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Trade-off and Transaction between Security and History**
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〈Summary〉

Prime Minister Abe has claimed to stand for a "breaking-away from the postwar regime" as the core idea of the regime since his first Cabinet was launched in 2006. Abe used to emphasize two policy directions to achieve the "breaking-away from the postwar regime": (1) recovery of US-Japan alliance relationship and revision of constitution (from SDF to Self-Defense Army), and (2) educational regeneration based upon new Basic Law of Education. This research raises two questions. The first is whether Japan had broken-away from the postwar regime since the launch of Abe's 2nd Cabinet? If the Abe Cabinet succeeded in "breaking-away from the postwar regime, how was it possible and what was Abe's strategy to achieve that goal? To find answers to these questions, Abe's policy goals are placed in the framework of national strategy. The second topic is on Abe's strategic calculation. As long as Abe and LDP placed top priorities on the two goals, there should have been tactical maneuvering between the two goals. To find answers to these two questions, Abe's policy goals are placed in the framework of national strategy.

From the literature review on the national strategy of Japan, we can find that there were no national strategy not to mention about the grand strategy. After the Second World War, in Japan, there was no public work to establish a national strategy. During the Cold War period Japan lacked the appropriate mind set for national strategy. There was no need to think about a strategy because of the so many constraints of the US-Japan alliance and the peace constitution. Even Yoshida Doctrine was not a strategic work that came through the formation of national strategy. Yoshida government's maneuvering under the status of a defeated country utilizing two policy tendencies of light armament and economic development and its institutionalization began to be called as a doctrine. Criticism on its anachronism in 1980s brought about a birth of Ozawa's

'normal country' and Nakasone's *Japan's National Strategy of 21st Century*. However, none of them were fulfilling the requirements for national strategy and were not supported by political power.

Abe's strategy is represented by National Security Strategy (JNSS hereafter), approved by the Cabinet in December 2013. It is fulfilling the four conditions of a national strategy, 1) suggestion of national ideology and its goal, 2) specification of national interest, 3) sorting the threat factors in global and Asia-Pacific environment, and 4) action plans to achieve the goals, but not 5) prioritization of national goals. It could have not met the 5th because JNSS is not a comprehensive national strategy or a grand strategy. To 'break-away' from the postwar regime, changes in security sector would be more important than any others. The fact that it is the only area for which national strategy is established could be an expression of precedence among the various sectors.

The most important goal of JNSS is the revision of peace constitution. The common goal between the US and Japan is the permission of the exercise of collective self-defense. So far, Abe government achieved this goal, only partially, through constitutional reinterpretation.

What extent did the Abe Cabinet achieve the breaking-away from the postwar regime? There are two things to remember when it comes to 'breaking-away' in security sector. The first is to amend the Constitution with the hands of Japanese, and the second is to escape from the dependence on the US in the security sector that served as the basis of the Yoshida doctrine. Abe thinks that it is neither possible nor desirable to leave the US-Japan alliance. Currently Abe is starting up the process toward the constitutional revisionism by extending his rule to Year 2021. The progress toward the 'breaking-away' has become very much irreversible because the Security Legislation is positioned within a national strategy and a carefully planned series of legislative institutions.

What is Abe's strategic calculation in meeting the US strategic demands? His strategy was to trade-off between security and history. He was demanding US concession in history matters, while yielding to the US demand in diplomatic and security issues such as defense cooperation, participation in TPP and Okinawa base relocation program, etc. This strategy have also enabled Japan to expand and increase its security role in balancing the rise of China, while cooperating with the US

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I. Introduction

Prime Minister Abe has claimed to stand for a "breaking-away from the postwar regime" as the core idea of his rule since his first Cabinet was launched in 2006. He realized the revision of the Basic Law on Education and the upgrade of Japan Defense Agency to Ministry of Defense, a full-fledged ministry, in the short period of a little over a year. For the general election which made his return to power possible in December 2012, and for the beginning of his second Cabinet, the 'breaking-away from Postwar regime' became his governing slogan again. As of July 2016, against the backdrop of the overwhelming victory in the upper house election, the Abe government is heading for toward a revision of the Constitution, which is the biggest goal of the 'breaking-away'.

During the 3 years and 8 months since his return to power, he has already accomplished changes in a number of policies and introduction of new policies to realize the governing slogan. With the constitutional reinterpretation, the permission for the exercise of the right for collective self-defense was legislated and the Guidelines for US-Japan Security Cooperation was revised. The things which were illegal and unconstitutional until the beginning of his second term became legal and possible. By the release of his statement on the 70th anniversary of the end of World War II, he settled the controversy over his own perception of history on Japan's imperialist aggression and war crimes. Despite of the turmoils caused by his visit to Yasukuni Shrine, his comments showing his historical revisionism, and the provocations concerned with the coercion in the issue of 'comfort women', Abe earned the evaluation that he made concession and pragmatic approach to history issues.

His final goal is to achieve the revision of Article 9 of the Peace Constitution, by pushing the momentum of achievements in institutions and perception. The possibility of constitutional revision is still in the fog. Then, it is necessary to evaluate whether the effort for 'breaking-away from postwar regime' is going on and how much it has achieved.

The year 2015 marked a major turning point in Japan's security strategy and US-Japan relations. However, when the PKO legislation was passed in 1991, when the Surrounding

Areas Law passed in 1999, and when the US military relocation was implemented in 2004, they were accompanied by evaluations such as "breakthrough" and "transfer". To make a fair evaluation on the changes under the Abe Cabinet, we need to look over these points: whether establishment of the Security Laws in 2015 and revision of the Guideline are crucial enough to be distinguished from the previous security policies, and whether the permission of collective self-defense is no more than the previous changes limited within the framework of incrementalism or it marks the emergence of a new Japanese national strategy. On the permission on the exercise of the right for collective self-defense, two arguments are contradicting each other. The one is that it is same with the virtual constitutional revision and the other is that the basic logic of the existing constitutional constraint is maintained.

This study attempts to analyze from the dimension of Japan's national strategy whether Abe's Japan broke-away from the postwar regime or not. Recently, the Abe Cabinet established a study group called 'Headquarters to Learn History and Look for the Future' whose purpose is in cultivating new awareness on the postwar regime. The dominant explanation is that the establishment of the study group is intended to be a preparation work in advance for a regime change. While the constitutional revision is a change in hardware, a new perception on history is a change in software.

This research focuses on two topics. The first is whether Japan had broken-away from the postwar regime since the launch of Abe's 2nd Cabinet? What is the US's stance on the breaking-away from the postwar regime? What is Japan's strategy for the relationship with the US in pursuit of the change? Will the US tolerate changes in the postwar order in return for Japan's defense burden-sharing? The second topic is on Abe's strategic calculation. If the Abe Cabinet succeeded in "breaking-away from the postwar regime, how was it possible and what was Abe's strategy for that goal? Abe's pursuit of 'breaking-away from the postwar regime' is under way in collaboration with the US Therefore, this study intends to analyze Japan's national strategy in the framework of US-Japan alliance.

II. Literature Review on Japan's National Strategy

In order to evaluate the national strategy of the the Abe Cabinet, it is necessary to examine the discussions in the previous period. Existing studies on Japan's national strategy, except for discussions on individual policies and strategies, start from the judgment of 'Yes' or 'No' on the question whether there is national strategy in Japan or not. While researches on the 'Yes' side are based on the assumption that it is very natural for a country to have a national strategy, researches on the 'No' side argues that when governments of a country find it is unable to carry out the national affairs according to the strategy, because of numerous constraints at home and abroad, governments may recognize that forming a national strategy is not only difficult but also meaningless. Japanese researchers lament that there is no strategy in Japan, and tend to raise people's awareness about it. Scholars and governments in US tend to emphasize that Japan keeps avoiding its due responsibilities for the international community and even for its own defense, by leaving such a situation of national strategy untouched. On the other hand, scholars in Korea (Bae Jung-ho 2006, Sohn Gi-seop 2012, Song Joo-myeong 2009) evaluate the Japanese situation as there is a reasonable and solid national policy in Japan.

Each area of a country has its own strategy and a strategy that covers all of them could be called a grand strategy or a national strategy. However, in the case of Japan, as long as a debate is concerned with a national strategy it can not be done separated from government policy orientations in national defense and security. It was because of the yoke put on a war-defeated country and the constitution, which is the most unique one in the world. The area of national security has been a central part in debates on national vision and national strategy. In this paper too, we will focus on the security strategy in evaluating the existence of Japan's national strategy.

The titles of the books published by two major Japanese newspapers in 2007 emphasize that there is no national strategy in Japan. Yomiuri Shimbun published a book entitled "*Verification: Japan Without National Strategy*" and Asahi Shimbun titled it "*Is There a National Strategy in Japan?*" Yomiuri Shimbun sent an alarm to the Japanese government and society, emphasizing that there is no national strategy in view of

Japanese experts in all fields of politics, economics, science and technology, education and environment. Asahi Shimbun reported that more than 40 experts said "no" when asked if Japan had a national strategy or not. Based on this survey, Tanter and Honda (2005) analyze the absence of Japanese strategy.¹⁾ The Yoshida doctrine, which reflects so many constraints of the postwar period, should not be called a national strategy, but also its side effects prevented the Cabinets from conceiving a national strategy. When accustomed to such a frustration, strategists would not be willing to labor out unfeasible policies. Masaru Honda (2007) called such a tendency "Strategic Allergy."

The Yoshida doctrine brought about a 'crisis of governance' in Japanese society. The free riding in the defense sector and the concentration of national power in the economic sector have prevented efficient integration of policy institutions in such areas as diplomacy, defense, demography, natural resources and economy. As the constitutional and administrative limitations that prevent the Self Defense Force from acting as an army of normal country have continued, there has been no proper mechanism for establishing security strategy. Under such circumstances, it is argued that the absence of national strategy is inevitable (Tanter 2005). Strategic phrases such as Ohira's concept of 'Comprehensive Security', Nakasone's 'International Country Japan' and his commitment for Japan as an 'America's unsinkable aircraft carrier', Miyazawa's 'Strategic ODA' and the New Miyazawa Initiative came out in the process of seeking alternatives to Yoshida Doctrine under the increasing US demand for burden sharing. However, they all failed to establish themselves as sustainable strategies because of their reactive nature of finding answers within the framework of the Yoshida doctrine.

Takahata Akio (2016) also points out the harmful effects of the Yoshida doctrine. Although it could be a Japan's success story, it has made the exercise of its autonomous diplomatic and security policy impossible because it showed a policy that was nothing but a follow-up to the US. In addition, it was buried in reflection and martyrdom of past militarism and was unable to meet the demands of the international society because of obsession with one-country pacifism. Failure to respond to the Iraq war has since

1) During the course of this project, I interviewed five Japanese scholars. Only one of them answered that there is a national strategy in Japan, and he actually answered the same question in 2007, and the answer was that the Yoshida Doctrine corresponds to the national strategy.

remained a trauma to Japanese society. Entering into the post-cold war era, the war behavior that occurred around the border of the countries changed into a war of peace keeping activities. However, Japan could not read, follow, or make subjective judgment of the world's tides (Akira Takahata, 2016, 171). When the doctrine dominated Japanese society for several decades, it left a deep foot print in Japan's diplomatic and security strategic thinking. "Pro-American, anti-communist," "light armament and economy first," "economy is first class, politics is third class," "Economy is a great nation, politics is pygmy," and "economic animal" are the expressions used by the international community to call for Japan's diplomatic and security strategy. Another analogy for such limitations is 'karaoke diplomacy' (Jain and Inoguchi 1996). The background music and lyrics are all provided by the United States, and Japan is just about deciding who will sing.

Meanwhile, Soeya et al. (2011) discusses the 2006 Asahi newspaper expert survey. Among the Japanese scholars, only one person, Hiroshi Nakanishi of Kyoto University, answered that the Yoshida doctrine could be classified as a national strategy, and the other scholars answered "no." During the Cold War period Japan lacked the appropriate mindset for national strategy. It was because there was no need to think about strategy within the many constraints of the US-Japan alliance and the peace constitution.

Studies suggesting that there is no national strategy in Japan suggest that institutions and mechanisms are needed primarily to establish a new national strategy. Takahata Akio (2008) points out that the establishment of an open national strategy-setting process is a pressing need, after analyzing the process of discussion for national strategy in the United States. Nakasone (2000) emphasizes that there are some intelligence agencies but the fact that there is no information integration organization like CIA is a big obstacle to the formation of national strategy. In Japan currently, there are several intelligence organizations such as the Ministry of Defense Information Office, the Cabinet Information Inspection Office, International Information Office in the Ministry of Foreign Affairs, the Public Security Inspection Agency, and the Maritime Security Service. However, it is unclear which organization oversees the information flow to the NSC. In addition, it argues that rapid improvement is necessary because universities and private research institutes for fostering talented people who are able to concentrate on national strategy are poor.

Historian Kenneth Pyle (Pyle 2007) uses international political theory to illustrate the characteristics of Japan's foreign policy decision-making since the Meiji Restoration. The course of the country selected by each age Japan is, in some part, the outcome of efforts to make a rational choice among policy-making groups. However, the international environment was dominating the Japanese institutions and diplomatic behaviors. In other words, rather than saying that Japan had passed its planned course on the basis of the national strategy established by itself, Japan would have changed its foreign policy and internal organization in accordance with the changed order whenever the international system underwent fundamental change. Therefore, his claim is categorized as 'no'.

On the other hand, Katzenstein (1996) begins with the claim that the pacifist identity formed in the constitution and education system in the postwar Japan and the flow of domestic politics formed a strategic culture. The foreign policy of the Yoshida doctrine is no longer a policy that means a passive response to the international environment, but a representation of national strategy based on social consensus based on Japanese social norms and identities. As the domestic political environment played more important role than the balance of power of the international community did in the decision-making, it is recognized as a diplomatic and security policy based on national strategy.

The argument of Samuels (2008) can be placed between 'Yes' and 'No' in answering to the question over the existence of the national strategy in Japan. He assumes that the answer to this question can vary depending on the viewpoint. Japan has created a strategic culture and identity centered on 'vulnerability' in its historical path. The history of security policy is not an outcome of irrational or unreasonable trauma, but rather an outcome of heated discussions and the process of consensus formation (Goldilocks Consensus) among domestic actors.

III. Japan's National Strategies

1. Yoshida Doctrine and Its Institutionalization

If concerned with national strategy of Japan, in the postwar era can be divided into three periods. The first is the period of the Yoshida doctrine and its institutionalization. This period extends to the time of the 1980s when the Prime Minister Nakasone proclaimed for the settlement of the postwar politics and the internationalization of Japanese society. The second is the 2000s, the period that looked for the alternative to the postwar Japanese system. The third is the period when Prime Minister Abe is leading Japan for "breaking-away from the postwar regime" under the name of the proactive pacifism.

The first period corresponds to the so-called the "postwar" which the second and third periods refer to the first period. It was a time of rising from the wounds of defeat, achieving economic growth, and developing into a great economic power. Such achievements were possible due to dependence on the US in the security field. Japan has concentrated its efforts on economic development by securing security guarantees in exchange for the role of the base country (Nam Ki-jung 2000), and minimizing investment in the defense sector. The domestic political and economic system that sustained during the period and continued well into the second period is call 'postwar' of Japan (Hirano et al., 2004).

