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ECONOMY OVER SECURITY: WHY CRISES FAIL TO IMPACT ECONOMIC BEHAVIOR IN EAST ASIA

by

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This study examines changes in economic behavior in East Asia following various periods of political crisis with China and explains these patterns through the lens of mercantile realism and dual hedge theories. Japan and South Korea have drastically increased their trade with China, a potential security adversary, at the cost of trade with the United States, a long-time security partner. Analysis of export trends from Japan and South Korea indicates that these countries do not take economic action to distance themselves from China in favor of the United States or Association of Southeast Asian Nations (ASEAN) following a crisis. Export data also indicates that Japan and South Korea continue to trade strategically important goods like steel and petroleum to China, despite the fact that these goods have a greater potential to affect regional security. Finally, this study highlights how Japan's economic weakness and South Korea's economic integration severely hamper any future prospect to use economic pressure to influence Beijing's security decisions.

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This study examines changes in economic behavior in East Asia following various periods of political crisis with China and explains these patterns through the lens of mercantile realism and dual hedge theories. Japan and South Korea have drastically increased their trade with China, a potential security adversary, at the cost of trade with the United States, a long-time security partner. Analysis of export trends from Japan and South Korea indicates that these countries do not take economic action to distance themselves from China in favor of the United States or Association of Southeast Asian Nations (ASEAN) following a crisis. Export data also indicates that Japan and South Korea continue to trade strategically important goods like steel and petroleum to China, despite the fact that these goods have a greater potential to affect regional security. Finally, this study highlights how Japan's economic weakness and South Korea's economic integration severely hamper any future prospect to use economic pressure to influence Beijing's security decisions.

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I. INTRODUCTION

A. RESEARCH QUESTION AND MAIN FINDINGS

For decades following the Second World War, Japan and South Korea engaged in the majority of their trade with their main security benefactor, the United States. During this time their economies flourished, using American dollars and guidance to springboard toward their own economic models that propelled them to the commanding heights of the global economy. In recent years, however, Japan and South Korea have displayed a keen desire to diversify their trading partners. In South Korea, in 2004, and Japan in 2007, these countries began trading more by volume with China over the United States despite centuries of antagonistic relations. Why have Japan and South Korea increased trade with a potential aggressor like China while decreasing trade with an ally like the United States? Do security concerns for Japan and South Korea impact trade in goods that might benefit Chinese security competition?

Trade with the United States was an important factor behind the growth of these developmental states and yet Japan and South Korea have increasingly turned to China. Knowing why U.S. major trading partners in the Far East have chosen to engage far more economically with what many would consider a regional aggressor gives insight into Japanese and South Korean economic preferences that seem to conflict with their security priorities. This thesis examines why Japan and South Korea have expanded with China, specifically looking at the change in relative export levels to China, the United States and the Association of Southeast Asian Nations (ASEAN) in the year following a crisis. Crises in this study are defined as incidents where China directly (or indirectly in the case of North Korea) upsets the political status quo in a way that prompts Japan or South Korea to issue a formal demarche. The majority of the events in this study are focused on security related incidents with at least one of these incidents involving North Korea. One South Korean crisis is measured as purely political (the Koguryo history controversy) to test whether change following a crisis, if any, is solely based on security concerns or not.

This thesis finds that crises between Japan and China and South Korea and China do not substantially impact overall trade with China or their exports of strategically important goods. Instead, this study asserts that a weak economy in Japan and a massive dependence on Chinese trade in South Korea severely hinder either states ability to reduce exports to China in an attempt to influence CCP policy in times of crisis. Concurrently, security concerns regarding North Korea, and the Kim regime's dependence on China for goods like petroleum, has no measureable effect on Japanese and South Korean exports to China. In sum, Japan's economic behavior vis a vis China is best supported by both mercantile realism and dual hedge theories. South Korea's economic choices indicate a much stronger relationship to dual hedge theory and little correlation to mercantile realism.

Japan has shown their desire to increase trade with China over time, but has also shown some unique tendencies following a crisis and a general downward trend in trade with China since 2011. Scholars of the region like Eric Heginbotham and Richard Samuels have thus suggested that their overall economic behavior since the end of the Cold War suggests "dual hedge" posture that maintains the U.S.-Japan security relationship while simultaneously expanding their trade with China due to a stagnant economy and desperation for profits.[1] The second trend, which begins in 2011 and extends through 2016 is best described by the theory of "mercantile realism" where states become increasingly sensitive to relative gains in wealth and technology from a state that is perceived as a potential adversary.[2] As a result of this trend, Japan should ostensibly restrict trade in "strategic goods" like steel and petroleum to have at least a marginal impact on China's military modernization and increasingly competitive economy, and yet it does not. Without strong economic growth numbers itself, which have typically been under 2% annually for the last 30 years, Japan is left with few other options than to

[1] Eric Heginbotham and Richard J. Samuels, "Japan's Dual Hedge," *Foreign Affairs* 81, no. 5 (Sept-Oct 2002): 119, https://www.foreignaffairs.com/articles/asia/2002-09-01/japans-dual-hedge.

[2] Eric Heginbotham and Richard J. Samuels, "Mercantile Realism and Japanese Foreign Policy," *International Security* 22, no. 4 (Spring 1998): 174, https://www.jstor.org/stable/2539243?seq=1#page_scan_tab_contents.

continue exports of strategically important goods despite the strategic implications that this trade may incur later on.[3]

South Korea's changes in trade are also measured against conflict with China with a much more definitive connection to dual hedge theory. With a steady 25% of its exports headed to China in recent years, reducing exports to China due to security concerns would have a much more significant impact on South Korea's economy than most other states.[4] Unlike Japan, South Korea has not shown any reaction to China's relative gains in wealth and technology, nor has it decreased exports following a regional crisis. Instead, Seoul continues to increase exports even directly after a crisis with China or North Korea or both. South Korea's embracing of the dual hedge theory is therefore much more pronounced and indicated that any crisis outside of a direct conflict with China is unlikely to diminish trade relations in the near future.

The remainder of this chapter discusses the significance of the research question, reviews the available literature from economic and IR theory to regional policy papers, followed by alternative hypotheses and explanations for Japan and South Korea's behavior, and finally a description of overall research design of this thesis. Beyond this introduction, the main body of this thesis is broken into two country specific chapters that analyze Japanese and South Korean economic and security challenges and then measures economic data to further describe these countries' economic behavior. This thesis ends with a conclusion that highlights key findings and discusses implications.

B. SIGNIFICANCE OF THE RESEARCH QUESTION

China's ascendancy and the reaction of East Asian nations has caused a significant debate within the international relations (IR) scholarship to explain state preferences within the region. Presently, realist IR theory has been unable to convincingly explain Japan and South Korea's increase in trade with their potential adversary China. Determining whether or not this increase, and supplanting of the United

[3] "Country Profile: Japan," Observatory of Economic Complexity, accessed December 5, 2017, https://atlas.media.mit.edu/en/profile/country/jpn/.

[4] "UN Comtrade Database," United Nations, September 12, 2017, https://comtrade.un.org/data/.

States, has any link to security policy has yet to be measured quantitatively. Some of the current scholarship provides economic links to their security implications, but there is a gap in sector specific analysis that may provide additional insight in framing exactly how security crises impact East Asian economies. This thesis measures the relationship between the competing priorities of security and economics in East Asia and suggests that Japan and South Korea do not change their economic policies as a whole or in strategically important goods despite growing security concerns regarding China.

There is assuredly a link between conflict and economics in times of crisis, but little has been done to measure the interaction of these priorities in East Asia. Decades of explosive economic growth and the unwavering U.S. security commitment to the region have seemingly diminished the realist priority of the pursuit of power in exchange for the expansion of economic cooperation in the region. Modern transitions of power should thus be viewed and measured in the context of an international economic system that has exceeded the complexity of any previous market system. A transition must also be viewed with careful scrutiny as China's preeminence in the region has not yet come to pass, nor proven its inevitability. Understanding the context of transitions past, the nature of the relationship between security and economics, and the unique context of East Asia sheds some light on the priorities of Japan and South Korea in shaping the future of China. By measuring the last of these variables, this thesis asserts the relationship between security and economy in East Asia are more than voluntarily separated, they each have little other choice than to continue trade despite security concerns given the substantial impact any reduction in exports may have.

C. LITERATURE REVIEW

There are three general categories of literature that address different aspects of this problem. The first point of review is other cases and analysis of states that have security concerns, but continue to trade despite the possible consequences involved. The second is the IR field at large, which outlines how states should interact based on points of emphasis of the given school. This thesis seeks to test realist claims against economic realities, thus making realism the primary focus of this review. Finally, much of the

literature on the East Asian region focuses on security or the economy or both with some interesting implications for the region. However, few of these study the quantitative shifts in trade as they directly relate to crisis events, which this thesis intends to do.

In order to answer the research question of why potential adversaries trade in great quantities in the context of northeast Asia, it is important to first understand why this phenomenon might happen in any context. There is more than one example of trading with a nation that would eventually become an enemy: concerns about perceived relative economic gains tend to outweigh concerns about security in the short-term. Studies of this phenomenon have been conducted at multiple levels and are reviewed in the context of trading with an active or potential adversary. At the broader IR level, realists maintain that relative economic growth can supplant priorities for military might in some cases, while liberals insist that increased economic cooperation decreases the need for military power. At the regional level, constructivists argue the importance of the distinct nature of East Asian cultures as a prominent contributing factor to the success of the region. The region has demonstrated a dynamic growth capacity unseen elsewhere in the modern era though serious challenges still remain. Finally, at the individual state level academic works for Japan, South Korea and China tend to focus on security or economic issues, with a few notable examples of analyzing the relationship between the two. Each level of analysis, from global to individual states, is important to understanding why states act a certain way in the international context and why the states in this particular study choose to trade more with a potential foe than a longtime friend.

There are some examples of states trading substantially with another until conflict breaks out; in fact, a few states have continued trade during hostilities to include arms sales. Peter Liberman examines two case studies in a multipolar world where future adversaries increased trade right up until the outbreak of hostilities. Pre-World War I Britain and Germany and pre-World War II U.S. and Japan show instances where countries were unaware of the problem they were creating by directly contributing to production capability. As an interesting point for analysis within this thesis, Liberman

suggests that in these cases, the use of economic sanctions in a highly dependent system led leaders to believe that any action would provoke their rival/partner.[5]

Gowa and Mansfield take a more quantitative approach to measuring global security and economic tradeoffs through participation in international organizations and find conclusions that seem to prove the liberal assertion that international cooperation decreases conflict whereas Liberman attempts to explain outliers where cooperation leads to conflict. Gowa and Mansfield find that countries with security alliances from 1905–1985 have a "direct, statistically significant and large effect on bilateral trade flows."[6] By quantitatively proving a generally understood phenomenon, Gowa and Mansfield provide a measurable foundation that can be applied to northeast Asia where no security alliance exists between China, Japan and South Korea, and where trade between Japan, South Korea and an allied U.S. is counterintuitively on the decline in exchange for Chinese trade.[7] This thesis intends to marry up economic data with policy decisions in an exhaustive manner in the hopes of explaining the interaction between these two major policy forces in Japan and South Korea. The following literature provides a theoretical background that is later tested against economic data to find which explanation best suits Japan and South Korea.

1. The Region at Large

Much of the analysis of East Asia has focused on either security issues or its booming economy. A rising China and perpetually belligerent North Korea dominate news feeds and receive immense amounts of attention from Japan, South Korea and the US. The East Asian "miracle" and Beijing Consensus dominate economic analysis of the region, hoping to better understand the explosive growth of these countries over a relatively short time.

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[5] Peter Liberman, "Trading with the Enemy: Security and Relative Economic Gains," *International Security* 21, no. 1 (Summer 1996): 173, http://www.mitpressjournals.org/doi/abs/10.1162/isec.21.1.147.

[6] Joanne Gowa and Edward D. Mansfield, "Power Politics and International Trade," *The American Political Science Review* 87, no. 2 (June 1993): 416, https://www.jstor.org/stable/2939050?seq=1#page_scan_tab_contents.

[7] Gowa and Mansfield, 420.

Aside from the curious behavior of East Asia regarding its economic choices in a highly insecure region, explaining their behavior within the context of traditional IR theories is problematic in that no particular theory seems to explain this behavior without making substantial modifications to a school's foundation. According to Steve Chan, Kenneth Waltz's emphasis on the primacy of "balance-of-power theory" simply does not fit the East Asian context. In the context of modern East Asia there is a highly divergent and vast scholarship attempting to explain relations in this region using IR models developed to describe Western interactions.[8]

Robert Ross finds a similar problem with realist theory in the region; he reshapes realist theory to fit balance of power in the Asian context rather than provide alternative explanations. Describing Japan, South Korea and others as "secondary states" Ross concludes that their reaction to China's rise is accommodating, as only great powers balance against one another.[9] Chan is equally skeptical of the balancing behavior of states and concludes that, in regard to the security versus economy debate for East Asia, China's trade with potential adversaries is supplementary to their overall security goal. In other words, trade with adversaries has proven more beneficial to China in their efforts to drastically improve their economy while having few if any negative repercussions regarding state security. This behavior ensures that rivals are locked in an indefinite struggle to rebalance with the knowledge that either side has the ability to renege against this symbiotic relationship to the certain detriment of both parties.[10] As such, countries in the region have chosen a different course contrary to the theory that a rising China should prompt a balancing away from a prospective new hegemon and solidifying the region as a unique problem in the realm of IR thought.[11]

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[8] Steve Chan, "An Odd Thing Happened on the Way to Balancing: East Asian States' Reactions to China's Rise," *International Studies Review* 12, no 3 (2010): 400. https://www.jstor.org/stable/40931114?seq=1#page_scan_tab_contents.

[9] Robert S. Ross, "Balance of Power Politics and the Rise of China: Accommodation and Balancing in East Asia," *Security Studies* 15, no. 3 (2006): 392, http://www.tandfonline.com/doi/abs/10.1080/09636410601028206?journalCode=fsst20.

[10] Chan, 400.

[11] Chan, 405.

There is some empirical evidence that suggests that this economic relationship will not result in a more peaceful relationship, adding further confusion to Japan and South Korea's actions. Keshk, Pollins and Reuveny find that conflict always negatively affects trade (as one would presume), however, find that the impact of trade has nearly zero impact on the likelihood of conflict.[12] Japan and South Korea should assume no guarantees through economic integration with China.

In the context of Japan and South Korea, each country must address its own unique set of concerns regarding China while balancing domestic politics and U.S. relations. As such, each country's issues must be analyzed individually before later comparing and contrasting their motivations.

2. Japan: Not the Typical Superpower

Both Japan and South Korea have a troubled past with China whether as aggressors or victims. Each has seemingly approached China in different ways both economically and militarily and at different speeds. The idea of a perpetually peaceful Japan is therefore perplexing for those ascribing to the realist school of thought given that their history of balancing and bandwagoning is convoluted. Several authors have tried to explain this phenomenon by maintaining that realism holds serious sway over Japanese politics despite seemingly contradictory behaviors that have expanded economic cooperation and integration while maintaining historic security disputes.

Of the more convincing realist arguments, Heginbotham and Samuels' theory of a "mercantile realism" has generated additional discussion of alternate methods of power politics in contrast to the liberal and constructivist theories which seemed to have more traction in the East Asian sphere. This political economy reinterpretation of realist theory implies that leaders have prioritized their policy to include

> the possibility that the efficacy of appeals to arms has … declined dramatically during the course of the twentieth century; national economic power can be used to constrain the sovereignty or independence of states;

[12] Omar M.G. Keshk, Brian M. Pollins, and Rafael Reuveny, "Trade Still Follows the Flag: The Primacy of Politics in a Simultaneous Model of Interdependence and Armed Conflict," *Journal of Politics* 66, no 4 (2004): 1175, http://onlinelibrary.wiley.com/wol1/doi/10.1111/j.0022-3816.2004.00294.x/full.

