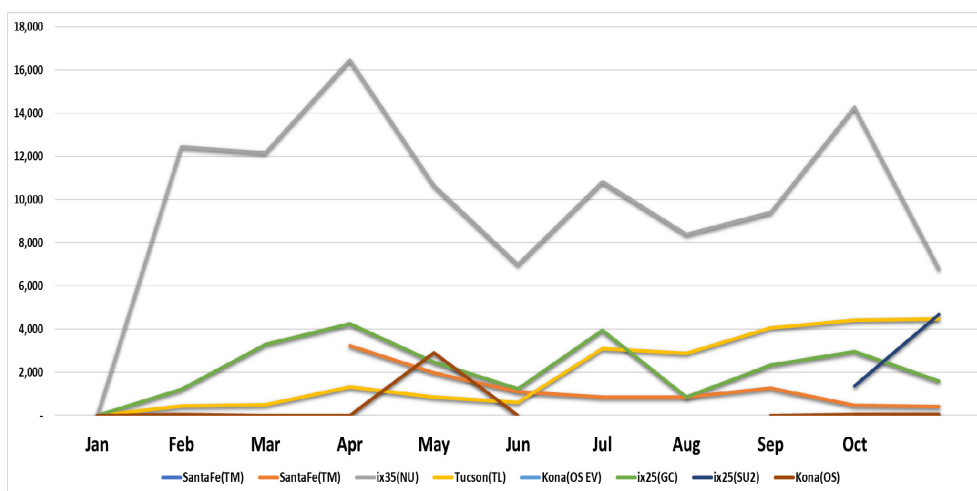
Experts argue that despite the SUVs are the Chinese consumer’s most favorite type of vehicle and a major portion of the entire industry, Hyundai Motor Company is failing to fulfill the SUV demand of the

Chinese consumers. It is suggested that Hyundai is not producing enough volume of SUVs and a diverse number of models. Indeed, failing to provide the rising demand would incur serious sales drop, which may be the reason behind the falling sales and production during the politically disputing periods.

It is true that over the last four years, SUV market share in the Chinese automobile industry is continuously growing and became a major market, having an annual compound growth rate of 18.1% within the market that grows at 4.5% (CEIC, 2020). Market share also experienced growth of a 13% (CEIC, 2020). Therefore, it is irrefutable that the SUV is a growing market as well as an important section of the industry.

Out of the 20 different models produced in Hyundai's factory line in China, 8 models are SUVs and 5 models are NEVs, which take the majority of their entire production in China. SUVs take 34.2% of their entire production volume in 2019, suggesting Hyundai is fully dedicated to the SUV production as well as targeting their production line share to the general market trend. Thus, the argument that Hyundai is not dedicating enough production of SUVs relative to the demand is false, and cannot be the main reason behind the falling demand during the politically disputing periods.

Figure 7.7 Hyundai's SUV Production Volume by Model (2019)



Source: Hyundai Motor Company

Table 7.15 China's SUV Production and Demand

	2015	2016	2017	2018	CAGR
SUV Production	6,243,638	9,152,891	10,286,982	10,286,982	18.1%
Total Market Sales	24,562,975	27,938,931	28,941,381	28,038,947	4.5%
SUV Market Share	25.4%	32.8%	35.5%	36.7%	13.0%

Source: CEIC Data

7.6.3 Decreasing Brand Value

Experts believe that Hyundai's growth in the Chinese market was initially due to being perceived as cost-effective imported vehicle. However, due to increased development of the Chinese domestic brands, cost-effective auto-industry became highly competitive, having no place for Hyundai.

Moreover, among the luxury vehicles, Hyundai can't compete against Japanese or German vehicles, stuck in between the cost-effective and luxury vehicle brands, making tougher grounds for Hyundai to survive.

If this theory is the main cause that dropped Hyundai's demand during the politically disputing periods, Chinese automobile brands must experience an increase in sales during the same periods. Over the last 5 years, especially during the Trade War and THAAD dispute, Chinese automobiles experienced a significant decrease in sales and market share. Their production flexibility increased slightly from 0.09% to 0.10%, average monthly market share decreased from 45.14% to 42.35%, dropping its average monthly sales by -36,429 vehicles (CEIC, 2020).

They are losing market share in the industry, suggesting that despite the cost-competitive section of the market become competitive, Chinese brands are not taking Hyundai's share, especially during the politically disputing periods. Chinese brands' sale drop also suggests that the nationalistic spending behavior faced by Korean brands are the second form, in which consumers divert consumption away from the politically disputing nations' brand to other foreign brands that has less political friction.