By the time the catch-up to the West is over, the Nakasone Cabinet proposes "the final settlement of postwar politics." It starts with the perception that Japan is now a great nation, and that it has to do what is right for it. The 1980s was the era of the 2nd Cold War, when US President Reagan confronted the Soviet Union with a strong dollar policy. As a result, Japan and Germany were able to enjoy a boom in trade and become major economic powers. The 1985 Plaza agreement resulted in Yen appreciation. This time, Japan was able to act as a big hand in the East Asian market based on the strength of the yen. This was the reason why the strategic ODA policy for Southeast Asia was possible during the Takeshita government.

At that time, Nakasone advocated 'international country Japan', which implies that Japan

should engage in international political affairs and demonstrate active leadership in world politics. In fact, Nakasone actively promoted summit diplomacy to strengthen the US-Japan alliance and to become a great power in the G7 summit. He urged Japan to move away from Yoshida Doctrine in the security field.²⁾ He also insisted that the Japanese archipelago play an active role, called 'unsinkable aircraft carrier' in supporting the US military which is conducting the 2nd Cold War. He also amended the 3 principles of arms export even in a limited way. In defense budget, he abolished the 1% rule and budgeted more than 1% of the GNP.³⁾ However, he was able to modify the Yoshida doctrine, but he failed to implement a policy that deviated significantly from it. As a result, unlike the slogans, the Yoshida Doctrine was hardly touched by the political systems and institutions that supported it (Samuels 2007).

Changes in security policy, liberalization of trade industry, and market liberalization in agriculture have faced domestic objections and nothing has been done properly. On the other hand, policy implementation in the monetary and financial sectors, such as the Plaza Agreement, was possible because it was an area that was not significantly restricted by Japan's domestic conditions. From the 1980s to the 1990s, trade and commerce sector caused serious conflicts with the US-Japan relationship because of trade disputes, but defense sector, monetary and finance sector played a role of stabilizing the US-Japan alliance. As a result, Japan was able to act as an economic power in the world political stage (Shiraishi, 2016, 252). Nakasone was able to respond quickly to US expectations in the financial sector, even though domestic political coordination was difficult in many other areas at the time, because the international finance sector was relatively free from domestic opposition.

The fact that Japan, the economic power of the late 1980s, was criticized by the international community for failing to play a role as a member of the United Nations in the Gulf War in the early 1990s has left a serious trauma to Japanese society. Ozawa's

2) On the discussion of security policy in Japan during the 1980s, Mochizuki (1984) classified these four schools of thought: 1) Demilitarized Neutralists, 2) Political Realists 3) Military Realists, and 4) Japanese Rights. According to this classification, Nakasone during the Prime Ministership is classified as a military realist.

3) In 1987 alone, the budget surplus exceeded only 0.0009% from 1%, while the actual defense spending was 0.9924%, which is less than 1% as before (Choi 1997).

'normal country' argument emerged from the crisis. This is the first national strategy proposed as an alternative to the Yoshida doctrine. In his book, *Blueprint for a New Japan* (Ozawa Ichiro 1993), Ozawa insisted that Japan should be a "normal country" where it could have military forces like any other countries. However, the Japanese national image he proposed is closer to Japan, which is leading the international contribution as a member of the United Nations, rather than Japan contributing to the US-Japan alliance. This was understood as a rightwing idea beyond the claims of military realists at the time. As the search for a strategy to replace the Yoshida doctrine proceeded, various opinions began to be presented about the national image of Japan as a normal country.

2. Search for National Strategy in 2000s :

Nakasone's 21st Century National Strategy

In 2000, former Prime Minister Nakasone published "*The National Strategy of Japan in the 21st Century*." His strategic conception needs to be compared with Abe's, so it is introduced in some detail here. Nakasone (2000) takes defense and education as two key areas in which to find answers to postwar political problems in Japan. He writes:

"I asserted at the Constitutional Research Council in the House of Representatives held in May this year as follows. One of the reasons why Japan lacks its own national strategy and is criticized as lacking an influential figure among Japanese politicians is that the current Japanese Constitution was created by the occupying US military and almost without the voice of Japan, thus we Japanese lost Japan's independence spirit and national pride... The utilitarian trend of succumbing to power affected politics... Therefore, even in order to separate from the fall of the spirit at the beginning of the 21st century, it is necessary to enact a national constitution and a Basic Law of Education." (Nakasone 2001, 15).

In the field of security, he emphasized the establishment of the Basic Law of National

Security and the confirmation of the U.S.-Japan Security Treaty until the amendment of the Constitution is realized. In the field of education, he urged to foster patriotism of the country, the love for the local area, and the transition of historical perception by the amendment of the Basic Education Law. He worries that the current Article 9 of the Constitution is ambiguous, its interpretation is jagged, and the ambiguity could become the source of calamity. Therefore, if the fundamental change in the security policy through the constitutional amendment is impossible, it is suggested that the National Security Act be enacted first. "Even if we acknowledge the right of collective self-defense, the process of its exercise needs to be regulated by national consensus. Indeed, the National Security Law should ensure the civilian control over the exercise and invocation of self-defense rights should be under the strict control of the Congress or the government" (Nakasone 2001, 72).

On the US-Japan alliance, he argued that consolidation through new confirmation is a prerequisite for Japan's national strategy. Since its defeat in the war, Japan has, from the outset, established and maintained by itself its policy of denuclearization and light armament. As long as Japan maintains three non-nuclear principles, the US-Japan alliance must be defended. It is true that Japan's spirit of independence is blurred, but the US-Japan Security Treaty is necessary both for the world and for Asia. He emphasizes that weakening or altering the security treaty would undermine regional and domestic stability and should not be taken by Japan itself.

In addition to revising the Constitution and reaffirming the US-Japan alliance, another fundamental issue emphasized by Nakasone is the need for a study on the Tokyo War Crimes Tribunal. He points out that the Tokyo trial sees the Great East Asia War as a normal war for the Western Empire, but it is an invasion war for neighboring Asian countries. He also made it clear that he had said, "The Great East War was a wrong war, and it was a war that should not be done." In addition, since the independence countries have increased a lot since the Great East Asia War, there has been a positive function that increased the independence countries by raising the national movement. (Nakasone 2001, 74). Nakasone's expression seems to acknowledge Japan's aggressiveness toward neighboring countries but his logic eventually extends to the colonial modernization theory.

3. Components of National Strategy

Takahata (2008) argues that "after the World War II, in Japan, there was no public work to establish a national strategy and to establish individual policies accordingly" (167). Here, the establishment of a national strategy is a process in which a government or a government leader specifies national goal, direction and ideology in the form of official declaration or document, and obtains appropriate support through discussion of the National Assembly and verification of public opinion. This includes defining diplomatic and national interests. In the case of Japan, we must start with the task of creating Japan's own subjective sense of purpose and predicting the future while examining the trends of Asia and the Pacific, the world, and the future strategy of the United States. Future focus (target year) should be assumed and a forecast report should be drawn up, and a multi-layered and multi-national target should be drawn based on this. Definition of national interest is essential and policy priorities should be determined through stratification of national interests, such as vital national interests, vital national interests, important national interests, and secondary national interests.

His argument is the result of an analysis on the establishment process of national strategy of the U.S. by looking at national strategy reports submitted by five organizations and groups during the period from 1998 to 2005. The commonality of these reports is that they predict and analyze the changes in the world order in 10 to 20 years, and actively adapt to those conditions, and make a national strategy for the United States to build the order of the international society.

In all national strategies, the analysis of threat factors and constraints in coping with them, the assessment of available resources, and setting the goals after overcoming the threats are presented as a minimum. Each country seeks its ideal goal based on its own cultural characteristics, but this is only after the survival is secured. This is possible in a society where resources and opportunities are more abundant than constraints. In order to achieve the goal within the constraints of resources, substitution or abandonment among means must occur. Therefore, prioritization of the target is the key to success or failure of the strategy.

Let's divide the components of these strategies more closely. The Oxford Dictionary

defines a strategy as "a plan to build successful actions based on mutual dependence and rationality on the other's movements." It includes the following five elements. First, a strategy is a *plan* - a road map, a blueprint, or some intelligible account of how one expects to get from A to B. Second, a strategy is a plan for *action*... It presupposes willingness and intention to devote time, energy, and resources to... Third, a strategy is a plan for *successful* action, which logically requires an ability to articulate one's goals... Fourth, a strategy that takes into account the fact that other actors will have goals of their own and can be expected to do their best to achieve them, too. Fifth, a strategy includes a vision of the *means* by which... How will... What roles... What niches... With whom... (Soeya et al. 2011, 16~17).

Below, we will look at the national strategy of Abe Cabinet, and analyze Japan's National Security Strategy (JNSS) approved by the Cabinet in December 2013, according to the components of the national strategy presented above. Also, based on the policy changes that Abe Cabinet has been promoting so far, it will be possible to evaluate how much Abe has accomplished the 'break-away from postwar regime'.

IV. Abe's Grand Strategy : Security Strategy and Historical Revisionism

At the policy speech to the 189th Session of the Diet (February 12, 2015), Prime Minister Abe said, "To take Japan back - this is the only path forward." He says these are the words that he have lived by and expended every effort towards achieving over the past two years. The paths he suggests to reach the goal are economic revitalization, restoration from disaster, social security reforms, the rebuilding of education, revitalization of local economies in Japan, women's empowerment, as well as diplomacy and security. He added, "There is no reason why the Japanese people of today cannot achieve what their predecessors achieved in the Meiji era. Now is exactly the time for us to press forward together as one, setting out along the path before us. Let us together dynamically embark on the "most drastic reforms since the end of World War II".

Even though he laid out all the major policies of the government, the idea did not reach

the level of grand strategy because he stops explaining how to achieve the goals in each sector without suggesting how to achieve the goals as a whole. From his political orientations expressed in his book of "Toward a New Country, Toward a Beautiful Country (2013)", policy achievements during the 1st Cabinet and political activities during the last four year, we can tell that the two area of education and security are the most important part of Abe's national strategy.

1. Grand Strategy of Abe Cabinet

Since Abe's first Cabinet inaugurated in 2006, Abe has proposed "breaking-away from postwar regime" as the regime's goal. Abe used to emphasize two policy directions to achieve it: (1) recovery of U.S.-Japan alliance relationship and revision of constitution (from SDF to Self-Defense Army), and (2) educational regeneration based upon new Basic Law of Education.

During his one-year term, the Cabinet achieved the goals of important issues that had been the aspirations of the Liberal Democratic Party (LDP) as a whole. He finalized the task of promoting the Defense Agency to the Ministry of Defense. The Basic Education Law was enforced by the Congress and the National Referendum Act was enacted as a preparatory work for the revision of constitution. Abe Shinzo, who returned as the Governor of the Liberal Democratic Party in six years after he stepped down as prime minister, presented four reform agendas in the general election manifesto which is titled "Get Japan back". They were regeneration of economy, regeneration of economy, regeneration of diplomacy, and regeneration of life.

Among these, regenerations in education and diplomacy are the two primary goals of Abe's national strategy for Japan. Diplomatic regeneration aims at restoring US-Japan relations and allowing the exercise of collective self-defense, and ultimately to the revision of Article 9 of the constitution. Educational rehabilitation aims at strengthening people's pride on home towns, local areas and the country through the spread of right-wing textbooks and historical revisionism. This is a key issue in the right-wing ideology. If the constitutional amendment is a change in hardware, educational regeneration can be said to be a reinforcement of the supporting software.

Abe's ultimate goal is constitutional revision. It has been mentioned several times that it is his political goal, and in his book he writes: "The goal of the Liberal Democratic Party at the time of its formation was that Japan should regain its independence.... The skeleton of the nation must be written on white paper with the hands of the Japanese people. But Abe's decision to change the constitution is focused on Article 9, which renounces war and the possession of war potential as well as the right of belligerency. The revision of Article 9 is the long aspiration of Japanese conservatives as well as Prime Minister Abe. Therefore, Abe's national strategy is concentrated in the security area.

In February 1997, when he was a new comer to politics, Abe organized "A Meeting of Young Lawmakers Who Thought about the Future of Japan and History Education."(Lawmakers' Meeting) As a first secretary general of the meeting, he led the movement to revise history textbooks. Even after the first Cabinet was terminated early, he has been supporting the activities of the 'Association to Make New History Textbook' (Association) by taking charge of important positions such as director or adviser at Japan Conference, a right-wing group coordinating and controlling the militaristic line. Since 2006, he has been working closely with other Japanese right-wing politicians for the Organization for Japan's Educational Regeneration (Regeneration Organization) formed by the group, which has been separated from the Association. He also played the role of a midwife in the establishment of Ikuho Sha after his resignation from the first Cabinet. In February 2011, he reopened the activities of the Lawmakers' Meeting that were dormant since 2009, renewed the organization and strengthened cooperation with the Regeneration Organization (Kyoikusaisei Hensyubu, 2011, 10-11).

The two pillars of Abe's national strategy, constitutional revision and historical revisionism, are found to be in the same line with what Nakasone (2001) proposed as the two most necessary reforms for Japan. This is the reflection of the tendency of conservatism and liberalist historical view that began to dominate Japanese society since the late 1990s. This is a process in which the content of the 'normal nation' proposed by Ozawa in the early 1990s changed from UN-centered pacifism to US-Japan alliance-centered pacifism.

The National Security Strategy (JNSS) established by Abe's Cabinet serves as a direct bridge to the constitutional revision. The Strategy was created with a view to allowing the exercise of collective self-defense rights, and the granting of the right is a key mechanism to alleviate the shocks that people may feel from the constitutional revision, because it is an intermediate stage going to the revision of Article 9. It is also in the area of security strategy that people can visually evaluate the "break-away from the postwar regime". In the history and education field, important attempts were made such as the verification of Kono statement, the issue of Abe's statement for 70th anniversary of the end of WWII, and the establishment of a 'Headquarters to Learn History and look for the Future', but there are no documents presented in the form of official documents to be evaluated at the level of national strategy. Just as an effort for active foreign policy, the plan on how to spread the Japan's stance on interpretations of history is included in several government policies.

Below, we will evaluate two topics: The first is, how far Abe's Cabinet has "broken-away from the postwar regime" by looking over the framework of the security policies introduced for the first time by 2016.

2. Evaluation of National Security Strategy

(1) Ideology and Goals of National Security Strategy

On December 17, 2013, JNSS and the National Defense Program Guideline (Defense Guideline) were concurrently approved by the Cabinet (National Security Council 2013). This is the first document to replace the "Basic Policy of Defense" issued in 1957, which is the highest national strategy on security. This document gives the National Security Council (NSC), established on 4 December, the role of control tower in the formulation and implementation of the strategy. It requires NSC to perform systematic assessments on a regular basis and make corrections if necessary. It is said to be a periodic revision, but specifies that a period of "approximately 10 years" is taken into account.

The purpose of this document is to clarify that it is a strategic document by stating that "Japan needs to identify its national interests from a long-term perspective,

determine the course it should pursue in the international community, and adopt a whole-government approach for national security policies." in its introduction. This document reveals that Japan's national ideology can be regarded as the policy of "proactive contribution to peace based on the principle of international cooperation." It is a great economic power with strong economic capacity and high technological capability, and it is defined as a maritime state with an 'open and stable sea.' It has been consistently following the path of a peace-loving nation in the postwar period, by keeping the promise to maintain the principles of an exclusively defense-oriented policy, not becoming a military power, and observing the three non-nuclear principles. When more active security role demanded by the international order is added up on the basic policies that Japan has maintained in the 'postwar' era, it is what JNSS calls 'the proactive pacifism.'