> and national economic power can be enhanced through industrial and trade policies designed to create comparative advantage in critical high-technology sectors.[13]

Japan and South Korea have used this comparative advantage in high-technology sectors to expand their economies at impressive rates. China, seeing their success, has increased trade in these sectors with both Japan and South Korea as well as buying precision machinery to build their own high-tech gadgetry in an effort to catch up and eventually surpass the Asian Tigers of capitalism.[14] There are no better trade partners in the region for trade in this sector, thus China's options are severely limited despite historical tensions.

This theory seems solid at first glance, but for such a theory to hold it should necessarily apply to other cases within the realm of theoretical debate. One of the main issues that mercantilist realism reconciles which other scholars avoid is the increasing economic cooperation with China in the face of increasing territorial disputes. Katzenstein and Okawara opine that the single use model of mercantile realism sets Japan as an exception to analysis of established schools of International Relations theory.[15] Instead of choosing a school for which they find Japan fits most succinctly, they argue that previous work that attempts to explain Japan's security status is flawed in that an "analytical eclecticism" approach is most likely to explain security in Japan.[16] Lind finds similar difficulties in placing Japan in a single school, though ultimately concludes that Japan most firmly fits within Walt's buck-passing realm of security policy.[17] Unfortunately, the article is not expanded to include economic preferences among available Asian economies and the fact that Japan has clearly chosen China over others despite immediate security concerns over territoriality.

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[13] Heginbotham and Samuels, "Mercantile Realism," 190.

[14] UN Comtrade Database.

[15] Peter J. Katzenstein and Nobuo Okawara, "Japan, Asian-Pacific Security, and the Case for Analytical Eclecticism," *International Security* 26, no. 3 (Winter 2001/02): 158, https://www.jstor.org/stable/3092093?seq=1#page_scan_tab_contents.

[16] Katzenstein and Okawara, 158.

[17] Jennifer Lind, "Pacifism or Passing the Buck? Testing Theories of Japanese Security Policy," *International Security* 29, no.1 (Summer 2004): 119, https://muse.jhu.edu/article/171552.

Further refuting Heginbotham and Samuels' theory, Midford argues that Japan could increase its military spending from below 1% of GDP to more than 3% without substantially affecting their economy.[18] If there were no economic cost to increasing defense spending and Japan was not worried about security improvements affecting its relationship with China, it would likely increase spending to address any additional security concerns. This fails to marry up with arguments like Lind's where buck-passing has reduced the need for increased military spending. It also fails to understand the urgency of Japanese politics in pushing for an economy first strategy through "Abenomics" where the lack of need for increased military spending compounded with a stagnant economy makes the proposition of increased spending doubly unpopular.

In the East Asian security debate most of the scholarly work focuses on realist arguments for the state of Japan's military with a smattering of liberal arguments to explain the regions' complex set of overlapping and intertwined international institutions as applied to the security context. Constructivism has a much larger body of work dedicated to East Asian security studies, perhaps due to greater inconsistencies with realist priorities and security realities. Miyashita argues that culture and norms have driven Japan away from building a larger military, as indeed a realist argument would presume Japan to seek a much larger military given its capabilities.[19]

Samuels and Heginbotham continue to push a theory of separate, yet symbiotic economic and security policy in later writings where other works tend to focus on one aspect at the cost of the other. They consider the balancing of the two realms into a "goldilocks strategy" (also called "dual hedge") where partnerships with the United States and China are beneficial within their own lanes without causing additional friction.[20] In essence, reliance on the United States for hard military power and soft power ties with China through economic cooperation serve to lower risk of conflict on

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[18] P. Midford, "The Logic of Reassurance and Japan's Grand Strategy," *Security Studies* 11, no. 3 (2002): 17, http://www.tandfonline.com/doi/abs/10.1080/714005337.

[19] Akitoshi Miyashita, "Where do Norms Come from? Foundations of Japan's Postwar Pacifism," *International Relations of the Asia Pacific* 7, no.1 (2007): 104, https://academic.oup.com/irap/article-abstract/7/1/99/687021.

[20] Heginbotham and Samuels, "Japan's Dual Hedge," 121.

both accounts.[21] Skeptics like Hughes are quick to doubt the feasibility of this strategy considering the potential for China to catch up and pass Japan in its technological production capacity.[22] Whether or not this prediction comes to fruition, Japan has clearly anticipated both short and long-term benefits to increasing trade with China despite the possibility of falling behind.

The economic side of East Asian policy includes several informative writings on Japan/China economic relations and institutional cooperation. Armstrong briefly delves into the politics of China's WTO accession, yet steers clear of security concerns in favor of comparing Japan/China trade with their global and regional trade.[23] Their parity compared to other partners may unintentionally speak to the lack of security concerns. The most important issue regarding all of these works is the lack of overlap between political economy and security policy. Samuels is the only scholar who has dedicated more than a single paper to rectify the disconnect between both sides. The data he has collected deserves an update since his last assessment of the situation in 2002, where Japan and China had yet to scuffle over the East China Sea and since North Korea developed a nuclear weapon while China continued to prop up the regime. These assessments of Japanese/Chinese relations also require an update given the changing nature of territorial disputes, China's continued rise, and Japan's continued stagnation which essential drives a substantial growing divide.

3. South Korea and the Lure of Chinese Prosperity

Like Japan, Korea shares a complicated history with China leading to complex security interactions and economic cooperation. Also like Japan, scholarly work on South Korea is largely split into separate economic and security concentrations. There are, however, a few useful works outside of the typical security/economic spheres.

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[21] Richard J. Samuels, "Japan's Goldilocks Strategy," *The Washington Quarterly* 29, no. 4 (Autumn 2006): 120, https://muse.jhu.edu/article/206461.

[22] Christopher W. Hughes, "Japan's Doctoring of the Yoshida Doctrine," *Asia Policy* 4 (July 2007): 202, https://muse.jhu.edu/article/421125/pdf.

[23] Shiro P. Armstrong, "The Politics of Japan-China Trade and the World Trade System," *The World Economy* (2012): 1114, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145127.

Jae Ho Chung's work analyzes rise in the context of both security and economic concerns while adding information about changing domestic perceptions of Chinese ascendance. One of the most convincing aspects of his study is how changes in perceptions drive policy in Korea.[24] The piece also includes specific economic data and potential areas of contention, all of which are used to bolster data gathered in this thesis with drivers behind traditionally counterintuitive choices for economic partners who exacerbate security concerns.

There is also a significant body of work regarding China/South Korea relations in their attempts to reign in Pyongyang's inflammatory behavior. Jih-Un Kim's analysis of Chinese reactions to each North Koran nuclear tests demonstrates Beijing's increasing reservation to condemn Pyongyang's actions as these tests continued to occur despite all objections.[25] The sinking of the Cheonan and shelling of Yeonpyeong-do in 2010 were even more damaging to Sino-ROK relations given the utter lack of response from Beijing.[26] Literature from this period focuses on the security implications for the region without measuring the economic implications for all countries involved. Economic analysis for South Korea is likewise hampered by largely removing security concerns from the equation and focusing on specific industries, trends, and developmental styles.

Without reemphasizing many of the same data issues for South Korea as with Japan, ROK focused authors do present a small amount of highly specific works focused on China/South Korea relations in particular. Kim, Kim and Lee's study of economic relations between China and South Korea in the mid-2000s is enlightening in noticing the transition of priorities for both countries. South Korea lost out on trade to other Asian

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[24] Jae Ho Chung, "Korean Views of Korea-China Relations: Evolving Perceptions and Upcoming Challenges," *Asian Perspective* 36 (2012): 222, http://eds.b.ebscohost.com/abstract?site=eds&scope=site&jrnl=02589184&AN=77415119&h=eMcT5NMPtyrkcP%2bT4YAEXgar6Fda2gaaJtuH63R5FNlrKlEEtImkN02C3ey6a7Al3XpSwwXRnVwtfiW%2fVPeniA%3d%3d&crl=c&resultLocal=ErrCrlNoResults&resultNs=Ehost&crlhashurl=login.aspx%3fdirect%3dtrue%26profile%3dehost%26scope%3dsite%26authtype%3dcrawler%26jrnl%3d02589184%26AN%3d77415119.

[25] Jih-Un Kim, "Inflated Hope, Unchanged Reality: China's Response to North Korea's Third Nuclear Test," *Asian Perspective* 39 (2015): 33, http://journals.rienner.com/doi/abs/10.5555/0258-9184-39.1.27?code=lrpi-site.

[26] Robert G. Sutter, *Chinese Foreign Relations* (Lanham: Rowman and Littlefield Publishing, 2016): 199.

countries while increasing trade directly with China, a trend that has been maintained to today.[27] Si Jong Kim analyzes conflicts in specific cases regarding bilateral economic relations, which are invariably linked to political choices and thus subject to analysis of security concerns.[28]

D. POTENTIAL EXPLANATIONS AND HYPOTHESES

Why would a country choose to trade more with an adversary than an ally? Heginbotham and Samuels' "mercantile realist" argument and similarly Liberman's analysis, which argues that preferences for economic power may outweigh the need for military might, seems to still have traction in the Japan of today.29 Given East Asia's current security concerns it is worthwhile to reengage this theory to see if it still holds and bolster its plausibility further by backing it up with trade data. Mercantile realism is tested in this thesis against quantitative data following times of crisis to see if the idea holds in both Japan and South Korea. If mercantile realism holds up through more recent times where Japan and China were at odds over territory, this could explain a similar relationship in South Korea and perhaps the idea deserves analysis and application to other relationships in the region.

1. Mercantile Realism and Dual Hedge in Times of Crisis

What Heginbotham and Samuels had not encountered at the time of writing was a Japan/China dynamic where trade flows had drastically expanded (exceeding that of Japan/U.S. trade) and a growing escalation in tension over the Senkaku islands. Japan has also expanded its role in global security operations incrementally while the relative size of the SDF has remained stagnant, which may put China on edge when trying to understand the hard limits of the SDF as a "defensive" force. Meanwhile the conflict in Korea has reached new heights as well with North Korea's development of a Nuclear

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[27] Joon-Kyung Kim, Yangseon Kim, and Chung H. Lee, "Trade, Investment and Economic Interdependence between South Korea and China," *Asian Economic Journal* 20, no.4 (2006): 390, http://www2.hawaii.edu/~lchung/Asian%20Economic%20Jour%20%5BKim%20Kim%20Lee%5D.pdf.

[28] Si Joong Kim, "Economic and Trade Relations as an Arena of Korea-China Contention," *Asian Perspective* 36 (2012): 250. http://journals.rienner.com/doi/abs/10.5555/0258-9184-36.2.237.

[29] Heginbotham and Samuels, "Mercantile Realism," 190.

weapon and China's increasing reluctance to come to the rescue of the Kim regime and prevent a humanitarian crisis on its border. Both Japan and South Korea could put economic pressure on China to pursue security objectives, but it would come at a significant cost. Japan is even less likely to reduce trade due to prolonged economic stagnation yet every conflict has a point at which a line is crossed and action must be taken. Has the era of Japanese/Chinese mercantile realism ended in times of increased conflict? Has South Korea moved towards trade with others as China continues to support an exceedingly obstinate and aggressive regime in Pyongyang?

Mercantile realism has the potential to explain the trading dynamic in South Korea as well since China directly supports their main security threat while trade between these two countries continues to grow. Applying the theory of mercantile realism to South Korea seems on the surface to be a different matter entirely, but may prove to be quite similar to Japan in its security motivations. South Korea has a highly capable military with none of the constitutional restrictions the Japanese Self-Defense Forces must endure. Like Japan, however, the ROK military is focused primarily on defense of the nation from the threat of North Korea. Security policy is far less concerned by the threat of China than it is by the idea of the DPRK leveling Seoul in a matter of minutes. However, China's actions in the Korean War and continued backing of the despotic country since have been a major point of contention lasting to the present day. Despite this conflict, South Korea has also drastically increased trade with China to the point where it is now South Korea's primary trading partner. Does Heginbotham and Samuels' theory hold up in a country whose military is a major player in security policy? Is the story of this shift in both countries simply that of shifting comparative advantage or is there an intentional effort to reduce the probability of conflict by tying the Chinese economy to Japan and South Korea? By using data analysis and comparing it to policy changes this thesis should provide a conclusive answer to each of these questions.

2. Alternative Explanations

There are still several reasons why Japan and South Korea should trade with China over the United States or other adversaries despite their security concerns.

Mercantile realism works well for explaining bilateral relations between China and Japan, but there are more powers at play in the region that influence both the security and economic decisions of both countries. These include the United States security umbrella, gravity theory, comparative advantage, and liberal ideas of peace through interconnectedness.

The United States security umbrella is likely the foremost factor among security decisions in the region. China's modernization of its military capabilities was the result of both U.S. and Soviet pressure and aggression during the Cold War, not a direct reaction to a resurgent Japan. On the other side, Japan has had little capability or incentive to expand their military due to constitutional constraints and the assured protection of the global hegemon through the U.S.-Japan security alliance. This has made any security matter between Japan and China a matter of concern for the United States as well. Matters of trade, which do not involve trilateral cooperation in this case, are thus not the concern of the United States and are subject to less policy influence from Washington. Without a third party, perhaps the security and economic policies of Japan and China would be far more reactive to one another. Similarly, the United States security umbrella in South Korea adds an additional buffer between Beijing and Seoul when addressing disputes. The addition of a direct aggressor in North Korea moves conflict with China even further back in priority. Beijing is not a kinetic threat to Seoul as it is a direct supporter of the continuing threat to the North. Like Japan, South Korea's economic decisions in a bilateral relationship are shielded from the multi-lateral complications of its security threats.

Geography and comparative advantage are logical concerns when security has been taken out of the equation as explained by U.S. involvement. Transportation costs and timelines for Japan and South Korea to transit the Pacific Ocean to deliver goods to the United States are much higher than crossing a short stretch of water to China. The "gravity theory" of economics is foundational to research that measures the relationship between distance and economic behavior. Anderson, Krugman, Bergstrand, and Helpman initially developed the model and successfully applied it to patterns in international

trade.[30] This model is useful in understanding the foundation of why Japan and South Korea have increased their trade tremendously since China opened up economically, suggesting that geographic proximity is the most important factor in developing trade relationships. This thesis suggests that a crisis with China has little effect on Japan and South Korea's economic preferences, even with ASEAN as a viable alternative for regional trade. As to comparative advantage, China's economy is markedly different from Japan and South Korea's though that is quickly changing. Japan and South Korea's high-tech and heavy industry economies found an eager market in China that was looking for new technologies to copy and reproduce while China continued to churn out low value added consumer goods to a welcoming market in its near abroad. As China moves toward more technically demanding, higher value added products they might find themselves in direct competition with Japan and South Korea in the future.

The final explanation involves the neoliberal idea that institutional and economic interconnectedness bring more peaceful relations. China has become an increasingly active partner in the international community by joining the WTO, working with ASEAN, establishing and heading the Asian Infrastructure Investment Bank, and other efforts that show it is willing to play by rules. Japan and South Korea's confidence that China will abide by these rules is thus heightened knowing that punishment will be more than unilateral should China choose to renege on any of its pledges. These organizations should effectively constrain divergent action by incentivizing cooperation and punishing rule-breaking. This explanation seemed to have serious merit as trade increased with China, but does not explain the lack of punishment for Chinese aggression in the South China Sea and East China Sea or China's establishment of an Air Defense Zone that overlaps with South Korea's.