Table 7.16 Chinese Automobile Brands' Market Share during Indirect Political Dispute (The US-China Trade War)

The US-China Trade War Periods	Chinese Automobile Market Share in China			
	Variance	SD	Mean	Average Monthly Sales
Total Period (Jan 15' - Sept 19')	0.11%	3.39%	44.24%	997,178
Before President Trump (Jan 15' - Nov 16')	0.09%	2.95%	45.14%	975,518
During Trump Administration (Nov 16' - Sept 19')	0.13%	3.56%	43.71%	1,021,980
The Official Trade War (Jan 18' - Oct 19')	0.10%	3.12%	42.35%	939,089

Source: China Association of Automobile Manufacturers, CEIC

Moreover, Hyundai is yet to illustrate their 'GENESIS' model in the Chinese market, so its focus is rather on cost-effective vehicles in China, not competing against Japanese or German vehicles in the first place in terms of luxury vehicles. Therefore, Hyundai hasn't lost its competitiveness in the Chinese market in terms of the brand value, especially during the politically disputing periods. In addition, Hyundai is a multinational corporation, and its brand value cannot befall in such a sudden period of time without external effects like the US-China Trade War.

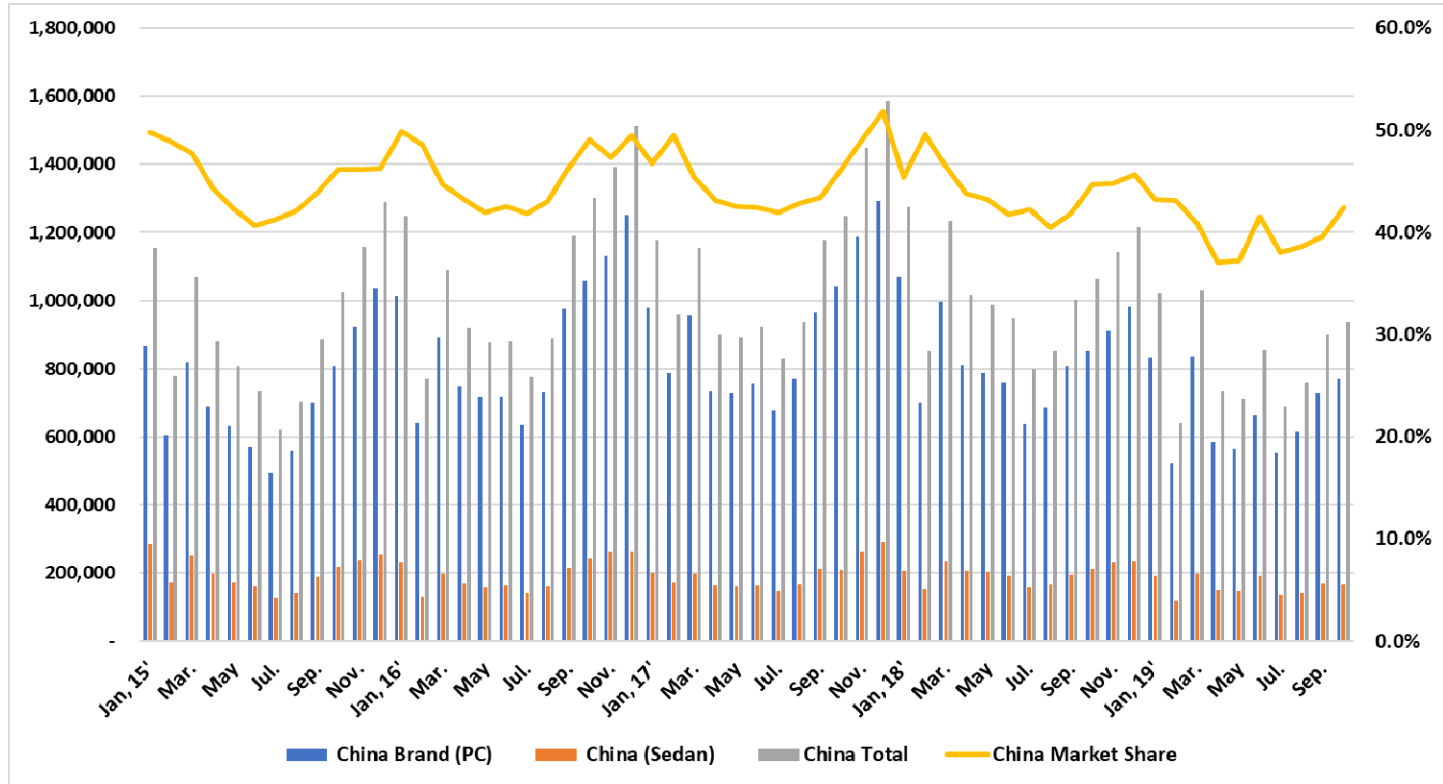
The three most compelling arguments that suggest Hyundai's drop in sales, during the direct and indirect political periods, is due to the faulty management, is effectively refuted, illustrating that faulty management is not the main cause behind the decrease in Hyundai's demand in the

expanding automobile industry with optimistic consumer confidence.

Ruling out the faulty management argument, it could be well argued that the nationalistic spending behavior is the chief reason behind Hyundai's fall in sales during politically disputing periods, which increased production flexibility in Chinese factories, effectively reacting to demand falls.