(2) Definition of National Interest

Japan's national interests and the goals of national security are defined The preservation of national sovereignty, independence and territory, the protection of the lives and property of the people, the preservation of peace and security on the basis of traditional culture and liberal democracy, the strengthening of the free trade system that enables Japan's economic prosperity as a maritime state, and the maintenance of an international order based on universal values such as freedom, democracy, respect for human rights, and the rule of law, are national interests of Japan. In order to protect these national interests, JNSS sets the following three goals. The first is preventing threats through strengthening necessary deterrence, and excluding them or to minimizing damage if threats approach. The sSecond is reducing or preventing threats by strengthening cooperation with partner countries as well as the US-Japan alliance. The third is strengthening the international order based on universal values and rules through diplomacy and human contribution, and playing a leading role in resolving the disputes.

(3) Security Environment and Threat Factors

The specific security environment and threat factors for achieving these goals are divided into two levels: global level and Asia-Pacific level. At the global level, the change

in power balance centered on the US and China, following loss of strong leadership, the emergence of non-state actors due to the rapid progress of technological innovation, the spread of weapons of mass destruction, proliferation and diversification of international terrorism, increased risks to international public goods in the oceans and the space, and threats to human security are the threats in pursuit of the national interests. At the level of the Asia-Pacific region, the shift of power, wealth and influence from the Atlantic to the Asia-Pacific region and the concentration of large-scale military major powers, the increase in North Korea's nuclear and missile threats and its military provocations, and the rapid rise of China, and its various advancement activities are the threats.

(4) Action Plan to Achieve the Goal

This document presents six strategic approaches to achieving Japan's security objectives: (1) strengthening Japan's own defense capability, (2) strengthening US-Japan alliance (3) strengthening diplomatic and security cooperation with partners in international community, and (4) proactive contribution to international peace-keeping efforts, (5) strengthening international cooperation in the field of non-traditional security, and (6) strengthening the domestic foundation and promoting global understanding.

Of these, (1), (2) and (3) are the traditional approaches to the security field. A state is supposed to improve its own capabilities first, and then to make alliances when security is not guaranteed by itself, and third, to strengthen security cooperation with neighboring countries. Japan's perception on and response to China threat, which was less highlighted by the threat analysis in the above, are addressed in this action plan. Approaches (4) and (5) are not policies directly affecting Japan's safety, but rather policies aiming at securing Japan's safety indirectly by enhancing Japan's image and influence in the international community. Approach (6) is to emphasize the domestic base and to secure the support of international society through the spread of Japanese software power.

Approach (1) presents countermeasures in 10 areas that Japan can take against the external threats. First, diplomacy should be strengthened to create a stable international

environment. In addition to enhancing diplomatic creativity and negotiation power, Japan should also secure support of the international community through the reinforcement of Japanese staff in the United Nations and international organizations. The Second is the improvement of defense capability by the establishing the comprehensive defense system. More detailed plan is specified in separate documents of Defense Guideline and Medium-Term Defense Program. These two are ratified by the Cabinet on the same day that JNSS was ratified. It is intended to plan Japan's defense posture for the next decade, but it is written with defense cooperation in mind expecting the revision of the U.S.-Japan Guideline. Third, in order to strengthen maritime surveillance capabilities, strengthening the functions of law enforcement agencies and strengthening cooperation between the relevant ministries and agencies are necessary. Fourth, in order to secure maritime security, protection of SLOC (sea lane of communication) around the arc of instability, which stretches from Middle East to Japan, and active support for cooperation with partner countries and enhancing their capabilities should be guaranteed. In addition to these, cyber security, enhancing information capability, countermeasures against international terrorism, utilization of space and security in space, and advancement in advanced defense industry are enlisted as means to improve Japan's own preparedness.

Approach (2) suggests the enhancement of deterrence by strengthening the US-Japan alliance. It is emphasized that the cooperation of the two countries through the TPP membership is also an important part of strengthening the alliance partnership of the two countries beyond the economic cooperation in the Asia-Pacific region. U.S. and Japan should revise the US-Japan Guideline through mutual adjustment on roles, missions and capabilities (RMC). The core contents of the revision is strengthen consultation for coordination such as joint training, joint information collection, vigilance and reconnaissance activities and joint planning in addition to previous cooperation through joint use of base and joint exercise, across the situations of peacetime, emergency, and armed conflict. It emphasizes the strengthening of defense cooperation by resolving the transfer of US bases in Okinawa to reduce the burden on the U.S. and to establish a stable U.S. military base. In April 2015 guidelines were revised one year and four months after the establishment of this strategy. Prime Minister

Abe visited the United States and signed the revised Guideline, with the initiative to legalize the security laws to allow the exercise of collective self-defense. Therefore, at the time of the establishment of this strategy, it was already planned to strengthen the US-Japan security cooperation through the exercise of collective self-defense rights.

Approach (3) emphasizes strengthening cooperation with Korea, Australia, ASEAN countries and India, because Japan recognizes them as countries sharing universal values and strategic interests. This is equal to promoting alliance network based on the bilateral alliance with U.S., which is a new mode of alliance management in the globalized world

Approaches (4) and (5) are about enhancing Japan's image of pacifism based on the principle of international cooperation. Considering the space constraint, let's move to the last action plan of Approach (6). This approach, which focuses on the information dissemination and the strengthening of domestic social foundation in national security, aims to promote international understanding and changes in domestic attitude on Japan's security policy. JNNS says, "To this end, with the Prime Minister's office serving as the control tower, Japan will enhance its public relations in an integrated and strategic manner through a government-wide approach. Fully utilizing various information technologies and diverse media, Japan will also strengthen its information dissemination in foreign languages. In addition, the Government as a whole will cooperate with educational institutions, key figures, and think tanks. In doing so, Japan will promote Japanese language education overseas, and train personnel who are capable of contributing to strategic public relations efforts and other areas."

This means seeking the understanding of the victims of the Pacific War in the expansion of the Japanese military role, promoting the national image of Japan contributing to world peace and dismissing the distrust caused by the actions of the Japanese military in the past war. Here we can see the linkage between security strategy and historical revisionism that Abe Cabinet and Japan's Rightists consider as the first and the second pillars of Japan's breaking-away from the postwar regime.

3. U.S.-Japan Relations and Breaking-away from the Postwar Regime

(1) Institutional Position of National Security Strategy

From the above discussion, we can see that JNNS meets many requirements that a national strategy should have. If anything is missing, there is a lack of discussion on the priorities of policy based on stratification of national interests (Akahata Takahata, 2008). It can be explained by the fact that JSS is not a national grand strategy but a partial strategy limited to the security sector.

Kamiya (Kamiya 2014), one of the many who have argued for 'active pacifism' since the end of the Cold War, has been expecting that the reduction in economic power due to the declining birthrate and aging society could be a constrain as well as a background of the strategy initiative. Kamiya pointed out that Japan's GDP accounted for 17.9% of global production in 1994, but only about 6-7% by 2020, citing the Maekawa report published in 2008. This suggests that there was a comprehensive consideration as a strategy when Kamiya was preparing for the JNNS. In addition, it can be said that the strategy recognizes the limitation as a partial strategy in that it also hints for the linkage between constitutional revision and historical revisionism.

Nonetheless, the legal arrangements and procedures before and after the Cabinet decision on JNNS show that it is carefully planned and arranged to be a part of a well-organized unity. On January 25, 2013, shortly after Abe's second Cabinet launch, the Cabinet decides on a document titled "Defense Capability Buildup in FY2013". It clarified the plan to revise the 2013 defense budget in line with the fiscal year that begins two months later and to dismantle the National Defense Program Guideline (NDPG) 2010 in just three years and establish a new NDPG. It is an expression of the willingness not to inherit the policy of the DPJ (Democratic Party of Japan) government.

At the end of the year, on December 4, 2013, the National Security Council Act was approved by the Cabinet to launch the Japanese NSC. A few days later, on Dec. 17, 2013, the JNNS and the new "National Defense Program Guideline 2014" passed the Cabinet approval on the same day. The opening of the NDPG writes "the Government of Japan sets out the "National Defense Program Guidelines for FY 2014 and beyond"

as new guidelines for Japan's national defense, based on "Defense Capability Buildup in FY2013" (approved by the Security Council and the Cabinet on January 25, 2013) and the "National Security Strategy" (approved by the National Security Council and the Cabinet on December 17, 2013, Decision)." The plan also included Medium Term Defense Program (FY 2014-2018), which specifies more detailed plan for acquisition of defense equipment based on the NDPG. These three documents went through the approval of the NSC, which was launched on a few days earlier. On April 1, 2014, the Abe administration decided on Three Principles of Defense Equipment and Technology Transfer that replaces the Three Principles of Arms Export. This was in order for the support and relocation of weapons and equipment to strengthen security cooperation for the enhancement of the capabilities of Southeast Asian countries such as Vietnam, Philippines, etc. which are in the middle of the sovereignty disputes with China in the South China Sea.

On July 1, 2014, the Cabinet approved the document which is titled "Development of Seamless Security Legislation to Ensure Japan's Survival and Protect its People." It is a historical document because it allowed the exercise of the right for collective self-defense through the reinterpretation of constitution, which had been prohibited since Japan Defense Force is established. The decision was sent to the relevant departments of Ministry of Defense including the Self-Defense Forces for draft or revision of bills. When it was finalized, the bills called Security Legislation were sent to the Lower House. In late April, Prime Minister Abe revised the US-Japan Security Cooperation Guideline (Guideline) when he made a state visit to U.S. and delivered a speech at the Joint Session of Congress. He became the first Prime Minister of Japan who delivered a speech at the Joint Session of Congress. The Guideline was revised assuming that Japan may exercise the right of collective self-defense. It was ahead of the Lower House deliberations on the Security Legislation scheduled for July 2015. It was enforced in the opposition of the citizens and the opposition parties and established in mid-September as scheduled. This allowed the exercise of the right of collective self-defense and the establishment of a new security and defense policy framework based on it.

The major security policies pursued under the Abe Cabinet are grouped into a package

and called as "Three arrows of Proactive Pacifism": (1) Japan's right to participate in collective self-defense, (2) extended economic assistance for partners' capacity building and (3) easing the nation's traditional arms exports ban. All these are included in the series of policies in the above.

(2) Changes in U.S.-Japan Relations

Is JNNS established by the Abe Cabinet allowing Japan to deviate from its security dependence on US, a key element of the Yoshida Doctrine?

Japan's defense capability building and proactive defense and diplomatic policies have been pursued for two purposes. The first is the response to the rise of China. With the estimation that U.S.'s influence declined after the Lehman crisis in 2008, China shifted its foreign policy from 'hiding and biding' to 'assertive rise' and declared China's interests in the East China Sea and the South China Sea as "core interests". Since 2010, China's threat to Japan has become clear. In the case of the trawler collision incident of 2010, Japan had to face diplomatic humiliation for the first time since the end of the World War II, and the year 2010 was the first time China surpassed Japan in terms of GDP. Since then, China has begun to be recognized as a real threat in Japan and many hard-line policies have been accepted in the country. Soeya et. al. (2011) cited Jennifer Lind's argument:

"[a]lthough antimilitarist norm is wide-spread in Japan, it has not constrained Japanese security policy. They have not prevented it from building one of the most powerful military forces in the world, with potent offensive and defensive capabilities. And, as Japan's leaders have said repeatedly, if Japan felt threatened, these norms would not even prevent Japan from building nuclear weapons." (Lind 2004, 120).

The second is restoration and strengthening of U.S.-Japan relations. Since 2010, U.S. has pursued a "Pivot to Asia" and a rebalancing strategy. After the Lehman crisis, the U.S. Department of Defense was forced to accept Congressional budget control. The recovery of U.S.-Japan alliance in such a situation implies a response, support and burden-sharing of Japan to U.S.'s new East Asian strategy. U.S. has been expecting Japan to expand its defense support to the US bases, enhancing Japan's own armaments,

participation in TPP agreement, progress in the base transfer in Okinawa, and increase in economic and military support for ASEAN countries. Japan has willingly accepted many of these, with the exception of Okinawa issue, which was not because Abe government did not want to, but because it could not. Japan's posture is well represented in JNNS. In particular, Japan's embracement of the US demands through the enactment of Security Legislation is well illustrated when compared with the demands which had been specified in Armitage & Nye reports (2012, 2007, 2000). <Table 1> shows the comparison. Although limited, we can see that most activities that were not feasible until now have become realized.

It is necessary to clarify the implications of the Abe Cabinet's defense policies on the US-Japan alliance. It is unreasonable to think that Japan's expansion of its defense capability and defense role is the 'partial' realization of right-wing agenda of equal and independent relationship with the US. However, it has been the bilateral relation so far that US has not allowed Japan to wield its leadership and autonomy in diplomacy and security over the last 70 years, as long as national interests intersect. Magosaki Ukeru (2012) points out that US put on a brake whenever Japan pursued autonomy on the issues which Japan had its own interest. Nixon Shock in 1971, negotiations and Japan bashing in Japan's Next Generation Fighter (FSX) project, which lasted 10 years since 1988, the second North Korean nuclear crisis that occurred just after Prime Minister Koizumi's Pyongyang Declaration of 2002, and the early resignation of Prime Minister Hatoyama in 2010 are just some of the long list.⁴⁾ Especially in the field of security, the role of Japan was limited, so there was no room for Japan to negotiate with the US. In this sense, if Abe government succeeds in the policies of burden-sharing, Japan's bargaining power and the autonomy of the diplomatic sector against US can be improved to some extent.

Nonetheless, the expansion of autonomy will remain within a range that does not deviate

4) The Nixon Shock is an incident that surprised Japan by announcing President Nixon's plans to visit China soon after Japan withdrew due to the Cold War when it was negotiating with China. Japan decided in 1988 to develop its own next-generation fighter planes, but due to the pressures of the US Congress and the government, it was decided not to cooperate until 1995. Japanese Prime Minister Hatoyama's anti-American policies played an important role in shortening the prime minister's affairs by influencing intellectuals in Japan and US high-ranking officials.

significantly from the U.S. interests, and most of them are likely to be related with Japan's diplomacy with the third countries whose interests does not likely to harm the U.S. interest. Through the 70-year alliance after the victory and the defeat, Japan's security system has been integrated into the US system. In particular, joint training and joint use of facilities between the U.S. Forces in Japan and Self-Defense Force, which began in the relocation process of U.S. forces in 2004, are now expanding to bilateral planning and operational coordination. The Security Guideline calls for the integration of the USFK and the Self-Defense Forces in areas that are subject to collective self-defense.

Samuels (2006), who experienced the first Cabinet of Prime Minister Abe in 2006, called the dialogue in search for the national strategy in Japan at the mid 2000s as the process of seeking the fourth consensus after the Meiji Restoration. "Japanese strategists have succeeded in cutting off the Yoshida doctrine's pacifism, which has persistently and subtly developed in the postwar period. We are heading for the fourth consensus recently, and if successful, we will have security guarantees that are not too dependent on the United States and not too weak for China at the same time." (9)

4. Abe's Historical Revisionism and Education Regeneration

(1) History as the Second Pillar of Abe's Grand Strategy

From the beginning of his second cabinet, Abe showed his intention to revise the existing historical interpretation on Japan's war time atrocities and colonial expansion of the early 20th century.