Each of these explanations of Japan and South Korea's increasing willingness to trade with China is an explanation of either security or economic decisions, but do not explain both. Mercantile realism manages to explain preferences when security and economic policy are managed independently, but may not hold up in today's environment

[30] Peter Egger, "On the Role of Distance for Bilateral Trade," *The World Economy* 35, no. 5 (2008): 653, https://doi.org/10.1111/j.1467-9701.2008.01098.x.

of increased conflict. Since its last assessment in 1998 trade and tension in the region have increased dramatically; it is therefore important to discover whether the theory remains the best explanation of Japan's interactions with China or if security and economic dynamics have changed enough to warrant a new approach to understanding East Asian political economy.

E. RESEARCH DESIGN

This paper uses mixed methods to answer the research question. The quantitative portion of the thesis uses economic data archives from Japan, China, South Korea and the United States to determine shifts in primary trade partners. Once this data has been collected, it is analyzed against significant security crises with China (and/or North Korea) to see if exports from Japan and South Korea change and in what sectors. These crises Any measurable correlation between the two would indicate that Japan and South Korea's economic policies are not a part of a "dual hedge" policy and may portent to shifting policies.

A substantial portion of the research regarding this thesis measures changes in trade of "strategic goods."[31] These changes are then analyzed in the context of significant security events involving Japan, China, and South Korea to discover if strategic goods are limited following conflict when no policy statement limiting these goods is issued. In essence, the objective is to track unofficial changes in the economy that may be security related to find out if security and economic decisions are indeed separate as estimated by mercantile realism. A stronger decrease in the trade of strategic goods than as compared to other goods following a security conflict event would indicate that security policy is unofficially influencing trade decisions. Changes in strategic goods that match changes in other goods following a security event would indicate that security and economic policies are indeed largely independent of one another as mercantile realism would predict.

[31] The definition and importance of "strategic goods" in foreign policy are the subject of a lasting debate that is only briefly discussed in this paper. The thrust of the argument in this thesis is that countries trade in goods that have an inherently strategic value and then analyzes whether Japan and South Korea change their behavior based on that value. See Reuveny and Kang (1998) for a more expansive discussion on how previous literature characterizes the trade of strategic goods.

Japan has two major sources for trade data in the Japan External Trade Organization (JETRO) the Ministry of Economy, Trade and Industry (METI); and the Ministry of Finance. JETRO maintains a database for trade in goods divided by country and divided by sector, but not both. METI has detailed information on each sector for the current year, but does not list trade with specific countries or have an archive of annual data. Japan's Ministry of Finance contains data for trade with Japan by industry, country and year, but the data sets are cumbersome and only extend back to the early 2000s.[32]

Data for South Korea is not so easy to find. Neither the Ministry of Strategy and Finance nor the Ministry of Trade, Industry and Energy have a searchable database. The best alternate sources for data are the World Bank and the UN. Of these two options, the UN Comtrade database presents data searchable by year and country pairs, by sectors, by groupings and over specific spans of time. Due to this expansive capability to pull specific data sets, the UN Comtrade database is the primary source of all economic data measured against crises in this study.

Changes to economic policy put out by the Ministries of Finance of each country provides very few indicators of intentions and shifts in economic preference changes as Tokyo and Seoul rarely threaten economic punishments for Chinese actions. Arrangements made through international institutions like the WTO, APEC and ASEAN serve as a backdrop for changes made outside of typical bilateral cooperation, but are also typically conciliatory toward Beijing's aggressiveness given their dependence on the Chinese economy. Even with the few examples of economic action taken against China there is typically a delay between policy creation and action, making interactions difficult to line up cleanly.

[32]UN Comtrade Database (accessed September 12, 2017), https://comtrade.un.org/data/.

II. JAPANESE TRADE AND A RISING CHINA

Japanese trade with China has grown at an astonishing rate since the end of the Cold War. Exports to the United States that had once seemed to be an irreplaceable part of Japan's economy in the 1970s and 80s were steadily replaced by an increasing reliance on China in the 90s and 2000s. Today, China is Japan's number one trading partner and shows no signs of giving up the top spot. This change did not happen overnight. Following the normalization of relations in 1972, these two countries set out to build a lasting economic partnership predicated on mutual benefit and an understanding that security concerns should be addressed outside of the economic sphere.[33] This process of separating the economy from security concerns between Japan and China has more or less held since 1972 and has greatly expanded economic cooperation, though it is becoming increasingly apparent that security tensions in the modern era may begin to bleed into the economic sphere.[34]

Officials in Beijing and Tokyo agree their relationship offers strong mutual benefits, though they continue to struggle with balancing these benefits against conflicting security interests.[35] The vast majority of Japan's security concerns today involve China directly or its varying levels of support for the DPRK. Given Japan's tension with China over security issues that include the Senkaku Islands, North Korea, and Japan's assurance that it will support the United States in a regional crisis (to include Taiwan), Tokyo's seemingly unwavering commitment to trading with a potential adversary is puzzling.

Structural realism poses a number of problems when analyzing Japan's behavior regarding China. Eric Heginbotham and Richard J. Samuel's note that Waltz and Walt's assertions regarding balancing and bandwagoning behavior seemingly ignore economic

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[33] Michael J. Green, *Japan's Reluctant Realism: Foreign Policy Challenges in an Era of Uncertain Power* (New York: Palgrave Publishing, 2003): 77.

[34] Green, 77.

[35] Richard C. Bush, *The Perils of Proximity: China-Japan Security Relations* (Washington, D.C.: Brookings Institution Press, 2010): 23.

behaviors in states like Japan.[36] To rectify the disparity between the foundational tenets of realism and the reality of Japan's politico-economic actions they add two additional propositions that seemingly match Japanese behavior: "states will be highly sensitive to the relative economic gains of other states they consider military threats" and that "the greater perceived military threat to a state, the more that state will pay in order to maintain its alliance relationships."[37]

Heginbotham and Samuels thus readdressed the Japan dilemma in 2002 and suggested that Tokyo has pursued a "dual hedge" strategy that considers the United States an economic competitor and China an indispensable economic ally, while concurrently maintaining its security alliance with the United States in the face of Chinese military aggression.[38] Both the mercantile realist and dual hedge theories are useful in explaining certain aspects of Japan's economic choices in times of crisis, but neither sufficiently explains changes in Japan's overall economic choices as well as its decisions regarding the export of strategic goods.

The main empirical findings in this chapter indicate that Japan's economic activity is supported by both mercantile realist and dual hedge theories with some caveats. Japanese exports to China as measured across all four crisis events dropped by 4.4% compared to the average annual change while exports to the United States increased by over 7%.[39] This data supports Heginbotham and Samuels' prediction that Japan would be sensitive to China's relative gains economically and that Japan has paid to maintain its security alliance with the United States at the cost of trade with China.[40] However, while mercantile realism adequately explains Japan's exports across all industries, Tokyo's reluctance to restrict trade in strategic goods presents a major problem for the theory. Mercantile realism suggests that Japan should be more sensitive to China as a perceived military threat (a perception that would be exacerbated by a security crisis) and

[36] Heginbotham and Samuels, "Mercantile Realism," 174.

[37] Heginbotham and Samuels, 174.

[38] Heginbotham and Samuels, "Japan's Dual Hedge," 119.

[39] The sole outlier in this data set was Japanese exports to China in 2010, which did not change relative to the average across all actors.

[40] Jih-Un Kim, "Inflated Hope, Unchanged Reality," 33.

consequently decrease exports of strategically important goods and yet it does not. This revelation does not change the fact that Japan has demonstrated measureable economic tendencies that support mercantile realist theory, only that Japan sees these goods as non-essential in actualizing its security goals.

The remainder of this chapter defines Sino-Japanese crisis events, analyzes data for consistency with existing IR theories, and addresses alternative explanations for the data outcomes. The next section outlines crisis events between Japan and China that serve as points of measurement in the economic analysis section. The economic data sections are broken into three parts: overall economy, steel exports, and petroleum exports. Each data set is then analyzed for overall trends, relative changes following crises, and consistency with mercantile realism. The final section discusses the viability of alternative explanations to explain Japan's economic behavior and concluding remarks.

A. SINO-JAPANESE CRISIS EVENTS

Japan and China's long and conflict-ridden history has hindered Sino-Japanese relations for generations. China's century of humiliation, suffered at the hands of the British, Americans, and Japanese, left a deep scar on the psyche of modern day Chinese security policy. Among the most damaging of these events to Sino-Japanese relations was the Imperial Army's occupation and subsequent reign of terror on Chinese soil during World War II. Japan's war crimes against Chinese civilians during the occupation and refusal to atone for Japan's actions or denounce the perpetrators in the years since (specifically in the Yasukuni Shrine) has led to China's severe distrust of Japanese military capabilities and intentions.41 As such, Japan's actions have been used on several occasions to justify Chinese expansion of its military, while simultaneously denouncing any restructuring, resizing or deployment of Japan's Self Defense Forces.

Despite Japan's constitutional restrictions commitment to the use of its military forces for defensive purposes only, Tokyo has been vocal concerning aggressive Chinese actions, show increased support for U.S. intervention in the region, and/or use the SDF to

41 Andrew Gordon, *A Modern History of Japan: From Tokugawa Times to the Present,* (New York: Oxford University Press, 2003): 224.

demonstrate resolve or protect territorial claims. Thus, threats by Tokyo to manipulate trade may not be a viable option in times of crisis due to concerns that any such action could worsen Japan's already stagnant economy. Japan has never gone further than implying economic consequences to Chinese aggression, though they have shown a tendency to move away from China economically following either a regional security incident or one that impacts Japan directly. The following crisis events are used as points of measurement to determine changes in Japanese exports to China as compared to the United States and ASEAN.

1. 1995–1996 Third Taiwan Strait Crisis, Multiple Nuclear Detonations

The Third Taiwan Strait Crisis began in 1995 when the United States granted a visa for President Lee Teng-hui of Taiwan to visit and give a speech at Cornell University. The resulting Chinese exercises, missile tests near Taiwan, and sailing of U.S. aircraft carriers through the Taiwan Strait highlighted how an "internal" conflict could quickly boil over into a regional crisis. The Third Taiwan Strait crisis compounded fears of a regional conflict following the 1994 DPRK nuclear crisis and produced an unintended consequence in that Tokyo agreed to provide logistical support to the United States for any future military engagement in the area.[42] In 1995 and extending into 1996 China resumed testing nuclear weapons before the Comprehensive Test Ban Treaty came into full effect. Japan reacted strongly to these tests in both the public and political spheres and began reducing grant aid to China, though it did not go so far as to sanction Chinese goods.[43]

2. 2004 ECS Drilling, PLAN Submarine Incident, China Named as Security Threat

The contest between Tokyo and Beijing in the East China Sea continued to heat up as China began drilling for oil in contested waters. Tokyo responded by approving energy exploration for Japanese companies in the ECS and the situation escalated. Both

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[42] Andrew Scobell, "Show of Force: Chinese Soldiers, Statesmen, and the 1995–1996 Taiwan Strait Crisis," *Political Science Quarterly* 115, no. 2 (June 2000): 244. http://onlinelibrary.wiley.com/doi/10.2307/2657901/abstract.

[43] Bush, *The Perils of Proximity*, 17.

Japan and China sent military vessels to the region to resolve any disputes by force if necessary.[44] Later that year the Japanese Maritime Defense Force located and tracked a PLA-N submarine operating within Japanese territorial waters near Okinawa. Beijing apologized for the incident, but the following Japanese policy changes confirmed Tokyo's increasing frustration and displeasure.[45] In December, the Koizumi administration officially listed China as a security threat, codified its support to the United States in a in the event of a Taiwanese conflict, and confirmed its commitment to maintain cooperative relations with Taiwan.[46]

3. 2010 Senkaku Fishing Vessel Incident

A Chinese fishing trawler collided with a Japanese Coast Guard vessel in the disputed waters near the Senkaku/Diaoyu Islands. Japan detained the crew of the fishing vessel for 10 days before releasing them without charges.[47] The incident caused a measurable decline in Japanese public opinion of Beijing's actions: affinity for China dropped by 18 points while raising non-affinity rose by 22 points.[48] This and other ECS confrontations led Tokyo to adopt a new "Dynamic Defense" concept that redistributed SDF troops across Japan, with specific provisions aimed at bolstering its air and maritime presence in the southwest.[49]

4. 2013/2014 Chinese ADIZ Expansion, Japanese Merchant Vessel Seized by China

China unilaterally declared the expansion of its Air Defense Identification Zone (ADIZ) in November of 2013.[50] The newly declared ADIZ stretched far into contested

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[44] Bush, *The Perils of Proximity*, 19.

[45] Bush, 20.

[46] Jae Ho Chung, "East Asia Responds to the Rise of China: Patterns and Variations," *Pacific Affairs* 82, no. 4 (Winter 2009/2010): 663, https://www.jstor.org/stable/25608969?seq=1#page_scan_tab_contents.

[47] Ken Jimbo, "The Rise of China and Japan's Foreign Policy Reorientation," in *China's Power and Asian Security*, ed. Minjiang Li and Kalyan M. Kemburi (New York: Routledge, 2015), 258.

[48] Jimbo, 258.

[49] Jimbo, 260.

[50] Scott Snyder and See-Won Byun, "China-Korea Relations: Crying Uncle No More: Stark Choices for Relations," *Comparative Connections* 15, no. 3 (Sep 2013-Jan2014): 89, http://cc.csis.org/2014/01/crying-uncle-no-stark-choices-relations/.

territory, giving China a somewhat boosted claim to patrolling the skies above the disputed Senkaku/Diaoyu Islands. Japan reacted strongly to the announcement along with South Korea and the United States The next year China seized a privately owned, Japanese flagged merchant vessel and demanded repayment of outstanding loans dating back to 1936. Tokyo claimed that any war reparations had been resolved following the 1972 normalization and that this ruling provided an opening for future disputes. More importantly, Japan's Chief of Cabinet Secretary Yoshihide Suga suggested the ship seizure would have a "detrimental effect on Japanese businesses" in China, though no official policy was put forth by the LDP.[51]

B. TRENDS IN SINO-JAPANESE TRADE

Japanese trade with China has grown at a much faster rate than trade with the United States, ultimately leading to China replacing the United States as Japan's number one trading partner in 2007 as seen in Figure 1. Despite a decline since 2011, total trade with China still exceeds that of the United States by 35% as measured in 2016. Trends in economic data depict Japan's increasing reliance on China as a trading partner while trade with the United States declines as a percentage of total trade. These trends as a total period of time since the end of the Cold War are seemingly unaffected by security challenges.

[51] Anna Costa, *The China-Japan Conflict over the Senkaku/Diaoyu Islands: Useful Rivalry* (New York: Routledge, 2018); Japan's purchase of the Senkaku Islands in 2012 is not included as a crisis event in this study. Changes in exports are measured as Japanese reactions to Chinese actions and this particular event was a Japanese change to the status quo, not Chinese.