Considering that American and Korean vehicles experienced significant fall in sales and market share, especially during the US-China Trade war and THAAD dispute, there exists strong nationalistic spending behavior in the Chinese automobile industry, and Hyundai is inevitably increasing production flexibility to sharply reduce its production to minimize the damage. Same trends and behavior could be found by the American automobiles, which are also directly involved in the political disputes with China.

Figure 7.8 Chinese Brands Performance (during Direct and Indirect Political Disputes)



Source: China Association of Automobile Manufacturers, CEIC

Chapter 8. Conclusion

Due to the nationalistic spending behavior by the Chinese consumers, triggered by the direct and indirect political disputes, Hyundai has suffered a serious drop in the number of sales, hence had to increase its production flexibility to reduce the monthly production to minimize the damage from inventory pileup costs as well as production costs.

Despite the dawn of the US-China Trade War and THAAD dispute, the result illustrated that the Chinese automobile market was expanding and consumers were more optimistic about their market, suggesting that falling general market demand is not the main cause behind Hyundai's drop in demand. Comparing the pre- to post-Trade War and THAAD dispute periods, average monthly production, Korean and American brand sales, market share, has all dramatically decreased. While other nations' brands that have less, or no, political frictions with China, such as German brands, which country stood against the United States on trade protectionism, enriched the greatest benefit, along with Japanese brands. During the period which includes both Trade War and THAAD dispute, Korean brands suffered the most drop in the average monthly sales. Therefore, it could be witnessed that Chinese consumers have diverted consumption away from politically disputing nations' brand to brands that are originated from the nations with

less political friction, or even politically friendly nations.

Moreover, Hyundai Motor Company's production flexibility in Chinese factories was higher than that of global factories. When Chinese factories faced a significant increase in production flexibility upon direct and indirect political disputes, global factories decreased its production flexibility, producing at a stable manner, which implies that Hyundai's brand value outside of China did not change much. Also, global factories increased average monthly production, contrasting to their Chinese counterparts. This suggests that within such a short time frame, Hyundai's drop in market share and average monthly sales in China is abnormal, and could not be derived solely from a brand value change. Hyundai's dramatic change in production flexibility, average monthly production, and market share was due to a sudden shock such as the US-China Trade War and the THAAD dispute, which triggered nationalistic spending behavior among the Chinese consumers.

In order for this argument to hold, this thesis explored the three most compelling arguments behind Hyundai's failing market position in China which could be grouped and called as the 'faulty management'. The first argument asserts that Hyundai is not fully dedicated to new energy vehicle production. However, it was found that NEV in China is a marginal

area of the entire automobile industry, while Hyundai is also increasing NEV production in China. During pre-politically disputing periods, between 2015 and 2016, Hyundai was producing NEVs at 0.05% of its entire production line (Hyundai Motor Company, 2020). Yet, the company still experienced growth with prominent shares in China. Only after the political disputes, the company sought dramatic hardships. Therefore, this argument cannot be the main reason behind the fall in Hyundai's sales during direct and indirect political disputes.

Second faulty management was failing to meet SUV demand. Indeed, SUV is a popular type of vehicle in China, which experienced 18.1% compound annual growth over the last four years between 2015 and 2018, while the entire market only grew at 4.5% level (CEIC, 2020). SUV market share increased dramatically within just four years, and in 2018, its entire market share in the Chinese automobile industry is 36.7% (CEIC, 2020). Therefore, it is irrefutable that SUVs are a large market, and Hyundai is effectively dedicating its production line for SUVs. Among the 20 models produced in China, 8 models are SUVs, taking 34.2% of its entire vehicle production in Chinese factories (Hyundai Motor Company, 2020).

Last one is due to the decreased brand value. It is somewhat true that Hyundai is slowly losing its value as a cost-effective imported vehicle,

facing greater competition with cheap Chinese automobiles. However, throughout the direct and indirect political dispute, Chinese brands also suffered serious damage in sales and market share. Thus, the last argument is inadequate to prove that Hyundai's decrease in sales is due to the development of Chinese brands.

These results illustrate that within the growing automobile market with optimistic consumers, Hyundai has faced a dramatic increase in production flexibility in Chinese factories, that was due to the decreased sales, which result was triggered by the US-China Trade War and THAAD dispute. This argument holds because non-politically disputing nations' automobile brands took the share of politically disputing nations' brands, during the political disputing periods, showing the traits of the nationalistic spending behavior.

Moreover, within such a short time frame, it is hard to constitute that fall in brand popularity, or value, is the sole reason behind such a dramatic demand fall as illustrated by Hyundai's global factories, which faced an increase in average production with a decrease production flexibility, highly contrasting results from their Chinese counterparts. In addition, the three faulty management arguments illustrated by the experts are effectively proven to be untrue, or has a negligent impact on Hyundai's

sales or production flexibility.

Thus, it could be argued that due to the US-China Trade War and the THAAD dispute, Hyundai has increased its production flexibility, to react to the lowered demand that was caused by the nationalistic spending behavior by the Chinese consumers. Hence, both hypotheses are verified to be true.

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