His approaches to achieve this life-time goal can be grouped into two areas. The first is reviewing existing interpretations and repentances such as concept of invasion, enforced mobilization of comfort women, Kono statement, Nanjing massacre, etc. The second is targeted for changes in regulations for narrative, screening, and selection of history textbooks at middle school and high school. According to the right-wingers' world view, education is not simply a matter of learning and teaching but a matter of recovering Japanese national body and regenerating Japanese spirit which they

believe are damaged and distorted unfairly for the defeat at the war.

Two parts of NSS action plans are concerned with historical revisionism. The first is the emphasis on enhancing diplomatic creativity as a part of the efforts to build Japan's own defense capabilities. It is to induce international environment favorable for Japanese defense strategies. As long as national security is to protect national values as well as people and country, active diplomacy is necessary to spread Japanese views and to get the support for Japanese policy positions. This is the point where Abe's education and history policy turns into the matter of diplomacy and security. The second is in securing the domestic base and to the support of international society through the spread of Japanese software power. Compared to the first one, this action plan is more comprehensive than diplomatic activities.

Public diplomacy could be placed in this category. During the last four year, Abe government poured out many plans to build academic and governmental institutions for international public relations on issue of history and territory issues. The Liberal Democratic Party (LDP) has assigned a budget of 46 billion Yen for 2015, which is three times of the budget for 2014, to promote Japan's view on its history and territorial problems in international community. In the early 2015, LDP established a plan for a new international broadcasting program for that purpose. The Ministry of Foreign Affairs of Japan is setting up a new facility, which will be installed under the title of "Japan House, is intended to spread information about Japan's position on territorial and historical issues and traditional Japanese culture overseas. In 2016, it will be installed in three locations in London, Brazil and Sao Paulo in Brazil, and in Los Angeles in 2017. This is the organ to execute the missions described in JNSS. Japan's Ministry of Foreign Affairs launched operations to translate Japanese history textbooks into 46 languages to distribute in foreign countries and to beef up the history education for its own diplomats.

(2) A Turnabout in the U.S. Position

The battle, centered on Asahi Shimbun's apology on the validity on the testimony used as a proof of coercion in the mobilization of comfort women diffused to the U.S. From

September 2014, U.S. scholars, newspapers and politicians criticized in one voice Abe Cabinet's efforts to revise the established historical facts on comfort women issue. On February 2015, 19 American historians issued a statement calling their Japanese counterparts to stand against pressure from the Abe's Cabinet to distort and minimize the Japanese government's involvement in mobilizing comfort women. The statement was issued in response to the Japanese government's pressure on McGraw Hill, a U.S. publishing company, to remove paragraphs on comfort women from its high school textbook. In the interview with a news agency, Alexis Dudden, a historian at University of Connecticut, said that history is not something you remember as you want to remember.

Entering into March 2015, the atmosphere of U.S. government and people who had been critical of the comfort women issue was being reversed. In February 2015, Wendy Sherman, the US undersecretary of the United States, raised controversy by saying that China and South Korea are responsible also for the conflict, and political leadership should not enjoy the cheap applause of the public by raising history issue. At the end of March, Abe told the *Washington Post* that the victims of the Japanese "comfort women" were "victims of human trafficking." This comment also has attracted severe criticism from Korea that Japan is pushing its own faults to the problem of universal human rights abuses that can be found anywhere and at any time in the world, but not as a strong expression of 'sexual slavery.' However Russel, the U.S. Assistant Secretary of State for East Asian and Pacific Affairs, said that it was a positive message to acknowledge the past.

All of a sudden, the trend in the U.S. is reversed. On March 26, US House Speaker John Bayner said in a press release that he "invited Prime Minister Abe to deliver a joint speech at the US House and Senate on April 29." This joint speech is the first of the Japanese prime ministers since defeated and is regarded as a signal for the upcoming honeymoon relationship between U.S. and Japan.

Four months later, Abe acquired President Obama's support for his view of history when he made a statement on the 70th anniversary for the end of World War II, The statement atoned for Japan's aggression in making wars with U.S. and European countries and

failing to follow international trend of peace and anti-colonialism in the late 1920s. It also emphasized that Japan succeeded in reconciliation with European countries with the help of their generosity. However, it did not express its apology or repentance for its annexation of Korea and suppressive policies on it. By providing full support for U.S. demands on alliance relationship, which do not necessarily contradict with its national goal, Abe partially succeeded in his goal of not bequeathing the burden of history to future generations.

When the bills to revise the Security Legislation, which were necessary to implement the new constitutional reinterpretation allowing the exercise of collective self-defense, were sent to Diet for approval, Abe's preparation to visit the U.S. and declare for the new U.S.-Japan Defense Cooperation Guideline was over. In the package, the possible settlement for Trans-Pacific Partnership (TPP) was included. The presents were precious to the U.S. enough to invite Japanese Prime Minister for the first time since World War II to a joint session of Congress and ask him to make a speech, which is the highest courtesy for foreign summits.

(3) Abe's Optimization between the Two Pillars

If put in a framework of grand strategy, even though it is not suggested by Abe's Cabinet yet, it would be natural to consider the costs and benefits across the policy goals. That is why the prioritization among the goals is one of the necessary components of national strategy. By tracking the paths that each country of Japan, U.S. Korea and China came through in the area of foreign policy during the last four years, we can conclude that Abe had been thinking of priorities among the two pillars and also the cost-benefit analysis.

To carry forward JNSS and the ideology of Proactive Pacifism, he had to overcome domestic protests as well as negative response from its neighboring countries. Abe Cabinet should use these causes as an excuse for Japan's expanded role in security and economy: 1) balancing against Chinese threat, 2) active and influential policy initiative toward ASEAN countries, 3) recovering DPJ government's policy failures on U.S. However, the expanded role and enlarged political investment does not guarantee

the increase in Japan's autonomy at least in the context of U.S.-Japan relations.

In return for Japan's active support for the U.S. rebalancing policy, Abe should have wanted to make a progress in achieving his goal of historical revisionism. His goal of educational regeneration is not feasible without U.S. support or at least acquiescence. For that purpose, he separated Japanese history of atrocity during the colonial rule from the Japan's aggression in World War II.

The sudden turnabout in the U.S. attitude in dealing with Abe's historical revisionism on comfort women issue make us deliberate about the possible policy transaction and trade-off between the two pillars. Abe's revisionism is well-known to the U.S. since 2006 when he refused to recognize about the enforced mobilization of comfort women and his request for a chance to deliver a speech at U.S. House of Representatives. After inauguration for the 2nd term, his revisionist view made the historical issue come to the headlines of newspapers for several time when he mentioned about the definition of aggression, when he visited Yasukuni Shrine in December 2013, and when a study group of LDP issued a report of the review on Kono Statement in June 2014.

From this process of the turnabout in the U.S. policy, we can deduce an implication. Even though Abe can be said to have made an unexpected concession in history issue when he stopped visiting Yasukuni Shrine, declared succeeding previous apologies and made an agreement on comfort women in Dec. 2015, it is only when we take into account his hard-line position on the issues. However, he also achieved a considerable part of his goals by gaining U.S. acceptance and agreement on Japanese interpretation of history and by making Korea and China separate history issues from their security issues.

It was possible because of Abe's strategic calculation. Abe's security policy is used to be called as a realist policy response to China's rise and provocation. However, from the evaluation of Abe's political thought and view on history, we can tell that he is closer to a revisionist than to a realist who places the prime importance on the balance of power. His strategy was to trade-off between security and history. He was demanding U.S. concession in history matters, yielding to the U.S. demand in diplomatic and security issues such as defense cooperation, TPP, and Okinawa base relocation program. This strategy have enabled Japan also to expand and increase its security roles in balancing

China's armament and aggression, under cooperating with the U.S. If we look at the final balance, the more the U.S. criticized Japan for those history issues within a certain limit, the more the U.S. could get Japanese concession in security area.

(4) Strategic Calculation in a Sample of Strategy

The trade-off between security and history and transaction between the U.S. and Japan in the Abe's strategic calculation is only an inference from what happened during the last 4 years based upon Abe's own comment. With the lack of grand strategy which explain the strategic relations between and among sectors, we do not know the fact until the participants in the policy consultation and negotiation confirms about it. The only thing available to prove the argument is looking into a sample of grand strategy comparable to Abe's strategy and ideology. Sugiyama Katsumi (2015) whose idea could be classified as a in-between military realist and Japan right-wing. Here is his suggestion (273-275):

National Strategy that Japan should have

What Japan has to do:

- 1) The development, deployment, and management of laser guns aimed at 'defense of their own country'
- 2) Development and laser guns and Large-scale spacecraft for 10 years and transfer them to the U.S. to let it come back to the role of world policemen.
- 3) Patrol from Guam to the Persian Gulf to ease the economic burden of the United States.
- 4) To make Americans understand Japanese, 5 wars (legal, public opinion, psychological warfare, historical recognition, and sending out of samurai cultures) are waged.
- 5) Perform the research and development of science and technology to lead the world with economic power.
- 6) Amend the Constitution and educate the right history and patriotism.

What Japan demand the United States to do to deepen alliances:

- 1) Join Epsilon, a communication firewall organization,
- 2) Sell F-22 to Japan until the development of the laser gun
- 3) Exclude Japan from the UN hostile provision
- 4) Admit the twentieth-century American plot such as the Tokyo trial.
- 5) Not to agree with criticism of Japan's historical recognition by China and Korea
- 6) Withdraw the U.S. forces, ten years after the completion of the laser gun

From this sample strategy, we can find these similarities. First, Maintenance of the alliance relationship with the U.S. is inevitable choice in front of the rising threat of China, and Japan has to transfer the laser guns to prove Japan's burden-sharing. Second, constitution should be revised, and third, history revision is important as much as the revision of constitution to nurture Japan's future and autonomy. Here we can find the transaction between the two countries to trade-off alliance dependence and historical independence. He suggests to ask the U.S. not to agree with criticism of Japan's historical recognition by China and Korea.

V. Conclusion

Prime Minister Abe has set the goal of his Cabinet as a "break-away from the postwar regime" from the beginning of the first Cabinet of 2006, and set the same goal when he formed the second cabinet in December 2012. This study sought to evaluate the achievements of Abe Cabinet for four years in the field of US-Japan relations and security strategy in light of the regime's goal as a part of Japan's national strategy. The postwar system in the field of national strategy refers to the Yoshida doctrine and its institutionalization, and Japan has achieved its strategic goal of economic prosperity. However, it is the judgment of the Japan's right-wing that Japan has continued to depend on the US in the field of defense by being buried in the postwar system, and as a result, the establishment of the independent national strategy became impossible. As a result,

Prime Minister Abe has set the constitutional revision and historical revisionism as his own policy goals. As the first step toward achieving that goal, he has established JNNS in the field of security and allowed the exercise of collective self-defense. By restoring the US-Japan relations and confidence, Abe moved one step closer toward the revision.

The most important achievement in the 'breaking-away from the postwar system' could be the independent establishment of the national security strategy. According to the above analysis, JNNS is satisfying many requirements as a national strategy. It is equipped with the strategic ideology of "proactive contribution to peace based on the principle of international cooperation." and presents the national image based on the ideology as its strategic goal. The images are the maritime state, the peace state, exclusively defense-oriented policy and the three non-nuclear principles and a country that contributes to international peace. JNNS specifies what the national interests of Japan are, and categorizes the threats to achieving the national interests into two the security situations of world order and the Asia-Pacific region. Under such an environment, the action plans for achieving the above-mentioned national goals are divided into six areas. However, priority-setting is missing among the national interests to pursue and the policies to achieve them. This could be because JNNS is not a comprehensive national strategy or a grand strategy. In order to 'break-away' from the postwar regime, the security is more important than any other sectors, and the fact that it is the only area for which national strategy is established could be an expression of priority. Also, it might have not been appropriate to prioritize national interests and policies within one sector.

Lets answer to the first question. What extent did Abe Cabinet achieve the breaking-away from the postwar regime? There are two things to remember when it comes to 'breaking-away' in security sector. The first is to amend the Constitution with the hands of Japanese, and the second is to escape from the dependence on the US in the security sector that served as the basis of the Yoshida doctrine. Abe would have said that it is neither possible nor desirable to leave the U.S.-Japan alliance.

A lawmaker raised a question on the phrase of 'breaking-away.' Japanese government used to blame China for its action to change the status quo by force whenever dispute occurs on the sovereign right over Senkaku islands. However, China retorts back against it. China's blame is that Japanese policy to 'breaking-away from the postwar regime'

by the revision of Peace Constitution is the true attempt to change the status quo. China argues that Japan's blame on China is like placing cart before the horse. While answering questions at Budget Committee of House of Representatives in March 2016, Abe said, "I meant it for domestic politics and it is not a kind of challenge to postwar regime." His answer can be understood as saying that even after the revision of the constitution, U.S.-Japan alliance relationship will be continued. Therefore, the goal is to secure maximum autonomy through the constitutional revision.

In addition, security legislation has become irreversible as it has been done in a carefully planned series of legislative and national strategies. The U.S.-Japan alliance will continue, but it is largely out of the constraints of the postwar regime.

As of November, 2016, Abe has made a lot of preparations for the revision of the constitution. The reason why the peace constitution was the biggest constraint on the operation of the U.S.-Japan alliance was the matter of interpretation related to the permission of collective self-defense. Permission of the exercise by constitutional reinterpretation can be regarded as coming closer to a considerable extent to the revision. In addition, Security Legislation has become very much irreversible because it is positioned within a national strategy and a carefully planned series of legislative institutions. The US-Japan alliance will continue, but Japan is getting out of the constraints of the postwar regime. Endo Seiji (2016) says,

The ongoing regime can not help but start with the position of Abe, starting with the revised constitutional interpretation and the exercise of collective self-defense rights. In this sense, under the Abe regime, the postwar Japan's national image has already been transformed, and the 'breaking-away from the postwar regime' is partially realized (117).⁵⁾

Now lets go to the second question> What is Abe's strategic calculation in meeting the U.S. strategic demands? His strategy was to trade-off between security and history. He was demanding U.S. concession in history matters, yielding to the U.S. demand in diplomatic

5) Endo Seiji (2016) does not aim at the evaluation of 'breaking-away from the postwar system' and does not provide the basis of the evaluation.

and security issues such as defense cooperation, TPP, and Okinawa base relocation program. This strategy have enabled Japan also to expand and increase its security roles in balancing China's armament and aggression, under cooperating with the U.S.

As long as Abe and his government never mention about how to deal with the US on the grand strategy, the trade-off hypothesis could be left as a guess.⁶⁾ However, it is very natural and reasonable to approach the two issues as an object of barter if all other conditions are met, as is used in a sample of national strategy suggested by Sugiyama Katsumi (2015).⁷⁾ As long as Japan cannot leave out of the extended deterrence of the US against Chinese threat, it should make concessions to the US security demand. Japan may ask the US for its countenance on Japan's view on historical issues instead, as long as history issue is critical for its prestige in international community.