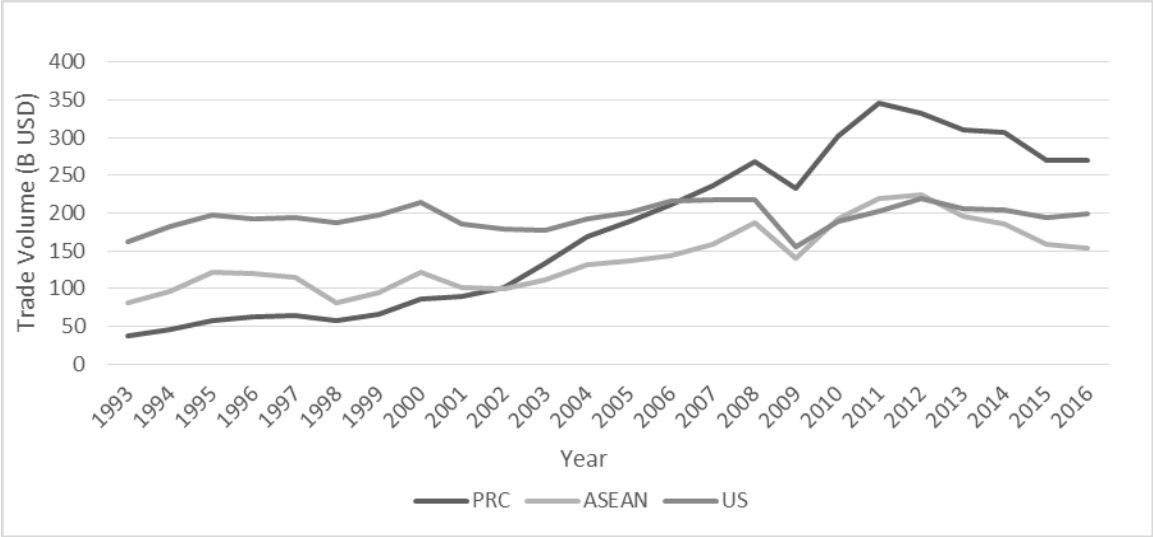

Figure 1. Japan annual trade.[52]

Measurements of specific moments in time, however, demonstrate Japan's distinct tendency to increase trade with the United States in the year following a security crisis with China. As an island nation, geography is also an important economic consideration in that Japan must move nearly all of its trade by sea regardless of alliance status, though distance is certainly a consideration. As such, the ASEAN states have been added for points of comparison. To ensure that geography does not skew the results of this study ASEAN has been included for a point of comparison that is both regional and demonstrates a positive security relationship with Japan.[53]

Realist theory provides additional theories on why these trends exist in the first place. Walt claims that "states balance against threats rather than against power alone" and that "the level of threat is also affected by geographic proximity, offensive capabilities, and perceived intentions."[54] While China's regional proximity gives Japan good reason to increase trade, its antagonistic nature should push Tokyo to choose less

[52] Adapted from UN Comtrade Database.

[53] The five original members of ASEAN are used in this study, as opposed to the current 2017 members, to cover the range of time in this data set (1993-2016). Myanmar, Laos, Cambodia, Vietnam and Brunei joined at different times after 1993 and skew results both in trade volumes as well as Japanese and South Korean political perceptions for any time covered before these countries joined ASEAN.

[54] Stephen M. Walt, *The Origins of Alliances*, (Ithaca, NY: Cornell University Press, 1987): 5, http://www.jstor.org/stable/10.7591/j.ctt32b5fc.

hostile alternatives like ASEAN as an destination for trade that is not considered a security threat. Japan's diplomatic relationship with ASEAN has indeed grown substantially over time since the end of the Cold War. Its participation with the Asia-Pacific Economic Cooperation (APEC) forum, ASEAN+3, and the ASEAN Defense Minister's Meeting-Plus (ADMM+) meetings have shown Tokyo's increased desire to increase both economic and security cooperation with regional partners outside of China and South Korea.[55] However, Japan's economic partnership with ASEAN as a whole has proven to be much stronger than agreements on security cooperation. Tokyo signed the ASEAN-Japan Strategic Partnership in 2011 and has agreed to expanded security cooperation efforts with individual ASEAN nations, but has not been able a secure agreements equal in their commitments to a mutual defense pact.[56]

The United States, China, and ASEAN thus serve as unique points of comparison for testing changes in trade volumes. The United States stands as Japan's non-regional security ally, China as a regional security rival, and ASEAN as a regional security ally/ neutral. Given these considerations it is unsurprising that the ASEAN countries have vastly increased their share of trade with Japan, though they have yet to permanently replace the United States in the second spot in total trade with Japan.

1. Increasingly Beholden to China

As an alternative to total trade, Japan's trade balance depicts a reality where it is becoming increasingly indebted to China while maintaining a positive trade balance with both the United States and ASEAN (Figure 2). If the theory of relative gains held for Japan this graph should be flipped. Japan should be running a trade deficit to the United States as an ally (if running a deficit to any country at all) and a trade surplus with China, given Heginbotham and Samuels' claim that Japan should be particularly sensitive to the relative economic gains of China now that it has become a more formidable potential

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55 Green, *Japan's Reluctant Realism*, 168.

56 Kei Koga, "Japan's 'Strategic Coordination' in 2015: ASEAN, Southeast Asia, and Abe's Diplomatic Agenda," *Southeast Asian Affairs* (2016): 70, https://muse.jhu.edu/article/627451.

military adversary.[57] Japan has instead chosen to run a consistent trade deficit with China for the past 25 years in a near mirror image to its trade surplus with the United States

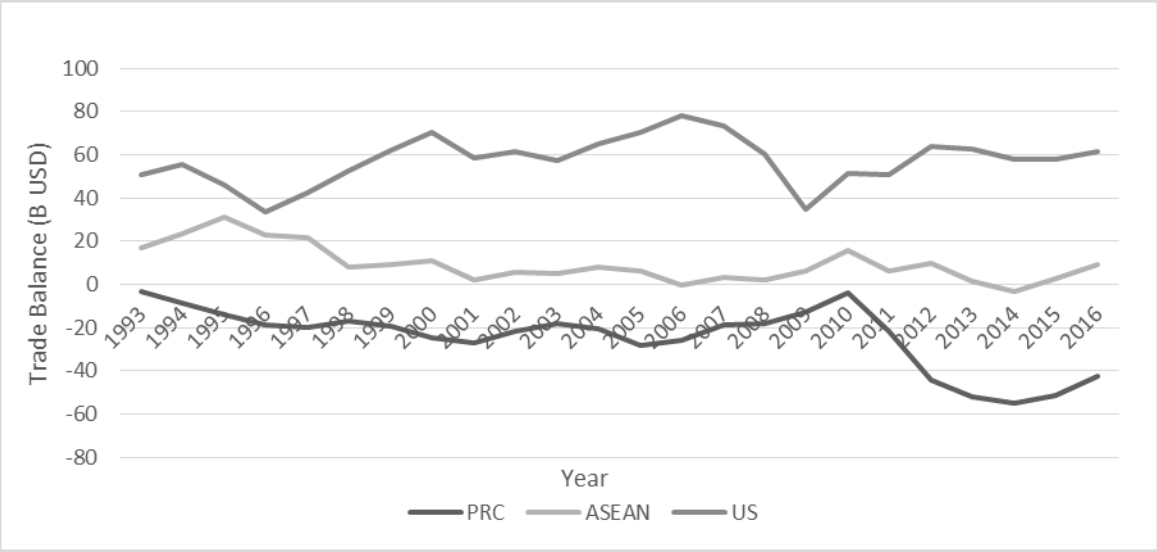


Figure 2. Japan trade balance.[58]

Japan may be able to limit how China grows by being selective about materials exports, but running a trade deficit essentially gives Beijing funds to spend as it wishes. Since the fishing vessel incident in 2010, Japan has run up a deficit of $225 billion through 2016. As a point of reference, this is nearly 40% of China's $590 billion military spending budget for this same time period.[59] This might be an unavoidable tradeoff for Japan given its already low annual growth rates and its ongoing efforts to climb out of the recession caused by the global financial crisis.

The effects of this deficit may be misleading as well, which leads to a few alternative explanations for the results of this data analysis. Japan's annual trading deficit to China at its maximum of $54 billion in 2014 was just over 1% of its GDP of $4.8 trillion and while Japan's overall economy maintained a marginal, yet positive growth

[57] Heginbotham and Samuels, "Mercantile Realism," 174.

[58] Adapted from UN Comtrade Database.

[59] Rakhahari Chatterji Pratnashree Basu, "China's Race for Arms," *Jadavpur Journal of International Relations* 20, no.1 (June 2016): 5, http://journals.sagepub.com/doi/abs/10.1177/0973598416661571.

rate of 0.3%.[60] However, realist balance of power is about choices and Japan retains the option to redistribute its import needs to other countries in the region that have fewer conflicts of interest. What this line of thinking fails to calculate is the cost of doing so. By trading with China, Japan has decided that the most efficient way to address its most pressing security issue, the economy, is to trade with any state that can produce the needed goods for the best price.

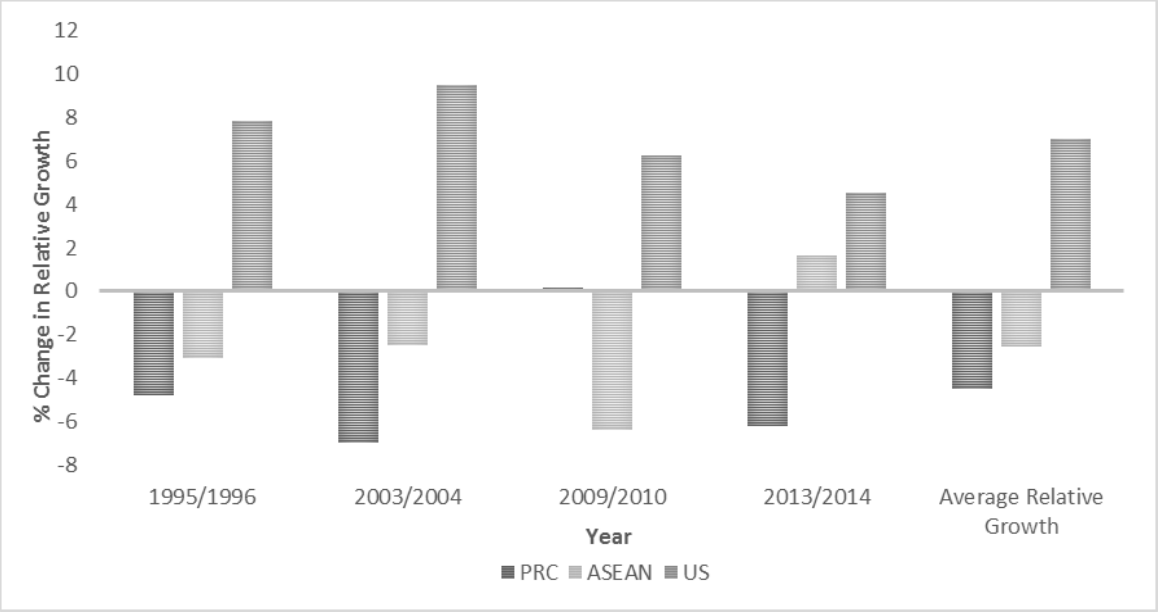
In essence, Tokyo has chosen economics over adversarial trade for a quarter century, and has continued run bilateral trade deficit with China beyond the most recent ECS crisis that began in 2012, though this trend may be reversing course. Japan's decline in trade with China since 2011 may be indicative of the mercantile realist insistence on the importance of wealth and technology as China presses to close the gap by investing heavily in technological innovation. China surpassed Japan's economy in size in 2010 and has been steadily closing the technological gap. Mercantile realism suggests that Japan would balance against China as a threat and its decline relative to the United States after 2011 suggests this might be the case. It is, however, difficult evaluate whether this as part of a longer trend that is reacting to increased tension with China or is part of a general effort by the LDP to reduce expenditures and meet their economic growth targets. Looking at the data in terms of total trade and balances is therefore important for understanding the implications for Sino-Japanese trade as a whole, but evaluating whether or not Japan is giving China the materials it needs to challenge its military security is even more important.

2. Changes in Trade Following Sino-Japanese Crises

Japanese exports to China, ASEAN, and the United States change considerably following a Japanese crisis event with China, though this may not be evident from the initial data set. For example, exports to all three actors fell following the Koizumi administration's declaration of China as a security threat in 2004 as well as the fishing vessel incident in 2010 and China's ADIZ declaration in 2014, but each fell at different

60 "Japan Country Data," The World Bank, accessed September 16, 2017, http://data.worldbank.org/country/japan.

rates. Instead, by measuring the relative changes in export volumes from the year preceding the crisis to the year after the data provides a picture where changes in trade are relative to one another, demonstrating relative gains by actor as seen in Figure 3. Japanese total exports to China fell off nearly every year following a politico-military confrontation with Beijing.[61]



Data periods are measured from the year before a crisis to the year during and/or following a crisis. The percent change in relative growth is the deviation from the mean average of all three actors.

Figure 3. Japan exports.[62]

In contrast, total Japanese exports to the United States increased relative to China every year following a crisis. This demonstrates Tokyo's clear preference to move back toward its long-time ally in times of regional instability and uncertainty. Japan's preference was not only conclusive in every instance of a crisis event, but the combined average of all events showed a clear pivot back to the United States (increase of 7%)

[61] Data from 2010 shows a slight increase of exports to China by 0.14% as compared to decreases of 4% or more for all other events. The near zero value of this event is significant in its neutrality, but does not show a sharp departure from the other data presented in this study.

[62] Adapted from UN Comtrade Database.

compared to a relative decline in preference to export goods to China (decrease of 4.4%). The results for ASEAN are inconclusive in this case suggesting that proximity is likely not a factor in Japan's decision-making calculus.

Aside from whole of economy shifts, there are more direct ways to influence China through trade following a security crisis including the manipulation of trade in strategic goods. Japan's concern over China's military buildup as well as the threat from North Korea and Beijing's direct support of the Kim regime mean that Tokyo has the opportunity to reduce trade in goods that may be militarily beneficial to either country. The next section analyzes Japan's export of two strategic goods, refined petroleum and steel, and how crisis events between Japan and China affects the trade volumes of these goods.

C. JAPANESE EXPORTS OF STRATEGIC GOODS

Historically speaking, Japan has built its economy on four major industries: production of vehicles and parts, electronics, industrial machinery and iron/steel. These industries made up approximately 50% of Japan's $582 billion in exports in 2016.[63] Prime Minister Shinzo Abe's "Japan Revitalization Strategy: Japan is Back" from 2013 provides important insights on the LDP's vision for Japan's economic future.[64] Under this revitalization strategy Japan emphasizes its aim of becoming the world's leading information technology society, promoting the expansion of science, technology, and innovation, and building strategic trade relations. These strategic relations should include the reallocation of strategic goods exports to non-threatening trade partners.

The concept of strategic goods has existed for quite some time, but agreeing on what exactly constitutes a strategic good is quite difficult. Strategic goods can be broadly defined as exported goods of "immediate military significance."[65] This is problematic for

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[63] UN Comtrade Database.

[64] "Japan Revitalization Strategy: Japan is Back." Office of the Prime Minster of Japan, June 14, 2013. http://www.kantei.go.jp/jp/singi/keizaisaisei/pdf/en_saikou_jpn_hon.pdf.

[65] Rafael Reuveny and Heejoon Kang, "Bilateral Trade and Political Conflict/Cooperation: Do Goods Matter?" Journal of Peace Research 35, no. 5 (September 1998): 586. https://www.jstor.org/stable/425700?seq=1#page_scan_tab_contents.

a number of reasons. Militaries are comprised of human beings, therefore any good that satisfies basic human needs might be considered a strategic good. Japan is an even more special case, having operated under a self-imposed ban on arms sales since the end of WWII up until 2014, thus making arms exports too specific to be useful. Japan should worry instead about the export of industry heavy products that can be converted to military use such as steel and petroleum, which fits under Polachek's definition of strategic goods that include "raw materials, minerals, fuels, and heavy manufactures."[66] As a producer and exporter of these strategic goods, Japan has the opportunity to restrict its exports of steel and petroleum to rival states and more efficiently affect their military capabilities. Economic data indicates that Japan does not use steel or petroleum exports to influence policy in one way or another.

1. The Importance of Steel in Sino-Japanese Trade

Despite the possible direct security implications of exporting steel to China, there is no economic evidence that Japan has reduced its steel exports following a crisis with China. Overall trends have favored exporting to China and ASEAN over the United States (Figure 4). This may be the result of Japan's reluctance to reduce the exports of any good and risk exacerbating their already stagnant economic growth. It may also represent the Japanese perception of the steel industry as a foundational part of Japan's success as an industrialized country that should not be influenced by political concerns.

[66] Reuveny and Kang, "Bilateral Trade and Political Conflict/Cooperation," 586.

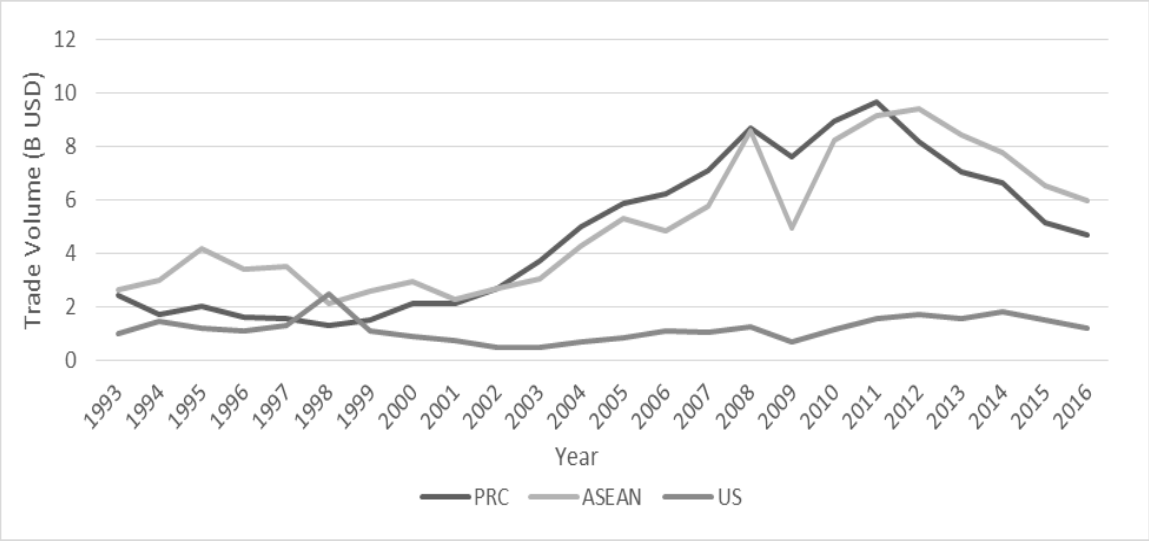

Figure 4. Japanese iron and steel exports.[67]

The Japanese steel industry is one of the great success stories of an industry built from the ravages of war that has been emulated time and again in East Asia. As the forerunner of industrial development in the region, post-WWII Japan was quick to enact policies that would benefit industries like steel, machine tools, and semiconductors that required substantial human capital.[68] Japan's quest for industrialization placed government funding directly in the hands of industrious businessmen while simultaneously restructuring the financial system to directly support this undertaking.[69] Years later, China's attempts to follow the Japanese model were slowed by state ownership and central planning as the centerpiece of the communist government. Inefficiency was endemic, losses inevitable, and profits and production numbers fabricated. China's eventual transition in the 1980s to the "dual-track system" (shuangguizhi) under the guidance of Zhao Ziyang did little to improve the situation, given that the steel industry remained a strategically critical asset that required state

[67] Adapted from UN Comtrade Database.

[68] Chalmers Johnson, "Comparative Capitalism: The Japanese Difference," *California Management Review* 35, no. 4 (1993): 62, http://journals.sagepub.com/doi/pdf/10.2307/41166754.

[69] Johnson, 63.

ownership.[70] Prior to reforms, production requirements that had been designed to increase as production volume increased.[71] The reforms of 1992 finally brought about some positive changes for the steel industry where centrally planned production requirements were lowered substantially, which immediately yielded higher growth rates.

Reforms and the rapid expansion of the Chinese steel industry has been unable to keep up with its massive infrastructure and manufacturing projects, which consequently require the continued importation of foreign steel. Japan has exported more than $5B USD in steel to China annually since 2004. If it chose to do so, Japan could strategically decrease its steel exports to temporarily impact Chinese production. Likewise, Japan could decrease steel exports to China to ensure that Japanese steel is not used to manufacture ballistic missiles or military vehicles in North Korea. Tokyo has reason to worry this could happen given some startling incidents involving Chinese imports to North Korea. In 2006 China voted in favor of UN sanctions against North Korea, but ensured language was included that forbade the inspection of goods entering the DPRK.[72] Even more damning was the revelation that the DPRK had procured missile components from a Chinese firm that included transporter-erector-launchers and possibly parts for the Unha-3 space launch vehicle.[73] Despite these worries, data analysis indicates that Japan has not decreased steel exports to China following a crisis events even though China could use this steel in ways that directly affect Japan's security.

a. A Missed Opportunity

Japanese annual export totals and percentage shares of steel exports for China and ASEAN are closely linked as shown in Figure 5. From 2000–2016 these two actors stay within 5% of each other (except 2009 at 8.5%), demonstrating a similar and lasting commitment by Japan to export steel within the region.

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70 Barry J. Naughton, *The Chinese Economy: Transitions and Growth*, (Cambridge: MIT Press, 2006): 91.

71 Naughton, 92.

72 International Crisis Group, "Fire on the City Gate: Why China Keeps North Korea Close," *International Crisis Group Asia Report*, no. 254 (December 2013): 1, https://www.crisisgroup.org/asia/north-east-asia/china/fire-city-gate-why-china-keeps-north-korea-close.

73 International Crisis Group, 8.

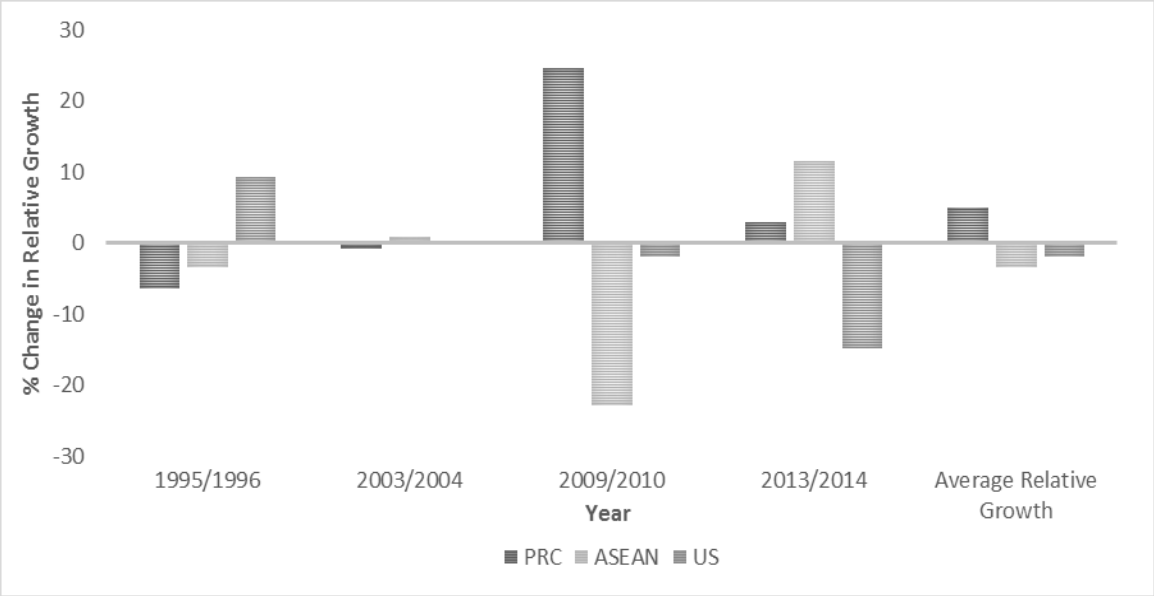

Figure 5. Japanese iron and steel exports.[74]

This consistency, however, does not extend to changes in trade volumes following a crisis between Japan and China. The inconsistency in year on year changes across all crises and all actors that indicates that Japan does not use steel as a strategic good. Additionally, Japanese exports to the ASEAN demonstrate a relative drop compared to the United States and China despite long-term increases that have moved the Southeast Asian countries to the number one recipient of Japanese steel in 2012. Japan has therefore demonstrated that it does not strategically decrease exports to China following a crisis, but it simply may not be able to do so.

b. Steel as an Indispensable Export

As one of Japan's four core economic industries steel and iron exports accounted for 7.5% of Japan's export profits in 2016 while the annual growth rate from 2015 fell just short of 1%.[75] Given that the Abe administration has a specific economic policy called "Abenomics" Japan's choice to reap the economic benefits of steel sales instead of restricting exports due to security concerns is understandable.

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[74] Adapted from UN Comtrade Database.

[75] "Country Profile: Japan," Observatory of Economic Complexity, December 5, 2017, https://atlas.media.mit.edu/en/profile/country/jpn/.

Japan has only cleared 3% annual growth once since the end of the Cold War while China posted several consecutive years of double digit growth.[76] As such, it would likely take a direct conflict with China or evidence that the PLA is using Japanese steel to produce Chinese military equipment for Japan to consider reducing steel exports to China. Further slowing Japan's already fragile growth numbers is simply not an option.

2. Japanese Petroleum Product Exports

Though it is rarely a topic of discussion, Japan has been exporting petroleum products at modest rates since 2005. At its peak in 2011 Japan was exporting $14.6B USD worth of petroleum products to its trading partners and posted $7.5B in exports in 2016 despite continued low oil prices. China and ASEAN made up over half of Japanese exports during this time, yet there is no measureable indication that Japan has used its exports to influence Chinese policy. The importance of energy resources in East and Southeast Asia cannot be overstated, and thus Japan's refusal to use petroleum exports as leverage seems counterintuitive.

China has already surpassed the United States as the world's biggest energy consumer and has made increasingly aggressive moves to ensure its energy security both regionally and abroad. Without a significant source of domestic energy supplies Beijing has been forced to look elsewhere for its increasing needs, which have been forecasted to account for 40% of the growth in the energy market until 2025.[77] As a latecomer to an already crowded international energy marketplace China was forced into regions that involved much more risk. Beijing offered risky "loans for oil" programs in Angola and was inadvertently drawn into the Darfur crisis in The Sudan.[78] Energy exploration has been a primary driver behind Chinese claims in the South and East China Seas as well. Crises between Japan and China in the ECS have focused more on claims to the resources

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[76] "GDP Growth (annual %)," The World Bank, accessed December 5, 2017, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=JP.

[77] Mohan Malik, "Energy Remapped: Yesterday's Winners, Tomorrow's Losers?" *World Affairs* 177, no. 5: 86. http://www.worldaffairsjournal.org/article/energy-remapped-yesterday%E2%80%99s-winners-tomorrow%E2%80%99s-losers.

[78] Henry Lee and Dan Shalmon, "Searching for Oil: China's Oil Strategies in Africa," in *China into Africa: Trade, Aid, and Influence*, ed. Robert I. Rotberg (Washington, D.C.: Brookings Institution Press, 2008): 124.

in contested regions than on the borders themselves. China has continually pushed these boundaries with patrols and angered Japan, but garners the most outrage in incidents involving fish and fuel.

Fuel has also been a particularly important tool for China in attempting to shape North Korea's behavior. As a point of reference, more than 90% of the DPRK's fuel imports came from China in 2013, meaning Beijing held the power to all but halt day to day transportation across North Korea if it were to come down hard on the Kim regime.[79] However, Beijing has continued to avoid any actions that could destabilize the North and has opted for a strategy that aims to "'punish but not strangle' Pyongyang and undermine its influence."[80] The problem for Japan is this: Tokyo has little ability to directly affect the fuel flows into North Korea so long as the majority of DPRK petroleum imports enter the country through China. It can, however, reduce the chance that any Japanese fuel enters the DPRK by reducing its exports to China. This paper's analysis of changes in Japanese exports following crisis concludes that Tokyo does not use fuel in a strategic way that is intended to influence either China or North Korea.

a. Petroleum Not a Problem

The economic data for Japanese petroleum exports following a crisis with China is inconsistent for all actors (Figure 6). Japan does not increase or decrease fuel exports to one partner over another across all crises, but the average trend does show a preference to increase relative trade to the United States while decreasing exports to both China and ASEAN. However, the data for all four incidents is misleading. In 1996 and 2004 Japan's petroleum exports to all worldwide customers totaled $1.85B and $1.44B respectively.

[79] International Crisis Group, 10.

[80] International Crisis Group, 10.

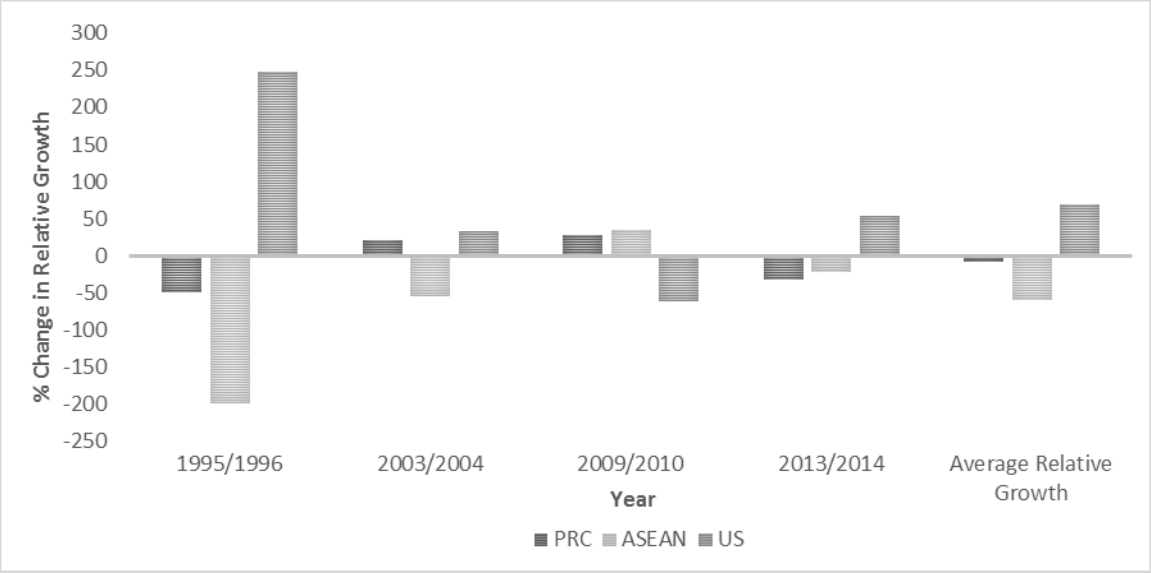

Figure 6. Japanese petroleum product exports.[81]

The low production levels during this time led to a disproportionately higher relative change given smaller fluctuations than a market producing a high volume of product. For example, Japanese petroleum exports to the United States from 1995 to 1996 increased by 249% relative to exports to China and ASEAN from a $2 million increase, but the same dollar amount generated a 62% change between 2009 and 2010 resulting from a much higher volume of worldwide fuel exports ($1.45B in 1996 vice $9.36B in 2009). Due to these factors, these points have been removed as seen in Figure 7, leaving the crisis points in 2010 and 2014 for comparative analysis.