[Table 1] Requirements of the Armitage-Age Report and Comparison of the Japanese Security Act⁸⁾

Armitage - age report	What you can do under the Security Act
Collective self-defense	
The prohibition of collective self - defense is a barrier to the alliance. The United States should empower the United States to cooperate fully, regardless of time, tensions, crises, or wartime.	Against the third country that has attacked the United States.
Geographical range	
Japan 's interests must extend to the far south, further to the Middle East, and the US - Japan cooperation should include a wider geographical range.	In addition to Japan, it is possible to support the US military and other countries' troops in all parts of the world, including refueling and transport.
Activities in the Persian Gulf, South China Sea	
Removal of mines from the Strait of Hormuz, joint surveillance in the South China Sea	Removal of mines from the Strait of Hormuz, Strengthening the defense of sea-lanes (sea routes) from the Middle East through the South China Sea

6) The five Japanese scholars interviewed in the course of the project expressed the position of denying the plausibility of exchanges and transactions between the US-Japan alliance and the historic revisionism. Most of them were aware that Abe had made a huge concession over the last four years, considering the right-wing nature of the prime minister, and that the US did not make concessions.

7) Nakano Koji (中野晃一) at Sophia University says it is not strange at all even though observers doubt about the barter between the two policy areas. "Conflict between Restored Nationalism and Reform following US, under the 2nd Abe Government" presentation at the 1st International Conference for Japan Specialist in East Asia on Dec. 1, 2016 at Songdo Conventia, Korea.

8) Asahi Shimbun, "Security legislation, along with the US recommendations: Also reflected in the Prime Minister's speech made by Minister of Intellectual Affairs," 2015.3.30.

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Analysis of Software Diversity Research Trends in Strengthening Cyber Security Capabilities

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Analysis of Software Diversity Research Trends in Strengthening Cyber Security Capabilities

〈Summary〉

Cyber-attacks are becoming more sophisticated and intensified with the advancement of ICT (information and communication technology). We are living in a hyper connected society and new types of cyber terrors, which were unthinkable in the past, have emerged. This report reviews software diversity, one of the methods to strengthen cyber-security capabilities.

The concept of software diversity is the use of various kinds of softwares with the same software features to decrease the shared vulnerabilities. It has been reported that the concept of diversification can be effective against viruses that are not detected over a long period of time, and when the number of worms is increasing.

To help to understand software diversity easily, the following concepts are briefly reviewed in this report.

- Software vulnerabilities: definition and measures
- Epidemic models: modeling propagation of virus
- Scale free networks and immunization
- Software diversity: previous works, measure of diversity, graph coloring problem (software assignment problem)

Many real-world networks such as the Internet, social networks, and technological networks are referred as 'scale-free networks SFNs.' Due to high fluctuation in the connectivity of scale-free networks, these networks are significantly vulnerable to attacks. It has been reported that malicious codes can spread quickly in SFNs even with small propagation rates. The graph coloring problem is introduced as a method for

software assignment to break up software monoculture.

Then, possible applications in defense area and further possible research topics are followed. Equipment with low manufacturing cost such as sensors in wireless sensor networks and simple drones may not be fully protected by security technologies. These are highly vulnerable and can be a starting point of cyber-attacks. Software diversity can be applied to protect these equipment and the other connected networks.

As a further research topic, the impact of software diversity on virus propagation in SFNs with shared vulnerabilities. The impact of software diversity on virus propagation has not been considered yet in previous literature. The need for making integrated model of software diversity and epidemic spreading is also presented.

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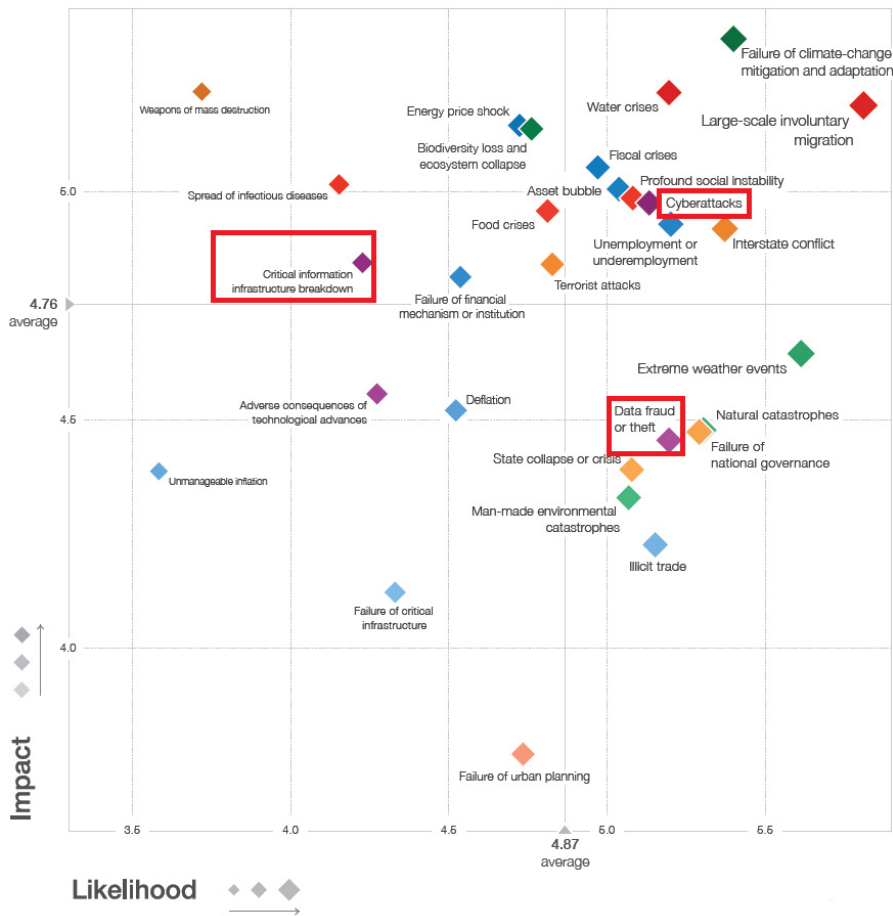
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I. Background

1. Intensifying Cyber War

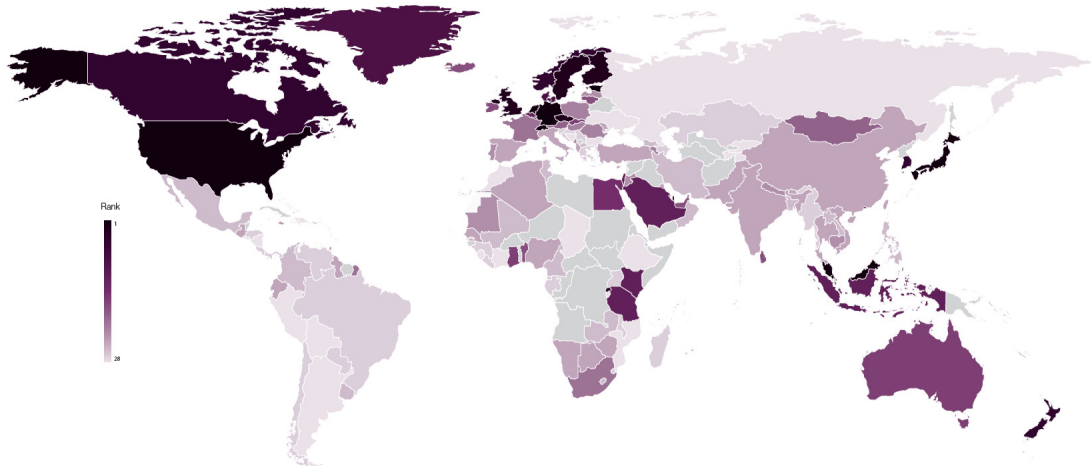
Invisible cyber war has been taking place all around the world and this has intensified. According to the 'Global Risk Report 2016', the impact of cyber-attacks has heightened with a greater than average likelihood among other risk factors (Figure I-1, World Economic Forum, 2016).



[Figure I-1] The global risks landscape 2016

China has been blamed as the nation responsible for launching the most online attacks against the USA. Mandiant, a cyber-security firm, reported that unit 61398 of the People's Liberation Army, which is based in Shanghai, China, has been named as the

main culprit hacking US institutions. The “Flame virus,” which was discovered in computers in Iran in 2012, was developed by the U.S. National Security Agency, the CIA, and Israel’s military intelligence to use in cyber-attacks (The Washington Post (WP), June 19, 2012). The virus included 20 different functions, including vaccines bypass, screen capture, keyboard interception, file transfer, and Bluetooth transmission. It was used to collect confidential information about Iran's nuclear program by means of using a virus to infect computers used by senior officials in the Iranian Government. More recently, a movie has triggered a cyber-war between North Korea and the USA (The Wall Street Journal (WSJ), December 14, 2014). North Korea disliked the release of the film “The Interview,” which portrayed the assassination of Kim Jong Un (the North Korean leader), and consequently hacked Sony Pictures Entertainment, the producers of the film. North Korea threatened to carry out terror attacks if the film was released as planned, and the release was canceled as a result. However, Sony Pictures released the film online and in cinemas, thereby triggering a cyber-war between North Korea and the USA. President Barack Obama denounced the hacking by North Korea as “cyber vandalism” and vowed to ‘respond proportionally’ (WP, Dec. 21 2014). Since December 19, 2014, web sites in North Korea have been paralyzed including their 3G communication networks. Many countries have invested significant resources (time, money, and human resources) to increase their cyber security capabilities against intensifying cyber terrors, and have established and operated institutions to defend against cyber-attacks at a national level. As cyber-attacks have intensified and expanded, international collaboration systems have been strengthened to manage cyber-attacks. For example, 87 nations and 18 international organizations participated in the third Global Conference on Cyberspace held in Seoul in October 2013 to strengthen the international collaboration system (Ministry of National Defense, 2014).



[Figure I-2] Cyberattacks, rank (World Economic Forum, 2015)

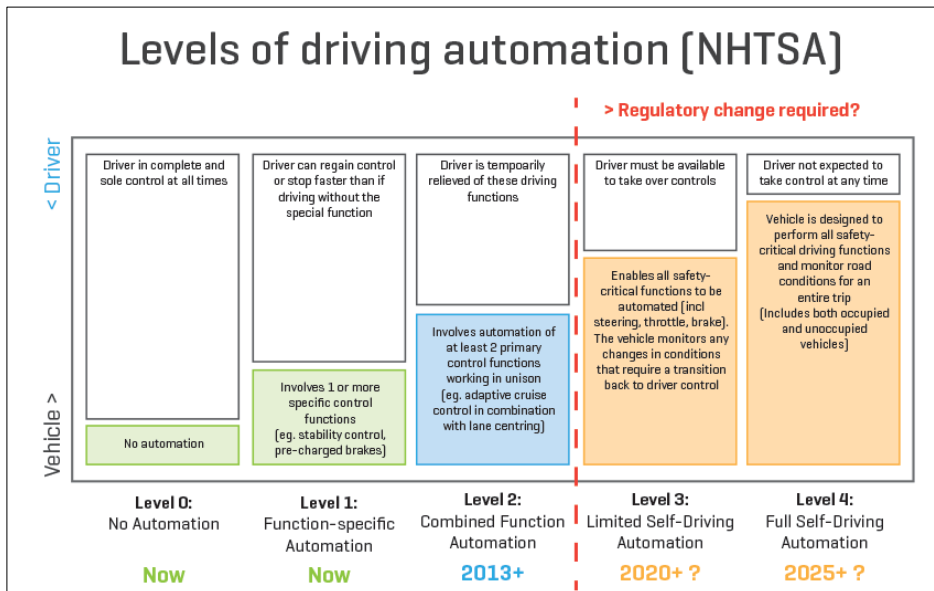
(Note: The darker the color, the higher the concern)

In particular, South Korea is always vulnerable to cyber terror from North Korea. These attacks have increased and are supported by increasingly sophisticated attack technologies since the start of the regime of Kim Jong Un (Paik, 2015). South Korea is classified as a country that is highly concerned about cyber-attacks (See Figure I-2). Cyber terror threatens national security, incites social chaos and anxiety, and causes instant and extensive damage. North Korea has attempted and succeeded in paralyzing computer networks in government institutions including the Blue House (the Korean presidential residence) using denial of service (DDoS) attack since 2009 and the range of their tricks and attack methods has been widened to include the use of malicious code, global positioning system (GPS) disturbance, and advanced persistent threats (APTs) (Shin and Lee, 2013). Cyber terror not only targets governmental institutions but also the private sector (Kim et al., 2013). North Korea has attempted to carry out cyber terror against national institutions and portal sites as well as to hack private companies e.g., Korean Air Lines (KAL) to steal defense-related data (WSJ, June 13, 2016). In South Korea, besides the threat from North Korea, various kinds of information infringement accidents have occurred, including leaks of personal information from credit card companies by hackers. It is therefore necessary to create a stable social atmosphere to facilitate reliable development of a nation, and to this end, cyber security needs to be strengthened.

2. New Threat in Hyper-Connected Society

The advancement of information and communication technology (ICT) and introduction of new technologies have enabled new types of cyber terrors, which were unthinkable in the past, to emerge. Notable examples of emerging technologies that were hacked listed as follows (Lim, 2016):

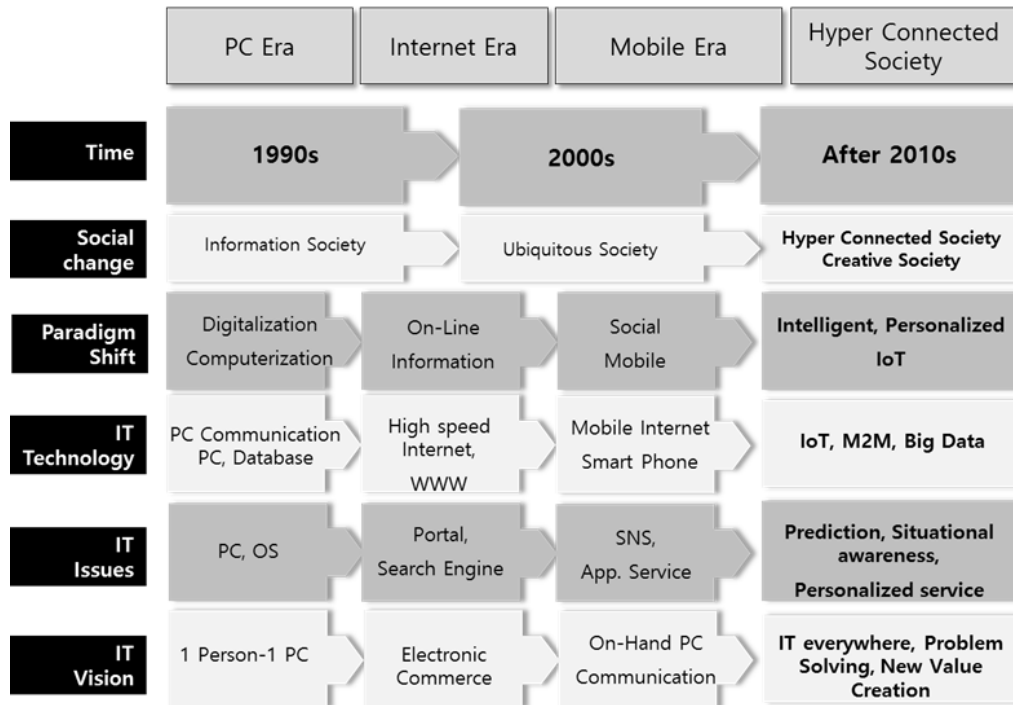
- Smart home: demonstration of the hacking Philips LED bulb (2013), and hacking examples of controllers of refrigerators and air-conditioners are available.
- Smart car: hacking demonstration at Black Hat USA 2014.
- Smart medical: hacking of a heart-rate meter and insulin pump were demonstrated at the Breakpoint Security Conference 2012, and at Black Hat USA 2013, respectively.
- Smart energy: a hacking group named “dragon fly” installed a backdoor in the US and European power grid control systems in 2014, and the group remained logged in for 15 months.