[81] Adapted from UN Comtrade Database.

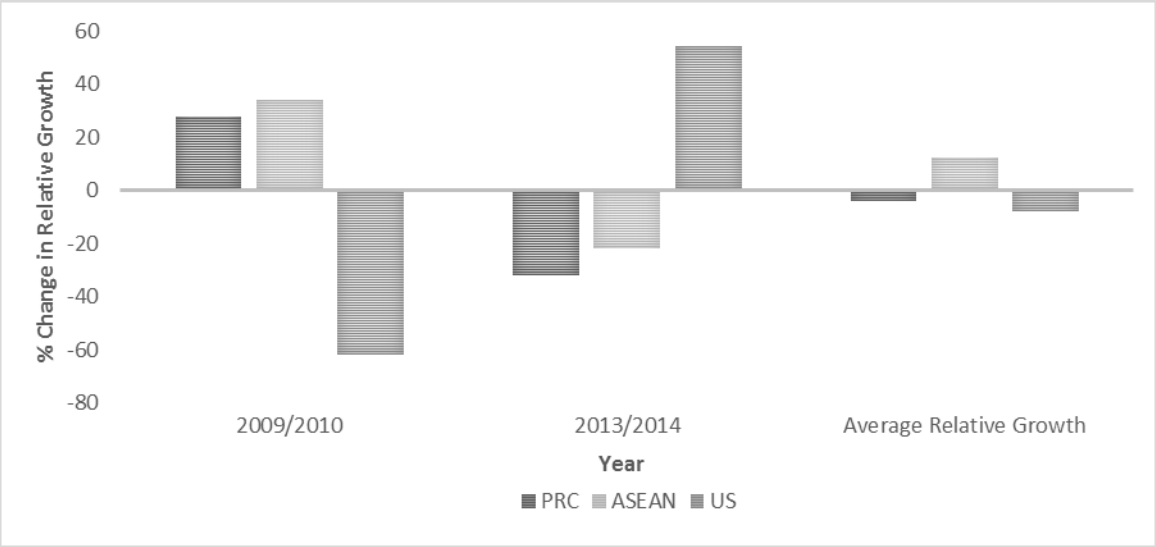

Figure 7. Japanese petroleum product exports.[82]

Analyzing these two data points alone shows little difference in relative trade in Japanese exports of petroleum products following a crisis. The year after Japan discovered Chinese energy exploration and drilling operations in the ECS in 2010, exports of petroleum to China increased compared to the average change in ASEAN and U.S. exports. In contrast, exports to China decreased significantly (32%) following Beijing's ADIZ declaration and merchant vessel seizure. These mixed results indicate that petroleum is not considered a strategic good that Tokyo considers means of leverage against China or North Korea in times of crisis. The continuation of low oil prices to date as well as the increased competition for energy resources in the region mean that Japan has likely missed the opportunity to leverage petroleum as a strategic good against China and North Korea, if it ever intended to do so at all.

b. Profit at Any Cost

As with steel exports, Japan is likely constrained in any choice to reduce petroleum exports to China. Petroleum exports make up a much smaller portion of Japan's overall exports compared to steel at just 1.6% of its 2016 totals, but even

[82] Adapted from UN Comtrade Database.

removing just China's share from the equation has substantial consequences.[83] With Japan's growth rate just under 1% last year, a complete restriction would put growth at an even more dismal 0.9% and would not necessarily result in a strategic impact on China's security policy.[84]

D. IMPLICATIONS FOR SINO-JAPANESE TRADE

Japan's weak economy is likely the main limiting factor in Tokyo's ability to strategically reduce exports in an attempt to influence Chinese actions in the region. Stagnant economic growth has plagued Japan for over three decades and remains the top talking point of each incoming administration. Any attempt to reduce exports to China in the short-term would ultimately be more damaging to Japan's economy than to China's, which reinforces Japan's dual hedge more through necessity than choice.

The only way to escape this pattern is for Japan's economy to grow at a rate where excess profits from exports can be sacrificed in the name of security or to move away from a reliance on trade with China. The former seems unlikely given historical trends, but the latter is a plausible alternative given Japan's decreasing trade with China since 2011. This might indicate Japan's sensitivity to China's relative gains as outlined by mercantile realism or it might be Tokyo taking every opportunity to make some Yen with more of those opportunities presenting themselves outside of China. In any case, Japan is likely to continue to rely primarily on the United States for security assistance and China for economic benefits for the foreseeable future in a dual hedge posture as long as neither actor threatens Japan's vital interests.

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83 "Country Profile: Japan."

84 UN Comtrade Database.

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III. SOUTH KOREAN TRADE AND A RISING CHINA

Relations between South Korea and China have taken a much different course than Sino-Japanese relations since WWII. Japan's occupation of most of East Asia and the use of Korean and Chinese women as prostitutes in "comfort stations" has resulted in a shared consciousness and mutual fear of Japan for both South Korea and China.[85] The fracturing of the Korean peninsula following WWII and breakout Korean War soon after further isolated South Korea from the region, leaving the United States as its primary security and economic ally. Over 60 years have passed since the conflict ended, yet the war has not technically concluded. Pyongyang has threatened to tear up the cease-fire agreement in an effort to deter the United States and ROK from taking action against the Kim regime, though at this point these types of statements are considered well within norms. Issues with the DPRK have proven particularly challenging for China, given that its goals of maintaining peace on the Korean peninsula by propping up the Kim regime often conflicts with its push to increase regional trade.

Despite these challenges, Sino-ROK relations following the Cold War improved greatly. South Korean diplomats saw China's opening as a chance to decrease their reliance on the United States, counter any future pressure from Japan, and a way to build an interconnected economic relationship in the hopes that it would deter Chinese encroachment on ROK interests.[86] Sino-ROK diplomatic relations even grew closer in the late 1990s, stemming from a like-minded approach to the North Korea problem. The Bush administration's labeling of the DPRK as part of the "Axis of Evil" moved Seoul and Beijing to take a more moderate and cooperative stance towards North Korea, despite its cycle of provocations and developing nuclear weapons program.[87] Some argue that this relationship has resulted in a "trade preceding the flag" phenomenon, serving to cool tensions in times of crisis given the implicit understanding that both countries will suffer

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85 Gordon, *A Modern History of Japan*, 225.

86 Sutter, *Chinese Foreign Relations*, 195.

87 Sutter, 194.

economically if the situation is not properly managed.[88] Throughout the 1990s and into the early 2000s, South Korea had skillfully balanced its desire for "active and successful engagement" with China against its need for a continued security alliance with the United States[89]

Relations between South Korea and China from the early 2000s to present have been much more tense than the 1990s. Beijing's inability or unwillingness to reign in the Kim regime has slowly eroded Sino-ROK relations as North Korea pushed forward with its first nuclear tests, space launches, and kinetic strikes against South Korea. More recently, Beijing has tested Seoul's resolve by extending its ADIZ over contested areas of the Yellow Sea. Caught between its economic and security priorities, South Korea has attempted to maintain what Jae Ho Chung considers "strategic ambiguity" where Seoul has remained noncommittal in declaring "whether and under what circumstances China might pose a military threat to South Korea."[90] This policy allows Seoul to pursue a dual hedge strategy that seeks to avoid damaging economic relations with China. Do South Korean exports measurably "follow the flag" in that they decrease following a crisis that involves China or North Korea? Additionally, does Seoul follow mercantile realist actions by reacting to military threats by increasing trade with alliance partners and show a high sensitivity to China's relative gains?[91]

The main empirical findings in this study indicate that South Korea's economic choices are not responsive to relative gains by China, and therefore not supported by mercantile realist theory. Analysis of economic data suggests that South Korea does not reorient its trade to favor allies or regional partners over China directly following a crisis and that Seoul's economic concerns outweigh security concerns across all crisis events. As such, South Korea's economic choices are most accurately defined by Heginbotham

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88 Chung, "Korean Views of Korea-China Relations," 227.

89 Chung, "East Asia Responds to the Rise of China," 665.

90 Chung, "Korean Views of Korea-China Relations," 222.

91 Heginbotham and Samuels, "Mercantile Realism," 174.

and Samuel's dual hedge theory and in a much more definitive manner than Japan.[92] In fact, South Korea's dependence on Chinese trade is so strong that exports of strategic goods following a crisis seem to trend in direct opposition to Seoul's security interests given their potential military use by either China or North Korea. The economic portion of this policy choice is largely driven by South Korea's integration and reliance on China's economy for its own economic growth. A decline of 1% in Chinese economic growth will result in a 0.2% drop for South Korea, making any economic decision that is driven by security concerns regarding China a potentially self-inflicted wound.[93] It is therefore unsurprising that exports of both steel and petroleum were relatively higher as compared to the United States and ASEAN in the year following a crisis.

The remainder of this chapter defines Sino-ROK crisis events, analyzes economic data for relevance to mercantile realism and dual hedge theories, and explores alternative explanations that may explain Seoul's behavior. The next section outlines crisis events between South Korea and China that serve as points of measurement in the economic analysis section. Unlike Japan, the majority of crisis events focus on China's reaction to or support of the DPRK as South Korea's primary security concern, while Beijing is considered a secondary actor. The economic analysis section then measures the defined crisis events against changes in South Korean exports as a whole and exports of strategic goods. Trends in the data are then analyzed for connections to mercantile realism and dual hedge theories while taking possible alternative explanations into account as well.

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[92] This data may also indicate that South Korea does not consider China a direct security threat, which is supported by a lack of official statements that designate China as such. However, China's support of North Korea through increasingly capable and aggressive actions gives South Korea reason to consider China as an indirect security threat. Territorial disputes and increasing military capabilities may also lead South Korea to perceive China as a rising security threat.

[93] Scott Snyder and See-won Byun, "China-Korea Relations: New Sanctions, Old Dilemmas," *Comparative* Connections 18, no. 1 (May 2016): 95, http://cc.csis.org/2016/05/new-sanctions-old-dilemmas/.

A. SINO-ROK CRISIS EVENTS

1. 2004 Koguryo History Controversy

The Chinese Academy of Social Sciences began the Northeast Asia History project in 2002 aimed at refining historical regional identity.[94] The Koguryo lived in a region that is now the border between China and North Korea, but had been claimed exclusively by the Chinese in this study. Chinese historians ignored previous efforts by North Korea to make the area a UNESCO Heritage Site, and South Korea's insistence that the Koguryo were a distinct part of Korean history. The Chinese Academy deleted Koguryo from the Korean history section of their website and would later remove any content regarding Korean influence in shaping pre-modern Korea. Protests erupted in South Korea and Seoul summoned the Chinese ambassador to discuss what they saw as the censorship of Korean history. As a result, previously positive perceptions of China among the South Korean populace soured over the years and by 2009 only 6% of respondents preferred a relationship with China as opposed to 68% who preferred the United States[95] The controversy itself has calmed considerably, but it was never fully resolved to the satisfaction of either side and may become a point of contention in the future.

2. 2006 North Korea Tests First Nuclear Weapon

China's efforts in promoting dialogue and resolution of the North Korean nuclear program fell apart when North Korea tested their nuclear capability for the first time in 2006. Shortly after the test and after Pyongyang abandoned the Six Party talks China lashed against North Korea in an uncharacteristically harsh way:

> The 2006 statement used the term "flagrantly/brazenly" (hanran) to describe the North's decision to test. Normally, China reserves hanran for cases where historical enemies or rivals impair its national dignity—for example, when Koizumi Junichiro visited the Yasukuni Shrine as Japan's

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[94] Dingding Chen, "Domestic Politics, National Identity, and International Conflict: The Case of the Koguryo Controversy," *Journal of Contemporary China* 21, no. 74 (March 2012): 229, http://www.tandfonline.com/doi/abs/10.1080/10670564.2012.635928.

[95] Chung, "Korean Views of Korea-China Relations," 225.

> prime minister, or when the United States accidentally bombed the Chinese embassy in Belgrade.[96]

China's fiery rhetoric quickly cooled when it came to taking substantive action against North Korea and was seen by Seoul as a weakening commitment by Beijing to deescalate tensions on the Korean peninsula.[97] By signing USCR 1718 the signatories agreed that no country would export any item that could "directly contribute to the development of the DPRK's operational capabilities of it armed forces," but China watered down the resolution significantly by insisting on a ban on the inspection of goods headed into North Korea, thereby making the sanctions virtually unenforceable.[98]

3. 2010 China's Response to Cheonan Sinking/Yeonpyeong-do Shelling

In March of 2010 North Korea sunk a South Korean corvette, the *Cheonan*, killing 46 sailors.[99] The United States pressed for an investigation, but China was reluctant to press North Korea for answers. The following November North Korea shelled Yeonpyeong Island, killing ROK Army personnel and some civilians. Beijing's reaction was again muted, too concerned with the possibility of conflict to condemn the acts and thereby assuage South Korean fears of an unchecked DPRK. Officials in both Seoul and Washington were shocked and incensed by China's silence, lending credence to the claim that this period marked the low-point of modern Sino-ROK relations.[100] South Korean public opinion mirrored this sentiment with 92% of the population claiming they were not happy with China's response.[101]

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96 Jih-Un Kim, "Inflated Hope, Unchanged Reality," 33.

97 Jih-Un Kim, 32.

98 "Resolution 1718 (2006)," United Nations, October 14, 2006, https://www.un.org/sc/suborg/en/sanctions/1718; International Crisis Group, "Fire on the City Gate," 1.

99 Sutter, Chinese Foreign Relations, 199.

100 Sutter, 204.

101 Jiyoon Kim and Jung-yup Woo, "Yeonpyeongdo pogyok satae gwanlyon gingeup yoron jos bogoseo (Report on the Survey Regarding the Yeongpyeong Shelling Incident)." Seoul: Asian Institute for Policy Studies (November 2010): 18.

4. 2013 DPRK Third Nuclear Test, Chinese ADIZ Declaration

China's reaction to the DPRK's third nuclear test in February 2013 was judged to be largely routine: "the Chinese foreign ministry's strongest language was simply 'firmly oppose' (jianjue fandui) or 'strongly urge' (qianglie duncu)" compared to its harsh condemnation following the first test.[102] China did initially halt exports of crude oil in the month following the test, but trade in energy products resumed soon thereafter with overall trade between the DPRK and PRC growing by 8.9% compared to the previous year.[103] In late 2013 China's declaration of an expansion of its ADIZ into the contested areas of the Yellow Sea and ECS further damaged relations with Seoul. The new border encompassed Ieodo, an underwater rock long claimed by South Korea and source of contention due to its associated economic exclusion zones. South Korea's response was a counter-expansion of the Korean ADIZ (KADIZ) to the southwest to include Ieodo and warned China that its declaration would "heighten nationalism among Northeast Asian neighbors and exacerbate regional territorial and historic disputes."[104]

B. SOUTH KOREA'S INCREASING DEPENDENCE ON CHINESE TRADE

South Korea made the move to substantially increase trade with China earlier than Japan given its perception of mutually beneficial trade and foreign policy throughout the 1990s. In three short years (2001-2004) China moved from South Korea's number three destination for exports to replacing the United States as the South's number one trading partner (Figure 8).[105] In fact, China has become such a large partner in South Korea's economy that major corporations (including Hyundai) are expressing worry about overdependence and the consequences of a slowing Chinese economy.[106]

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[102] International Crisis Group, "Fire on the City Gate," 6. Jih-Un Kim, "Inflated Hope, Unchanged Reality," 33.