[Figure I-3] Levels of driving automation

In recent years, autonomous driving vehicles have been studied actively. The National Highway Traffic Safety Administrative (NHTSA) in the USA recognizes the autonomous driving vehicle software developed by Google as a driver, expecting a new market in the near future. Moreover, the autonomous industry expects that autonomous driving vehicles to enter mass production by 2020. (Refer to Figure I-3¹⁾). According to recent security research reports, autonomous vehicles have been hacked, and this can lead to cyber terror that can cause physical damage and human casualties and become a serious threat. In addition to threats due to the introduction of new technologies, privacy protection and security as well as significant security issues that are new but difficult to be identified easily have also been introduced. There was much controversy as to why signs of terror were not identified in advance in the investigation that ensued after the November 2015 Paris attacks by the Islamic State (IS). The terror group evaded detection by employing encrypted communication support messengers such as “Surespot” and “Telegram.” Restriction on the use of encryption technology has been raised at a national level to prevent terror groups from using encrypted communication although there have been objections in terms of privacy protection. The unlocking feature of the iPhone 6 created a similar issue in the fatal shooting event that resulted in 14 deaths and 22 injuries in San Bernardino, California in the USA in December 2015. The FBI attempted to gain access to the contents of the iPhone owned by the suspect during their investigation of the shooting incident, but the phone was locked. Thus, a request was made to Apple for cooperation to unlock the phone. However, Tim Cook, Apple's CEO rejected the request, which stirred huge controversy.

1) Figure Source: <http://www.transport.govt.nz/ourwork/technology/specific-transport-technologies/road-vehicle/autonomous-vehicles/>



[Figure I-4] Changes in the information paradigm

(Source: NIA, 2013)

Year	2000	→	2014
Characteristic of cyber-attacks	Accidental	→	Intentional
	Failure	→	Attack
	Random	→	Targeted
	Internal Origin	→	External Origin
	Technical	→	Human

[Table I-1] The Evolution of Threat

(Source: Lim, 2016)

We live in a hyper-connected society that is represented by intelligence, personalization, and the informatization of things, following the ubiquitous society that emerged in the 2000s represented by socialization and mobile technology (Figure I-4). Some of the representative technologies in the hyper-connected society are Internet of Things (IoT), big data, and cloud computing. This means that we are becoming increasingly dependent on ICT, which also means increased exposure to the risk of cyber terror and threats.

As the dependency on ICT increases, cyber-attacks have evolved to become more elaborate and intentional (Table I-1). In conclusion, the importance of cyber-security capabilities has further increased.

3. Research Scope and Objective

This research examines the concept of “software diversity”, one of the methods to strengthen cyber-security capabilities. In addition, this research includes a study of a possible plan to apply this concept in the national defense security area. Software diversity can be explained in the following example. Each software program has vulnerabilities that can be exploited by malicious codes. Suppose that every member of a certain group (or a firm) uses identical software to perform a specific task, for example, everyone uses the MS Word application. Consequently, everyone has the same software vulnerabilities, and would experience the same problem caused by a set of malicious code. The concept of software diversity is that the use of various kinds of software with the same software features to decrease the shared vulnerabilities (Bailey, 2005; Birman and Schneider, 2009; Cox et al., 2006). It has been reported that the concept of diversification can be effective against viruses that are not detected over a long period of time and when the number of worms is increasing (Sukwong et al., 2011).

This report introduces the concept of software diversity and related topics such as vulnerabilities, and presents an analytical model for virus (worms or malicious codes) propagation are presented. Previous work on software diversity is also reviewed. The remainder of this report is organized as follows. Section II presents the required background knowledge for understanding software diversity. The background knowledge includes software vulnerabilities and free-scale networks. Section III discusses possible applications in the defense area and alludes to future research directions. Finally, Section IV summarizes and concludes the report.

II. Software Diversity and Related Topics

In this section, an analogous example found in Biology is introduced to explain the concept and to emphasize the importance of software diversity. Then, software vulnerability is introduced as a possible necessary prerequisite for understanding software diversity. A model of an epidemic virus is introduced to model the propagation of malicious code, such as worms, in a network. Especially, the concept of a free-scale network is considered. Real-world networks such as the Internet, technological systems, and computer networks are described using the concept of a free-scale network. Finally, various problems pertaining to software diversity are presented: a review of previous work, related topics to analyze software diversity, and so on.

1. Lesson from the Ecosystem

An example of the risk of using a monoculture can be found in biology: the near extinction of the Gros Michel banana (Figure II-12²) caused by the fungus *Fusarium oxysporum* (recited from Hernandez-Castro and Rossman, 2013). The plants bearing the Gros Michel banana are genetically identical; thus they could not develop the strength to fight new unknown diseases, an ability that would develop as a result of evolution. The variety was very popular in the 1950s, but was discontinued in the 1960s after the outbreak of Panama disease because the plants could not resist the disease. Subsequently, the Gros Michel banana was replaced by another variety, the Dwarf Cavendish banana, which seemed to have increased resistance to Panama disease. However, it has been reported that the variety was found to be susceptible to Panama disease in the 2010s. The risk faced by a monoculture can also be applied to a software ecosystem (Neti et al., 2012). A group consisting of clones can be vulnerable to a novel kind of attack. The coexistence of various species, i.e., diversity, is essential for “the emergence of resilience, stability or novelty (a property)” (Baudry and Monperrus, 2014). The importance of coexistence is also essential for a software ecosystem facing unknown cyber threats.

2) Source: <http://www.bananas.org> (access 25 Oct 2016)



[Figure II -5] Nearly Extinct Gros Michel banana
(Source: www.bananas.org)

An example of the benefits of avoiding a monoculture in software can be found in SQL database servers (Garcia et al., 2013). Garcia et al. (2013) found cases in which a single error affected more than one server and that coincident failure was not reported in more than two of the SQL database servers (PostgreSQL, Interbase, Oracle, and Microsoft SQL servers).

2. Software Vulnerability

A. The Definition

Faults embedded in software that can be potentially exploited by malicious users are known as vulnerabilities. The formal definition of software vulnerability differs slightly depending on researchers (Joh, 2011):

- An instance of an error in the specification, development, or configuration of software such that its execution can violate the security policy (Krsul, 1998)
- Ozment (2007) revised the definition of Krsul (1998): change “an error” to

“a mistake”, and put “explicit or implicit” in front of “security policy”.

- Software defects or weaknesses in the security system that might be exploited by malicious users causing loss or harm (Pfleeger and Pfleeger, 2003).

More recently, based on the definitions, Lim and Kim (2014) concluded that vulnerability is potentially dangerous since it might be exploited to cause loss or harm. Thus, it is necessary to remove discovered vulnerabilities as soon as possible.

B. Measure of Vulnerability

First, vulnerability has unique representation through the CVE (Common Vulnerability and Exposures)³⁾ classification system. Vulnerability is one of the following states in a computing system (Garcia, 2013):

- allows an attacker to execute commands as another user;
- allows an attacker to access data that is contrary to the specified access restriction for that data;
- allows an attacker to pose as another entity;
- allows an attacker to conduct a denial of service attack.

Vulnerabilities are stored in the NVD (National Vulnerability Database) operated by the MITRE Corporation with the National Institute of Standards and Technology (NIST). The NVD is recognized as the most complete and referenced database for software vulnerability (Garcia et al., 2013). However, a few problems of the NVD including chronological inconsistency, inclusion, separation of events, and documentation were pointed out by Ozment (2007). This database was created to share known vulnerabilities. The old syntax of CVE is as follows:

3) <https://cve.mitre.org/>

CVE	-2016-	0000
Prefix	Year	Serial Number

[Table II -1] Old Syntax of CVE

The serial number consists of four digits; thus the maximum number of vulnerabilities that could be stored per year was 9,999. The MITRE Corporation has mitigated the four-digit limitation on the serial number since January 2015. The CVE system is a useful tool for the quantitative analysis of software-security vulnerabilities because it is possible to analyze the number of vulnerabilities according to calendar time. In addition, the classification of vulnerabilities based on their type is also possible. More than 57,500 CVEs of 1,907 software packages have been listed on the NVD to date (Lim and Kim, 2014). These can be downloaded in various formats (Figure II-2).

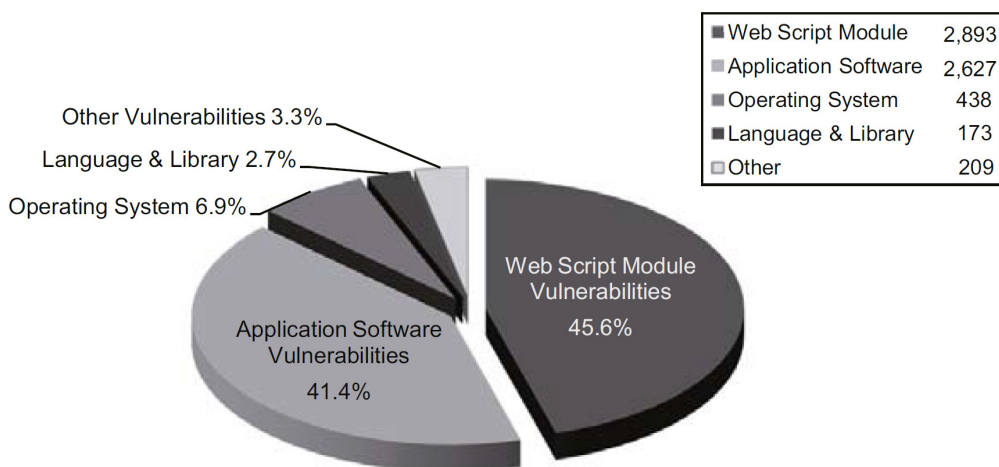
The screenshot shows the 'Download CVE' page on the MITRE CVE website. The page title is 'Common Vulnerabilities and Exposures' with the tagline 'The Standard for Information Security Vulnerability Names'. The main content area is titled 'Download CVE' and indicates that data was last generated on 2016-10-31. It lists available download formats: CVRF, XML, HTML, Text, and Comma-Separated. There are also links for 'Download Formats', 'XML Schema', and 'Assistance'. A note states: 'NOTE: To save compressed files, you may need to right-click and choose a "Save Link As" or "Save Target As" option.' Below this, there are sections for 'Download Formats' with links for 'CVRF format (learn more)', 'XML format', 'Text format', and 'Comma-Separated format'. Each format section lists specific file types like 'Unix compressed (.Z)', 'gzipped (.gz)', and 'Raw (.xml)'. There is also a 'CVRF (older entries)' section with links for various years from 2007 to 1999.

[Figure II -1] The webpage for downloading CVE

(Source: <https://cve.mitre.org>)

Han et al. (2009) categorized vulnerable software into five types (application software, web script modules, operating systems, languages and libraries, and others) and

investigated the number of vulnerabilities for each category. For the “languages and libraries” category, this includes programming languages and libraries for general programming. Figure II-3 presented by Han et al. (2009) shows the number of vulnerabilities for five categories and the corresponding percentages (relative frequencies). It shows that almost 85% of the total vulnerabilities can be found in two categories (i.e., they are more vulnerable than the other three categories): “web script modules” and “application software”.



[Figure II -2] Vulnerabilities in different software categories

Vulnerabilities can also be classified based upon their severity. The CVSS (Common Vulnerability Scoring System) is a framework for the scoring severity of vulnerabilities. Scoring is based on a value ranging from 0.0 to 10.0 and involves three aspects: base metric, temporal metric, and environmental metric⁴). The latest version of CVSS is 3.0⁵). An analyst scores each of the discovered vulnerabilities by assigning a value as “the Base metric” in advance. Then, a score ranging from 0.0 to 10.0 is computed using “the Base equation.” The NVD describes four levels of severity and its corresponding CVSS are provided in Table II-2 (FIRST webpage). The difference between ver. 2.9 and 3.0 is that the category “High severity” in ver. 2.9 is split into two classes: “High” and

4) FIRST, CVSS Guide, <http://www.first.org/cvss/cvss-guide/>

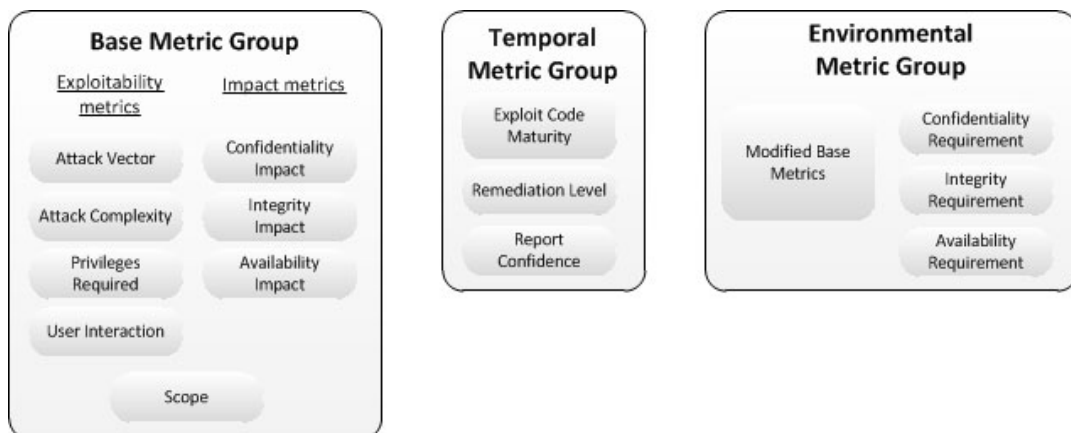
5) FIRST. Common Vulnerability Scoring System v3.0: User Guide, <https://www.first.org/cvss/user-guide>

“Critical”. A detailed verbal description of severities in the document ver. 2.9 can be referred (Woo et al., 2011):

Rating	CVSS Score
None	0.0
Low	0.1 – 3.9
Medium	4.0 – 6.9
High	7.0 – 8.9
Critical	9.0 – 10.0

[Table II-2] Qualitative severity rating scale

- High Severity (CVSS from 7.0 to 10.0): vulnerabilities enable a remote attacker to violate the security protection, or permit a local attack that gains complete control, or are otherwise sufficiently important to have an associated CERT/CC advisory or US-CERT alert.



[Figure II-3] CVSS v3.0 metric groups

- Medium Severity (CVSS from 4.0 to 6.9): vulnerabilities are those not meeting the definition of either “high” or “low” severity.
- Low Severity (CVSS from 0.0 to 3.9): vulnerabilities typically do not yield valuable information or control over a system but may provide the attacker with information that may help him find and exploit other vulnerabilities

or may be inconsequential for most organizations.

The life cycle of a vulnerability consists of the following four phases (Garcia et al, 2013):

- *discovery*: when a vulnerability is first detected;
- *disclosure*: when the detector (the person who discovered or became aware of the vulnerability) first notifies the software vendor about his findings;
- *publication*: when the vulnerability is publicly disclosed; and
- *patching*: when a fix for the vulnerability becomes available.

3. Propagation Modeling

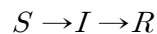
A. Epidemiological Models

In complex and interconnected computer networks, malicious software such as viruses, worms, and malware propagate and exploit vulnerabilities in operating systems (OSs) and application software. Especially, self-propagating malware is currently considered to be a major security threat (Hosseini et al., 2016). Propagation of this nature has the property of “nonlinear dynamics,” which means it is difficult to identify a causal relationship (Kephart and White, 1993; Chen and Carley, 2004). “Epidemic models” have been used to model the propagation of viruses or worms on interconnected networks. An epidemic model has been used “to study the mechanisms by which diseases spread, predicting the future course of the outbreak, and evaluating strategies applied to control an epidemic” (Daley and Gani, 2005). The analysis of an epidemic model leads to the identification of the degree to which the epidemic has spread.

Epidemic models are classified into continuous- or discrete-time models. They require a set of linear differential or difference equations to be solved in a continuous- or discrete-time epidemic model, respectively. Hosseini et al. (2014) argued that discrete-time models are more popular than continuous-time models, and presented four reasons:

- More convenient and accurate to describe epidemics since statistical data is obtained in a discrete-time manner.
- Discrete-models have proven to be more accurate based on numerical simulation results.
- The numerical solution for a continuous-time model is obtained by discretizing, eventually.
- The discrete-time models are more appropriate to describe more wealthy and complex dynamical behavior.

One of the more widely known models is the SIR (Susceptible-Infected-Recovered) model. Here, S, I, and R represent the state of an individual entity (e.g., a computer in network): a computer is susceptible to malicious software, a computer is now infected, and a computer is recovered. Changes in the states of a computer are as follows:



Suppose that the total number of computers (N) remains constant, and $S(t)$, $I(t)$ and $R(t)$ represent the number of susceptible, infected, and recovered computers at time t , respectively. Then, the total number of computers is the sum of the three terms:

$$N = S(t) + I(t) + R(t)$$

Let us define two parameters: β and γ , which are related to the rate at which infection spreads, and the rate of recovery from infection. In other words, a computer can be infected by an infected neighbor with a probability β . The probability of the state of the computer changing from “infected” to “recovered” is γ . Then, the following differential equations can be derived for a continuous-time model:

$$\frac{dS}{dt} = -\frac{\beta SI}{N},$$

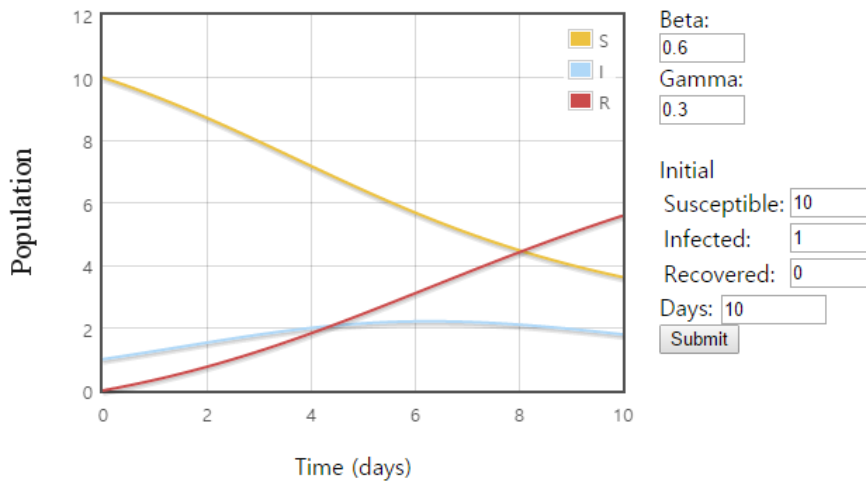
$$\frac{dI}{dt} = \frac{\beta SI}{N} - \gamma I,$$

$$\frac{dR}{dt} = \gamma I,$$

$$N = S + I + R.$$

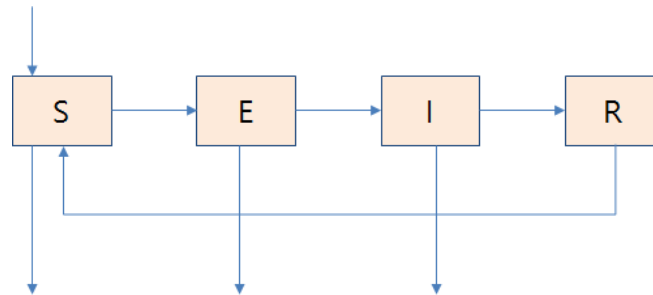
The dynamics of spreading can be identified by solving the above equation with different mathematical assumptions. An online simulation tool written in JavaScript is available⁶⁾ (Figure II-4).

Other models such as SIRS, SEIR, MSIR, and MSEIRS were subsequently devised and investigated. As another example, let us consider the SEIRS model where “E” denotes “exposed”. “E” is the intermediate state between susceptible and infected (Figure II-5).



[Figure II -4] An example of the SIR model

6) <http://www.public.asu.edu/~hnesse/classes/sir.html>



[Figure II -5] State transition diagram of the SEIRS model

(Source: Hosseini et al., 2014)

B. Quantifying the Impact of Software Diversity on Propagation

An epidemic threshold is a measure of the resilience of the network to epidemic spreading (Kim et al., 2004). It is used to investigate the steady-state prevalence of malicious software such as viruses and malware in the presence of software diversity (O'Donnell and Sethu, 2005). Most importantly, “resiliency” is investigated first. Although, resiliency could be defined in various ways, NIST (2011) defined “resiliency” as follows:

“the ability of an information system to continue to:

- (i) operate under adverse conditions or stress, even if in a degraded or debilitated state, while maintaining essential operational capabilities; and
- (ii) recover to an effective operational posture in a time frame consistent with mission needs.”

C. Scale Free Network and Immunization

It has been shown that many real-world networks such as the Internet, social networks, and technological networks differ from random networks (Zhuo et al., 2011). They are referred to “scale-free networks (SFNs).” Some examples of SFNs can be found in scientific collaborations (Barabasi and Bonabeau, 2003), business alliances (Barabasi and

Bonabeau, 2003), and in technological systems and computer networks (Barabasi et al., 2000; Bailey, 2005).

The degree distribution of these networks follows a power-law (Cohen et al., 2003):

$$p(k) \sim k^{-\gamma}, \quad 2 < \gamma \leq 3,$$

where $p(k)$ is the probability of a node having k connections to other nodes, γ represents the connectivity exponents, $p(k)$ means that each node may have a significant probability of having a large number connections relative to the average connectivity $\langle k \rangle$ of the network. SFNs are characterized by the connectivity, in SFNs, fluctuations $\langle k^2 \rangle$. This means that some nodes that are used to denote computers may have a very high degree, whereas some may have low degrees. The connectivity fluctuation is considered to be very high. This high fluctuation in connectivity has rendered these networks significantly vulnerable to attacks (Hosseini et al., 2014). It has been reported that malicious software can spread quickly in SFNs even with small propagation rates (Hosseini et al., 2016). Pastor-Satorras and Vespignani (2005) also stated that SFNs are very prone to the propagation and persistence of infections. Previous studies have also shown that the network topology has a great effect on propagation (Moreno et al., 2002; Pastoer-Satorras and Vespignani, 2001; Wang and Chen, 2003; Wang et al., 2003). The epidemic threshold for an SFN has been presented by

$$\lambda_c = \frac{\langle k \rangle}{\langle k^2 \rangle}.$$

The formula above implies that when the network size $N \rightarrow \infty$, the connectivity fluctuation $\langle k^2 \rangle \rightarrow \infty$ where $2 < \gamma \leq 3$. The implication results in the absence of the epidemic threshold, in other words, $\lambda_c = 0$. In conclusion, for any spreading rate without the epidemic threshold in SFNs, the infection can eventually result in the entire system becoming infected.

Various researchers have studied ways to reduce the spreading of epidemics in SFNs. One of the approaches is to specify defensive points (Wen et al., 2012), and immunization strategies have also been extensively studied. It is argued that a successful immunization strategy can be developed by accounting for the connectivity fluctuations of SFNs (Pastor-Satorras and Vespignani, 2008). Two immunization strategies are as follows (Hosseini et al., 2016):

- Uniform immunization: this strategy is the simplest and most inefficient for SFNs. Uniform immunization can be used in networks with little connectivity (homogeneous networks). Uniform immunization selects random nodes to achieve a uniform immunization.
- Targeted immunization: nodes with many connections are highly vulnerable because of their increased likeliness to propagate infections. The main network component involved in the process of spreading the epidemic, the most connected nodes, is selected and immunized.

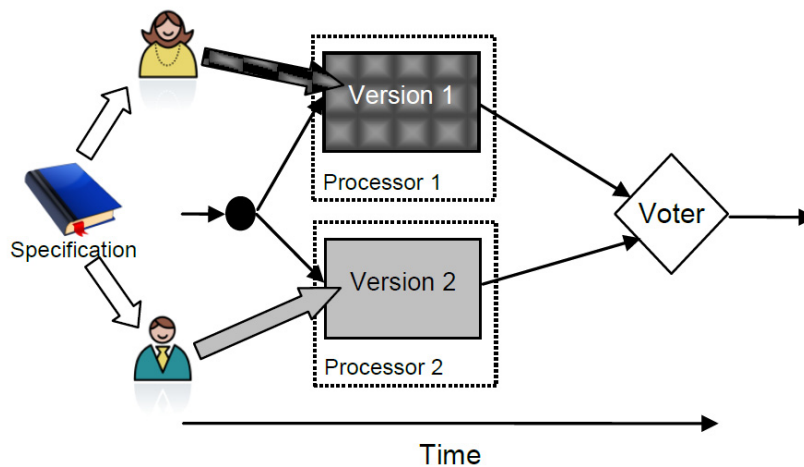
Some studies presented a targeted immunization strategy is an effective solution for optimal immunization in SFNs. This strategy also has a non-zero epidemic threshold. However, some argue that this is not a practical approach since it considers neither the software diversity nor shared vulnerability across software vulnerabilities.

4. Software Diversity

A. N-version Programming and Previous Work

N-version programming (NVP), which was introduced by Avizienis (Avizienis (1975) and Avizienis and Chen (1977)) in the 1970s, was one of the first attempts to create software diversity (Hosseini et al., 2016). It aimed to develop a unit of fault-tolerant software capable of providing a proper service without interruption even in the presence of faults (Lyu et al., 1992). The definition of NVP is “the independent generation of $N \geq 2$

functionally equivalent programs, termed “versions”, from the same initial specification.” (Avizienis and Liming, 1977). It is based on their fundamental conjecture that the “independence of programming efforts will greatly reduce the probability of identical software faults occurring in two or more versions of the program.” It means N teams develop N versions of a program where these programs are functionally equivalent to the same initial specification (Figure II-7). The “Voter” in Figure II-7 chooses one version between two different versions at execution time. NVP aims to achieve the required level of reliability by building fault tolerance (or redundant systems) (Littlewood et al., 2001). Papers about NVP suggest that a diversified system is more reliable than any other single version system (Partridge and Kranowski, 1997; Zhang et al., 2001). Since its introduction, a rich body of literature on NVP has been presented and three elements of the NVP approach established: process, product, and environment (refer to Lyu (1995) for more detail).



[Figure II-6] N-version programming, N=2

(Source: Hanmer, 2009)

NVP has been utilized for safety-critical systems such as software for flight control computers (Yeh, 1996) and nuclear reactor protection systems (Yoo and Seong, 2002). These systems are assumed to contain unavoidable and undetectable faults, and the required reliabilities for these safety-critical applications are 10^{-9} failures per hour and 10^{-5} failures on demand, respectively (Partridge and Krzanowski, 1997). Securing

the safety of the reactor protection system plays an important role in nuclear power plants. Thus, the design process of plants should ensure redundancy and diversity for high reliability of hardware and software (KEPCO-ENC, 2004). Baudry and Monperrus (2015) presented a comprehensive review paper on software diversity including NVP. They pointed out that the subject has been expanded in terms of both its goals and in analytical studies.

NVP is not considered to be that practical since the manual development and maintenance of various versions of software. “Manual development” means N teams are required to develop N versions of functionally identical software. In addition, it has been empirically shown that N versions of software have coincidental faults even though these N versions of software are developed by N teams (Huang et al., 2014). NVP assumes independence among the different versions of software; however, Knight and Leveson (1986) stated that it is not always true in practice. This is caused people who make the same mistakes and by specifications that may be incorrect or incomplete, and so on.

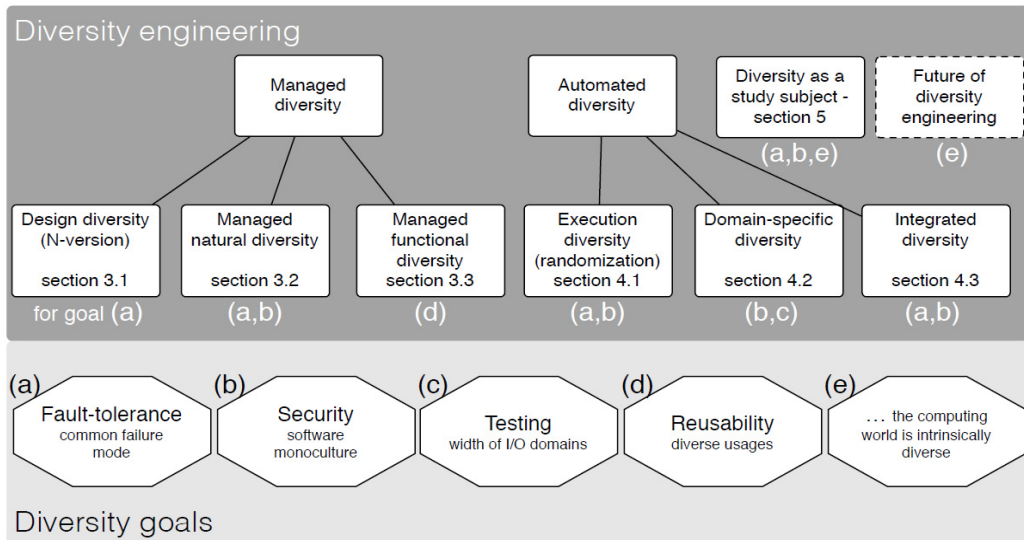
Techniques that provide software diversity automatically (also referred as ‘artificially’) has been introduced. Representing obfuscation techniques are as follows (Hosseini et al., 2016):

- instruction set randomization (ISR),
- address space randomization (ASR),
- data space randomization (DSR),
- stack base randomization, heap randomization, reverse stack, and so on.

A more detailed review of the randomization technique can be found in Baudry and Monperrus (2015). Figure II-8 shows various methodologies for diversity (managed, automated, etc.) and goals (fault-tolerance, security, testing, and so on).

The security level of software can be improved by the randomization technique (Bhatkar et al., 2003). Software diversity is used to prevent malicious users from breaking into

systems with shared common vulnerabilities using a series of the same attack. Further, monitoring and comparing the reaction to the same input, including intrusion, can equip the system can have with capabilities to detect intrusion efficiently (Ghrebi et al., 2011).