[103] Kim, 35.

[104] Snyder and Byun, "Crying Uncle No More," 89.

[105] Jae Ho Chung, *Between Ally and Partner: Korea-China Relations and the United States*, (New York: Columbia University Press, 2007): 81.

[106] Snyder and Byun, "New Sanctions, Old Dilemmas," 95.

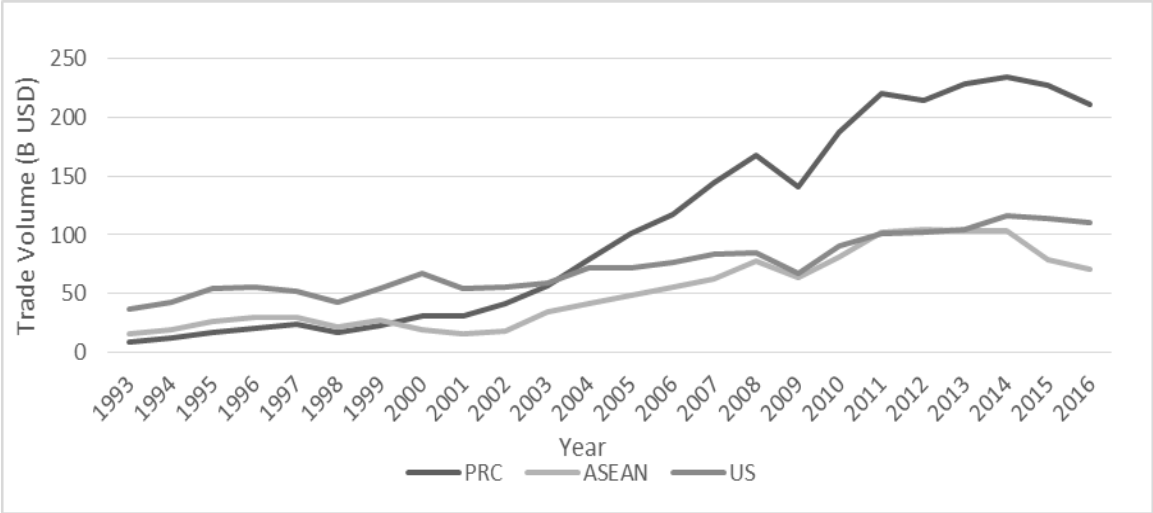

Figure 8. ROK annual trade.[107]

The economic benefits of trading with a regional partner with a booming economy have drawn these two countries ever closer as economic gravity theory would suggest. There is a noticeably stronger correlation between trade with China (perhaps due to proximity) than trade with ASEAN following a crisis event, though overall trade with ASEAN continues to increase over time. Figure 9 shows that exports to China have totaled roughly a quarter of South Korean exports since 2009 while trade with the United States decreased and exports to ASEAN remained relatively stable as a percentage of the whole. Conversely, South Korea has become an increasingly smaller partner in Chinese trade and putting Seoul at a disadvantage at the negotiating table.[108]

[107] Adapted from UN Comtrade Database.

[108] Chung, "Korean Views of Korea-China Relations," 220.

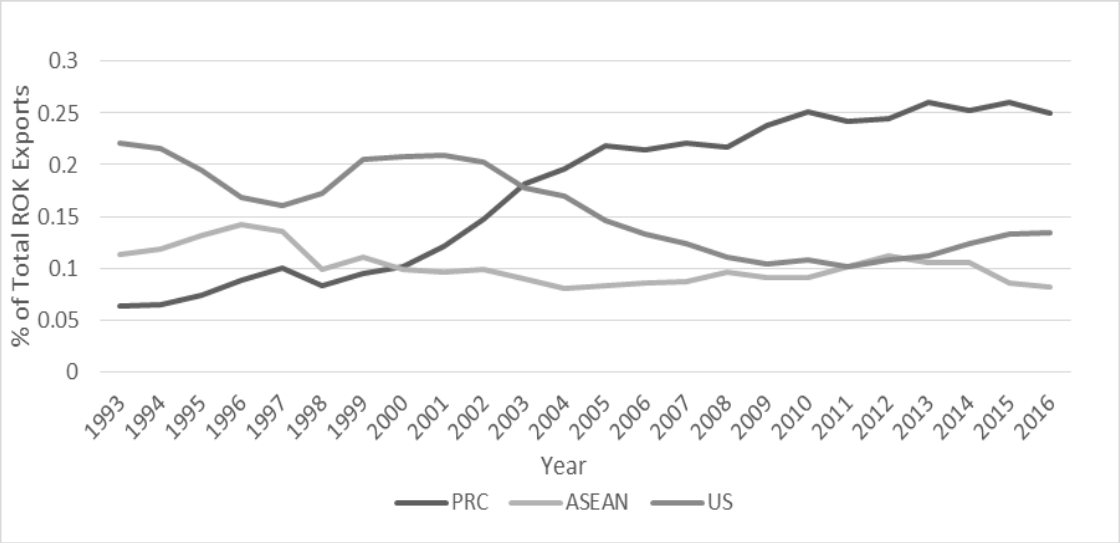

Figure 9. ROK exports.[109]

1. The Effects of Overdependence in Sino-ROK Trade

China's report of its weakest growth numbers in 25 years has added to South Korea's concerns that a slowing China will negatively affect them. Research confirms that a decline in China's economy would impose a bigger cost on South Korea than any other country due to its reliance on China's purchase of its exports.[110] A 2011 estimate takes this presumption a step further, suggesting that a 1% drop in China's GDP would trigger a 0.2% decrease in South Korea's GDP while a 1% rise in Chinese export prices would increase prices in South Korea by 0.1%.[111] This reality has forced Seoul to be more aggressive in maintaining its historic trade levels having failed to find a viable alternative thus far. In May of 2016 South Korea posted its greatest decline in exports to China since the global and Asian financial crises. This prompted extensive efforts by the ROK minister to revitalize Sino-ROK trade including a "Korean Wave" economic offensive in China in an attempt to lure trade back towards South Korea.[112] Given

[109] Adapted from UN Comtrade Database.

[110] Snyder and Byun, "New Sanctions, Old Dilemmas," 95.

[111] Chung, "Korean Views of Korea-China Relations," 221.

[112] Snyder and Byun, "New Sanctions, Old Dilemmas," 96.

Seoul's difficult situation, it is unsurprising that South Korean trade with China has persisted and even grown through times of crises.

2. A Lack of Economic Change Following Crisis

Analyzing economic data of South Korean exports in the year following a crisis provides mixed results as visualized in Figure 10. The first and most important observation is that crisis events that involve China do not seem to change South Korea's choice in export partners. Data for China, ASEAN and the United States fluctuates irrespective of complications in the regional security environment for individual events. The combined relative change across all crises in this case is misleading. While it does suggest an overall preference to move exports towards ASEAN states over the United States following a crisis, the alternating increase and decrease in preferences by incident indicates there is no direct correlation for these data points.

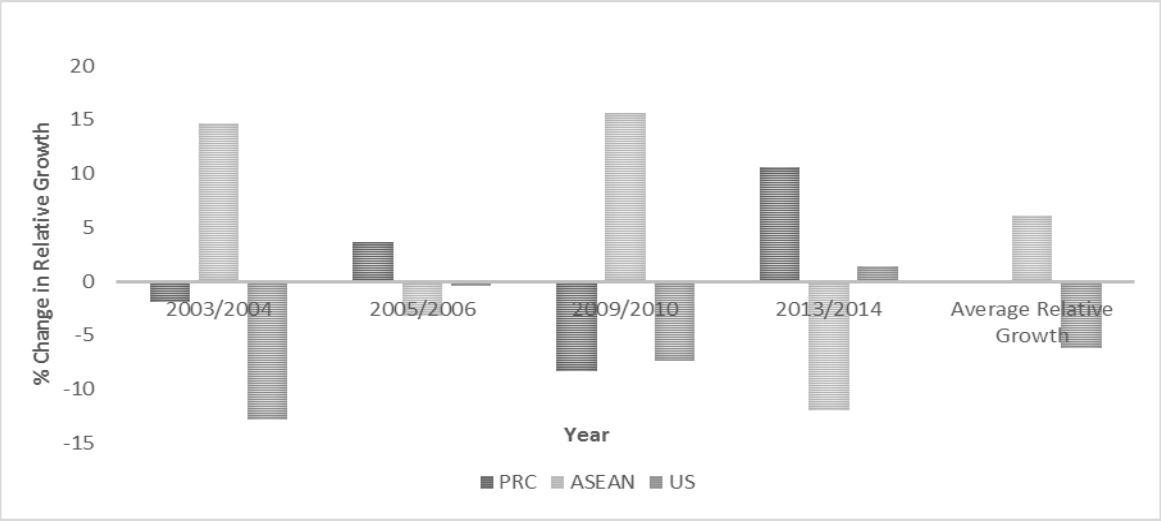

Figure 10. ROK exports.[113]

C. SOUTH KOREAN EXPORTS OF STRATEGIC GOODS

South Korea's economy industrialized by modeling its behavior after Japan's, thus it continues to prioritize exports of industrial goods to this day. In fact, South Korean

[113] Adapted from UN Comtrade Database.

exports of steel have exceeded Japan's every year since the end of the Cold War.[114] South Korean petroleum exports are also a much larger portion of overall exports and account for 5% of last year's export profits.[115] Given these facts and South Korea's history of stronger annual economic growth, Seoul should have the ability to decrease exports to China and force policy concessions. The reality of South Korea's direct dependence, however, makes any decrease in exports to China even more costly than it would be to decrease to any other economic partner.

1. South Korean Steel as a National Asset

The development of South Korea's steel industry closely mimicked Japan's industrialization process. President Park's insistence on developing heavy industry led to the rise of the *chaebol*, a collection of powerful businesses with direct access to government funding. Seoul offered protection to infant industries by issuing tariffs against competing products while providing subsidies to make South Korean exports more competitive, and thus driving the growth of the steel industry through export oriented industrialization. The importance of steel has been ingrained in the South Korean psyche as part of its success. The industry has been so important to South Korea that Seoul outright rejected calls from the Reagan administration in the mid-1980s to reduce its steel exports to the United States even though a reluctant Japan had agreed to reduce its exports shortly before.[116] South Korean production of steel in the 1980s had yet to reach its peak and post-Cold War production ramped up following the Asian financial crisis as the region clamored for the materials to further industrialize (Figure 11).

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[114] UN Comtrade Database.

[115] "Country Profile: South Korea," Observatory of Economic Complexity, December 5, 2017, https://atlas.media.mit.edu/en/profile/country/kor/.

[116] Art Pine and Thomas O'Boyle, "Seoul Rejects Cutting of Exports of Steel to U.S.: South Korea Says Shipment Will Remain at '84 Level in Setback to Reagan Plan," *Wall Street Journal*, December 11, 1984.

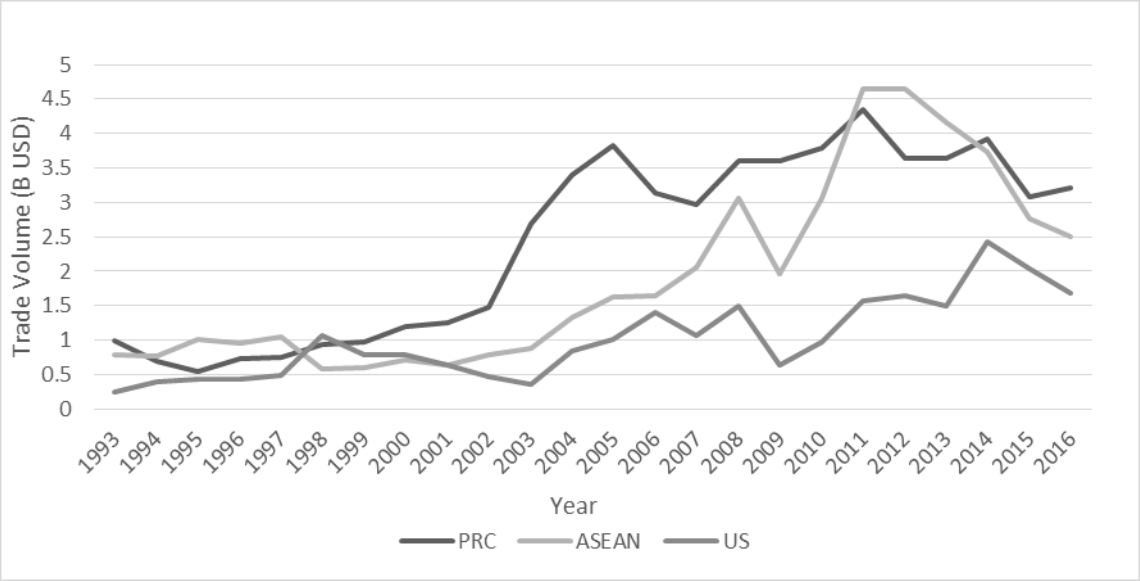

Figure 11. ROK steel exports.[117]

a. Steel Production Explodes in East Asia

South Korean and Japanese steel grew spectacularly after 2000, more than tripling their output by 2011 (Figure 12). Their export levels closely mirrored one another, indicating no preference among buyers for one producer over another while producing massive profits for both countries. South Korea's steel industry continues to grow to this day despite a decline in exports from 2011–2016. ROK steel exports in 2017 rose by 35%, setting a new record, and contributed to a new record surplus in South Korean trade. Overall trends in trade data suggest that the rise of China's steel industry has yet to definitively affect exports of South Korean and Japanese steel. Furthermore, China's massive rise in steel production has not affected South Korean steel exports to China, which have steadily grown despite conflicts over history, borders, and North Korea.

[117] Adapted from UN Comtrade Database.

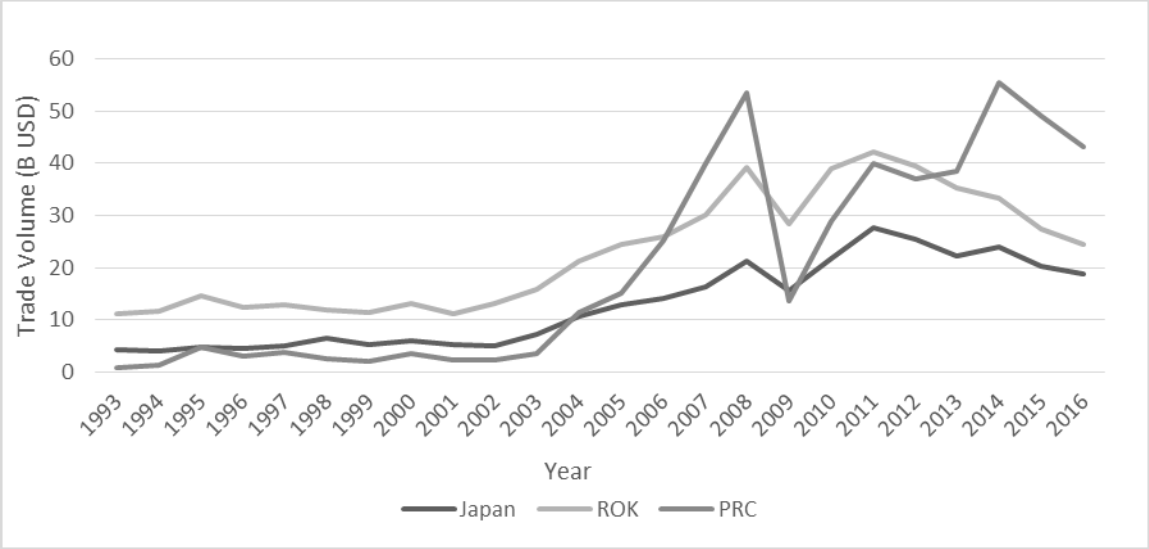

Figure 12. East Asia steel exports.[118]

b. Profit at Any Cost

Economic data illustrates that South Korea does not decrease its steel exports to China following a crisis (Figure 13). In every case, steel exports to China in the year following a crisis increased relative to changes in trade with the United States and ASEAN. This suggests three behaviors in Seoul's decision to export a strategically valuable good, which are all linked to its dependence on China for its economic success. First, South Korea values its economic partnership with China above all others given the sensitivity of its economy to fluctuations in the Chinese economy and overall dependency on the Chinese market for South Korean exports.[119] Second, that alliance status is no guarantee of favorable trade in strategic goods from South Korea. Finally, Seoul is likely not overly concerned that South Korean steel may make its way into North Korea by way of China.

[118] Adapted from UN Comtrade Database.

[119] Snyder and Byun, "New Sanctions, Old Dilemmas," 96.

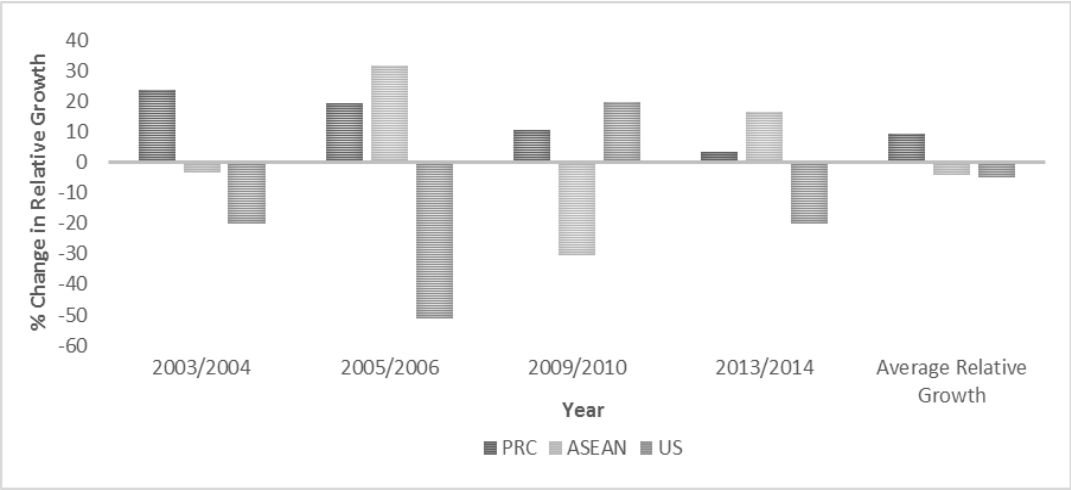

Figure 13. ROK steel exports.[120]

In 2006, weapons and military related components are clearly a concern as outlined in UNSCR 1718, but the materials used to make such equipment were not sanctioned.[121] That approach may have changed with the changes in the most recent set of sanctions levied against North Korea. UNSCR 2270, which was adopted in March of 2016, maintained the same restrictions on the export of military equipment, but expanded the list of items to include "any item, except food or medicine, if the State determines that such item could directly contribute to the development of the DPRK's operational capabilities of its armed forces…"[122] Chinese policy enforced this resolution soon after by announcing its decision to ban exports of "dual-use" items to North Korea. The list includes mostly technical items and scalable testing equipment, but is notably devoid of raw materials exports to the DPRK.[123] The latest set of sanctions signed in September of 2017, however, does include hard limits on exports of crude oil to North Korea.[124]

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[120] Adapted from UN Comtrade Database.

[121] "Resolution 1718 (2006)," United Nations, October 14, 2006, https://www.un.org/sc/suborg/en/sanctions/1718.

[122] "Resolution 2270 (2016)," United Nations, March 2, 2017, https://www.un.org/sc/suborg/en/s/res/2270%282016%29.

[123] Christopher Bodeen, "China releases new list of items banned for Export to North Korea," *Associated Press*, January 26, 2016, https://www.usnews.com/news/world/articles/2017-01-26/china-releases-new-list-of-items-banned-for-export-to-nkorea.

[124] "Resolution 2375 (2017)," United Nations, September 11, 2017, http://unscr.com/en/resolutions/doc/2375.

2. South Korean Petroleum Product Exports

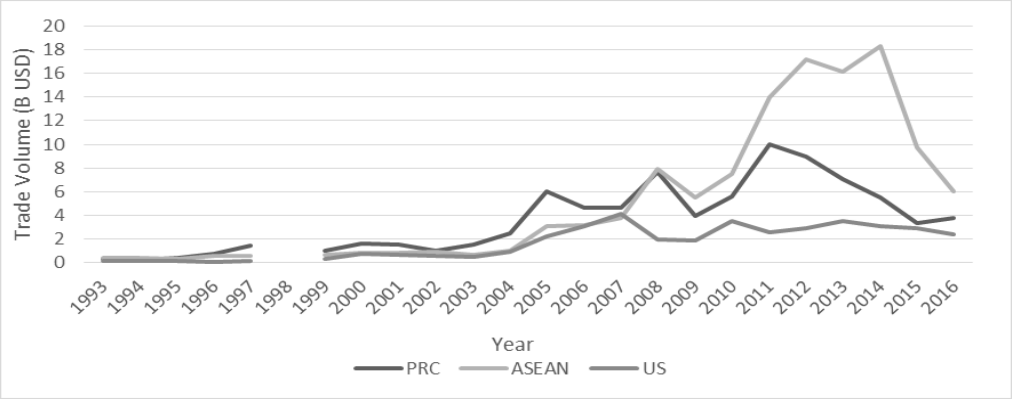
South Korean petroleum exports are often overlooked in discussions of energy security, which tend to stress Seoul's reliance on foreign sources for its oil needs. Imports of crude petroleum comprised 11% of South Korea's total imports in 2016, leading all other goods entering the country.[125] After processing the crude, however, Seoul then exports much of the finished product abroad for profit as opposed to keeping it for domestic consumption.

a. The South's Surprising Petroleum Revenues

As an export, finished petroleum comprised 5% of the South Korean export market, making it the fourth largest export overall.[126] Exports to China have grown over time, but not as quickly as exports to the ASEAN states. As of 2008, ASEAN replaced China to become the number one destination for ROK petroleum exports (Figure 14). China remains a substantial recipient of South Korean petroleum exports, buying over 6 million barrels in 2016. Petroleum exports have thus provided an avenue for Seoul to use energy to punish Beijing and Pyongyang in times following a crisis. But like its steel exports, South Korea has shown a pattern of maintaining fuel exports to China regardless of its security concerns.

125 "Country Profile: South Korea."

126 "Country Profile: South Korea."



Data not available for South Korean petroleum exports to individual countries in 1998.

Figure 14. ROK petroleum product exports[127].

b. Fuel for the Fire?

Exports of South Korean petroleum to China are relatively higher in the year following a security crisis as compared to exports to ASEAN and the United States as shown in Figure 15. This follows the positive correlation demonstrated by the steel industry in all but one case and South Korea's reliance trade with China despite regional tensions. Additionally, events in 2006 and 2010 that specifically involve North Korean actions show both a relative increase and decrease in the year after the crisis.

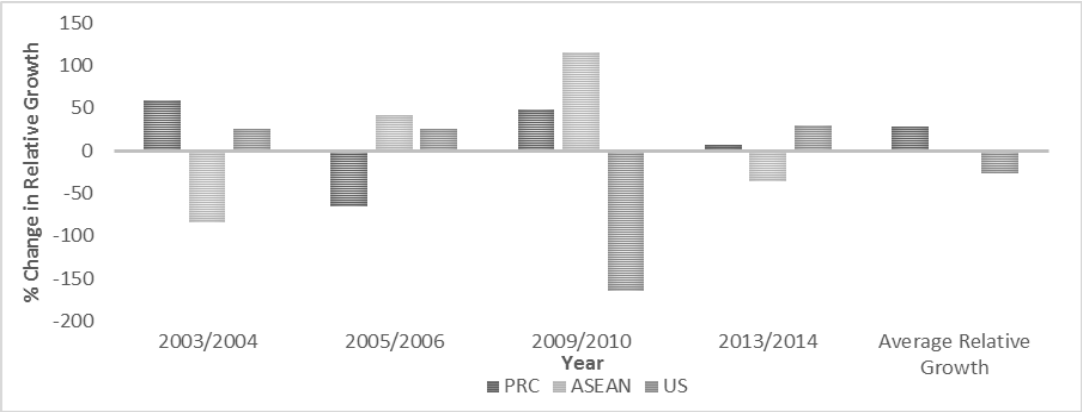


Figure 15. ROK petroleum product exports.[128]

[127] . Adapted from UN Comtrade Database

[128] Adapted from UN Comtrade Database.

This is surprising given the fact that the overwhelming majority of fuel imports to North Korea come from China.[129] However, South Korea would still need to convince China to reduce its own exports to North Korea to ensure that a South Korean reduction had any real impact. Any export reductions thus ensures a loss of profits for South Korean companies and may or may not have the intended effect on influencing the Kim regime's actions.

D. SOUTH KOREA'S ECONOMIC DILEMMA

South Korea's economy is less fragile than Japan's (2.8% growth in 2016), but Seoul's ability to influence Chinese security decisions by strategically reducing exports is more complicated.[130] China's role in supporting North Korea reduces South Korea's ability to directly influence the Kim regime as its primary security concern. As such, reducing South Korean exports of steel or petroleum to China may not affect Chinese exports of these goods to North Korea whatsoever and therefore have little or no strategic effect.

South Korea's prospective manipulation of strategic goods to influence policy in China is primarily hampered by Seoul's direct reliance on the Chinese economy for its own economic growth. South Korea is exceedingly vulnerable to China economically. Roughly a quarter of annual profits generated by South Korean exports come from China and slowing growth rates in China have been shown to have a direct impact on South Korea's economy as well. In essence, any attempt to punish China by reducing trade is doubly costly in that it likely has repercussions that exceed the initial impact. South Korea loses the profits from the export itself and is then subject to any slowing of the Chinese economy this reduction might incur. Seoul has essentially backed itself into a corner where a dual hedge strategy has become the only option available to meet both its economic and security goals.

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129 International Crisis Group, "Fire on the City Gate," 10.

130 "GDP Growth (annual %)," The World Bank, accessed December 5, 2017, https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?locations=KR.

IV. CONCLUSION

China has become an indispensable trading partner in East Asia. Japan and South Korea have been forced to sacrifice absolute gains in economic growth and development even in times of crisis due to their incredible level of economic interdependence. Both countries are so heavily reliant on China to buy their goods (though for differing reasons) that Tokyo and Seoul are unable to reduce exports to China due to the severe economic consequences such a reduction would have at home. Flash points over contested territory, military operations, history, and a belligerent North Korea have therefore had few effects on exports from Japan to China and no effect on exports from South Korea to China. Each country displays measureable dual hedge tendencies, with mercantile realism explaining several portions of Japan's economic behavior, though neither country fits the model completely in the way Samuels and Heginbotham prescribed. On the last point of analysis, neither country seems to use steel or petroleum exports strategically to influence Chinse security policy following a crisis.

A. JAPAN TOO ECONOMICALLY WEAK

Changes in Japan's overall economy are at least partially illustrative of Tokyo's sensitivity to China's relative gains following a crisis and has resulted in a temporary shift of exports to the United States This trend is consistent across all measured conflicts with positive changes in relative export levels increasing for the United States and decreasing or neutral for China. In fact, the relative trend of moving exports out of the region entirely (decline in ASEAN exports as well) further supports the theory that this shift may be security related and not restricted by proximity. This data confirms Heginbotham and Samuels' concern that geography might not be as important to a mercantile realist as Walt might suggest.[131] It also reinforces mercantile realist theory that Japan, with its sensitivity to China as a rising military threat, would move closer to the United States as a more capable security guarantor instead of ASEAN, which has had little success in assembling a united front against Chinese actions in the South China Sea.

[131] Heginbotham and Samuels, "Mercantile Realism," 174.

This analysis supports the theory that Japan remains a mercantile realist to this day while the data involving the export of strategic goods supports Heginbotham and Samuels' "dual hedge" hypothesis.

Japan's trade in strategic goods as measured by this study indicates that Tokyo is not concerned about the export of steel and petroleum to China. This is concerning given that their maritime disputes in the East China Sea involve military and fishing vessels made from steel and running on petroleum. Japan's ability to significantly affect the production of Chinese vessels may be insubstantial, but even the thought of Japanese exports used for Chinese military production should give the politicians in Tokyo pause. The "dual hedge" theory of Japan's economic and security policy is represented by this lack of concern, indicating that Japan's conception of a strategic good is not security related. A strategic good may be may be more related to investment in China, given that Tokyo's singular action against CCP policy has been to reduce grant aid in the late 1990s.[132] Japan will likely continue to balance security concerns against economic benefits with China for the foreseeable future. South Korea, however, has chosen to go all-in with China and in many ways directly contradicts its own security concerns.

B. SOUTH KOREA TOO ECONOMICALLY DEPENDENT

With roughly a quarter of all exports heading to China, South Korea is heavily reliant on the world's second largest economy for its economic wellbeing and maintains a strong correlation to Heginbotham and Samuels' dual hedge theory. Security concerns have little or no impact on export preferences across all industries following a dispute with China. South Korea has not shown any mercantile realist tendencies either, likely due to its overwhelming dependence on Chinese trade. Seoul's stated concern over increasing competition with Chinese goods has simply not materialized in any measureable way. These concerns should be amplified during times of crisis and shown directly by positive relative change and so South Korea is most definitely not a mercantile realist. It does, however, show a much more robust case as a dual hedge country based on its trade in strategic goods.

[132] Bush, *The Perils of Proximity*, 17.

Exports of South Korean steel to China in the year following a crisis improved relative to that of the United States and ASEAN for every year measured. Exports of petroleum to China were relatively positive in three out of four cases as well. This data indicates that South Korea is more concerned about the economic benefits of trade in steel and petroleum than it is about the security implications of these goods being used in military production in either China or North Korea. The DPRK's reliance on Chinese fuel imports lends greater gravity to the idea that Seoul should be more proactive in restricting petroleum exports in times of crisis.[133] In this way, South Korea embraces the dual hedge strategy even more fervently than Japan by increasing trade in strategic goods regardless of the security environment. Whether or not this hedging will lead to security implications for the economy or vice versa has yet to measurably materialize.

For now, it seems that Japan and South Korea have either ignored the implications of exporting to strategic goods to potential adversaries or they prefer to continue trade with China so long as the immediate security consequences of doing so are not readily apparent. Tokyo and Seoul have demonstrably continued exporting to China even following periods of pronounced conflict and are unlikely to change their approach in the near future. China's increasing integration into the region and growing role as an economic leader makes changing trading partners even more difficult as there are few alternative markets that are as diverse and profitable as the Chinese market. North Korea will continue to be troublesome for this growing leadership role as an unpredictable liability at best and a potential humanitarian crisis at worst. All the same, these East Asian actors are seemingly locked into a tenuous relationship where trade outweighs all other priorities and where disputes go largely unpunished.

[133] International Crisis Group, "Fire on the City Gate," 10.

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