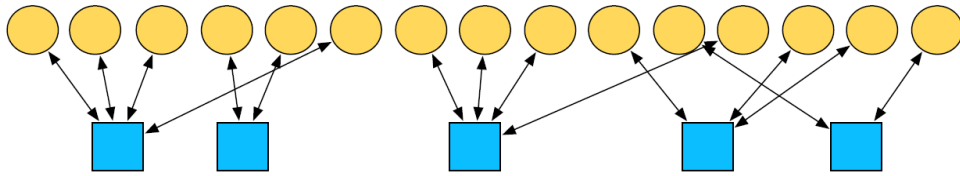


[Figure II -7] Diverse Dimensions of Software Diversity

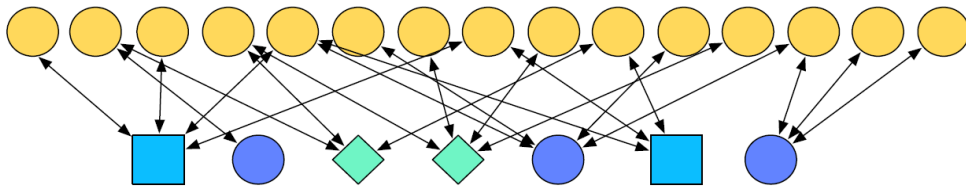
(Source: Baudry and Monperrus, 2015)

B. Software Diversity in Networks

For information security, the goal of diversity is more than a system with high reliability (Nagy et al., 2006). Software diversity for information security has been introduced to decrease the exposure of computer systems to common failures by preventing them from sharing vulnerabilities (Bailey, 2005; Chen et al., 2011). As indicated before in this report, an enormous migrating trend in services to the cloud has been recognized by the NIST. Additionally, according to the publication “Land War Net 2020 and Beyond Enterprise Architecture”, the US Department of Defense began their Enterprise Email migration. Transition to a “Thin/Zero Client Computing” has also been initiated (Thebeau II et al., 2014). These cases reveal that the dependency on the cloud and on interconnected computer networks for service is increasing.

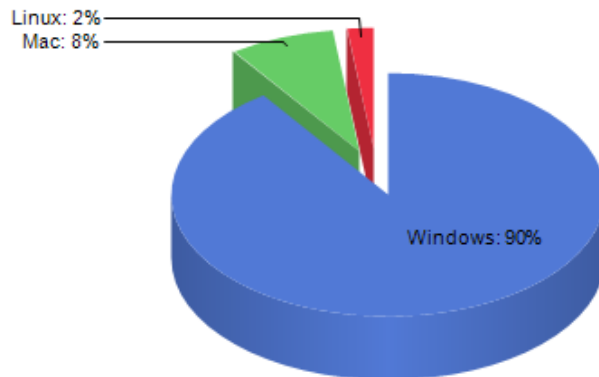


[Figure II -8] Software monoculture in client-server relationships



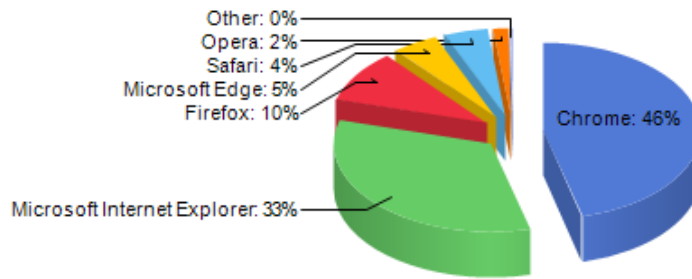
[Figure II -9] Emerging software diversity in servers

For such networks, software monoculture can be a serious problem where vulnerabilities are shared. Malware such as a computer worm is self-propagating and can spread to many connected systems in a network through common vulnerabilities. It is quite clear that infection of a certain cloud service would incur significant cost. Thus, interconnected networks inevitably needed to be made more resistant to failures caused by cyber/security attacks. Software diversity has been adopted to break up software monoculture and to decrease their common vulnerabilities. In other words, it has been used to improve network resistance or resiliency. Figure II-9 and II-10 (Baudry et al. (2014)) present the concept of software diversity in a network environment. The circles in the top layer denote client machines, and these are connected to servers in the lower layer. In Figure II-9, all servers are depicted in an identical way (monoculture). On the other hand, there are different kinds of servers in Figure II-10. Besides the basic concept of software diversity, Baudry et al. (2014) introduced the emergence of software diversity “through evolution (e.g., additional/removal of kernel packages)” using Figure II-9 and II-10. Each client is connected to only one server in Figure II-9. On the contrary, Figure II-10 shows that a client machine can be connected to more than one server, which can provide an appropriate service. Although multiple servers can guarantee robustness through redundancy, this can increase the operating cost. Baudry et al. (2014) said that a trade-off between the robustness and total cost of a network should be considered.



[Figure II -10] Desktop Operating System Market Share
(from January 2016 to October 2016)
(Source: <http://www.netmarketshare.com>)

Software diversity is considered not only in the development stage (or department) but also in the purchasing stage. Software with large market share, e.g., Microsoft (MS) Windows and Microsoft Office, is popular because of their increased compatibility. Interoperability both internally and externally can be important for a firm, for example. This kind of monoculture can attract more attacks and being connected with partners who also use popular software means firms are vulnerable to attacks via security breaches at their partners. Therefore, firms may have higher risk by being connected within a larger network using popular software (Chen et al., 2011). Chen et al. (2011) mentioned a recent example of devastating worms such as MS-Blaster (CERT, CA-2003-20) and Saaser (Symantec, 2004). These worms invaded the network and exploited vulnerabilities in the operating system, MS Windows. Then, they propagated from computer to computer, and targeted unpatched computers in the network. Chen et al. (2011) stated that diversification in the purchasing stage “not only reduces loss variance but also minimizes expected loss.” However, Figure II-11 shows that the reliance on MS-Windows is too high. On the other hand, dependency on a single product is not that serious for the desktop browser market.



[Figure II-11] Desktop Browser Market Share
(from January 2016 to October 2016)
(Source: <http://www.netmarketshare.com>)

C, Measure of Diversity

This section introduces measurement and analytical models about software diversity. Lyu et al. (1992) stated the four characteristics of software diversity as follows:

- structural diversity: structural differences among software versions;
- fault diversity: the differences between the faults found among the software versions;
- tough-spot diversity: the differences in fault-proneness among the elements of the software versions;
- failure diversity: the differences in the failure behavior among the software versions.

Lyu et al. (1992) regarded software diversity as the result of the NVP efforts, and introduced metrics related to the four kinds of diversity listed above.

Structural diversity is measured by assessing several dimensions that constitute the structure of software. This paper reviews the metrics presented by Lyu et al. (1992), which are as follows:

- Deliverable source lines (DSL)
- Noncommentary source lines (NCSL)
- Halstead's Software Sciences (Halstead, 1977)
 - Number of unique operators
 - Number of unique operands
 - Number of total operators
 - Number of total operands
- Decision count DE (Conte et al., 1986)
- McCabe's cyclomatic complexity $V(G)$ (McCabe, 1976)

The second kind of diversity is fault diversity. During a given development cycle, the number of types of faults and the number of faults of each type are counted. Then, it is calculated using the following formula:

$$\text{fault diversity} = \frac{\text{Number of distinct faults found}}{\text{Total number of faults found}},$$

for a time interval of the development cycle.

The third kind is termed "tough-spot diversity." The term "tough-spot" signifies a certain part of a specification that is difficult to implement. In addition, it also refers to programmers' common blind spots. A possible metric is presented as follows:

$$\text{Tough Spot Diversity} = \frac{\text{The number of faults found in the different parts}}{\text{The number of faults found in the entire program}}.$$

Finally, the metric of failure diversity is introduced for which a given set of input cases denoted by Σ should be considered. Its definition is given by:

$$\text{failure diversity} = \frac{\text{Number of distinct failures found}}{\text{Total number of failures found}} \Big|_{\Sigma}.$$

An ecological diversity measure was reviewed by Hernandez-Castro and Rossman (2013). One of the well-known diversity measures used in biology and ecology is the Shannon-Wiener index, and Hernandez-Castro and Rossman (2013) argued that this is the most informative and useful in the information security area. In ecology, the measure of diversity gives the richness of species, and is used in monitoring ecological changes. The Shannon-Wiener index presents the diversity of species and is based on the concept of evenness or equitability (Spellerberg, 2008). The representing properties are summarized as follows:

- When there are two types of amounts, the number of types and evenness simultaneously increase, then the value of the diversity index increases
- Given that the number of types is fixed, the maximum value of the diversity index is obtained when all types are equally distributed.

Its formula for computing the value of diversity is given here

$$D(S) = \exp^{-\sum_{i=1}^S p_i \ln(p_i)},$$

where p_i denotes the proportional abundance of i th type, and S is the number of all species. $D(S)$ can be rewritten as follows

$$D(S) = \exp^{-\sum_{i=1}^S p_i \ln(p_i)} = \prod_{i=1}^S \frac{1}{p_i}.$$

In addition, Hernandez-Castro and Rossman (2013) gave a simple example to understand the nature of the Shannon-Wiener index. Suppose that there are four types of species,

three communities, and its distribution in proportion is as follows

Species	1	2	3	4
Community A	0.25	0.25	0.25	0.25
Community B	0.25	0.75	0	0
Community C	0.1	0.2	0.3	0.4

[Table II-2] A Distribution of Four Species in Three Communities

(Source: Hernandez-Castro and Rossman (2013))

Then, the value of diversity $D(\cdot)$ for each community can be obtained:

$$D(A) = \prod_{i=1}^4 \frac{1}{4^{1/4}} = 4, D(B) = 1.75476, D(C) = 3.59611 .$$

It can be concluded that when the proportion of each species is equally distributed, the value of diversity is maximized, as expected.

Actually, the Shannon-Wiener index is based on Hill's diversity index (Hill, 1973). Its presentation is given below

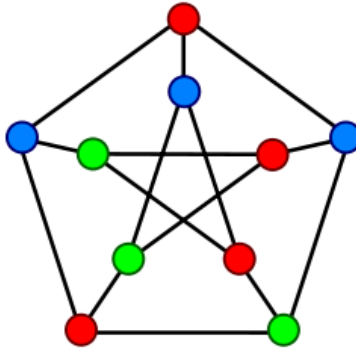
$$D(S) = \left(\sum_{i=1}^S p_i^q \right)^{1/(1-q)},$$

where the meaning of S and p_i are the same as those used in the Shannon-Wiener index, and q denotes the order of the diversity.

D. Graph Coloring Problem

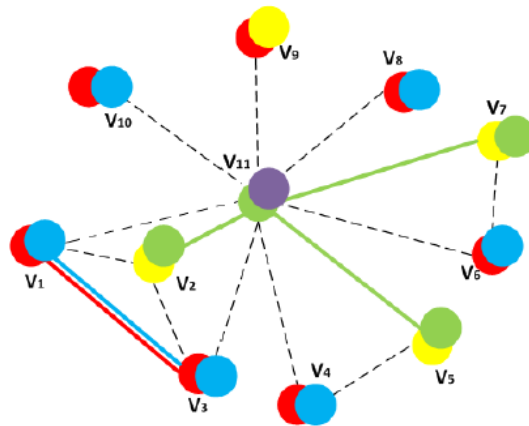
The graph coloring problem provides further background knowledge that makes it easy to understand analytical models of software diversity. It is a well-known problem in graph theory, and its description can be found in a book by Bertsimas and Tsitsiklis (1997):

“Given an undirected graph $G=(N,E)$, we want to assign a color to every node in N , so that adjacent nodes are assigned different colors, and the total number of colors is minimized.”



[Figure II -12] An Example: a graph is colored with the minimum number of colors

In a network environment, computers (or machines) are represented by nodes. Edges are used to present the connections between nodes. Let us consider an example of Huang et al. (2014). In Figure II-14, there are 11 machines denoted by from V_1 to V_{11} . The five colors (blue, red, green, yellow, and purple) correspond to the installed software, i.e., diverse software products. Finally, the edges are depicted as solid or dashed lines depending upon the connectivity: a solid line (or a dashed line) between two nodes means two nodes are either connected (or not connected).



[Figure II -13] An Example: Network topology with 11 machines and 5 distinct software products

Huang et al. (2013) considered connected edges to be worm-spreading paths. Suppose that an attack started at node V_{11} , then the attack can propagate to V_2, V_5 and V_7 . They are using the same software, and are sharing common vulnerabilities. In this sense, solid edges are also known as defective edges, and dashed edges are known as immune edges (Huang et al., 2013). If the number of software programs is equal to the number of nodes (each node is assigned a distinct color), the security risk is minimized. However, this can incur excessive purchasing and operating costs. The objectives of the model presented by Huang et al. (2013) are

- to minimize the number of defective edges, and;
- to increase the number of disconnected components.

In short, the graph coloring problem in information security entails assigning the minimum number of software products (colors) to each machine (node). O'Donnell and Sethu (2004) introduced a few algorithms for the graph coloring problem including randomized coloring, a color-flipping algorithm, a color-swapping algorithm, and a hybrid algorithm.

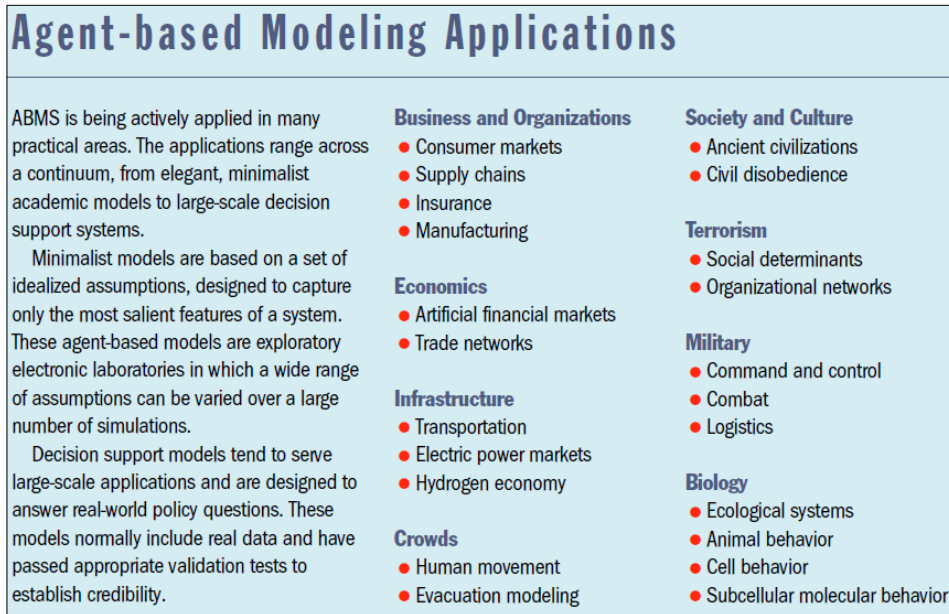
In addition to the software assignment problem presented above (equivalently the graph coloring problem), various approaches to break up the software monoculture have been introduced (Huang et al. 2015).

III. Applications and Further Research Topics

This section first introduces the recently introduced research topic on software diversity. Then, this is followed by possible applications and further research topics on software diversity to increase cyber security capabilities in the defense area.

1. Recent Research Topics

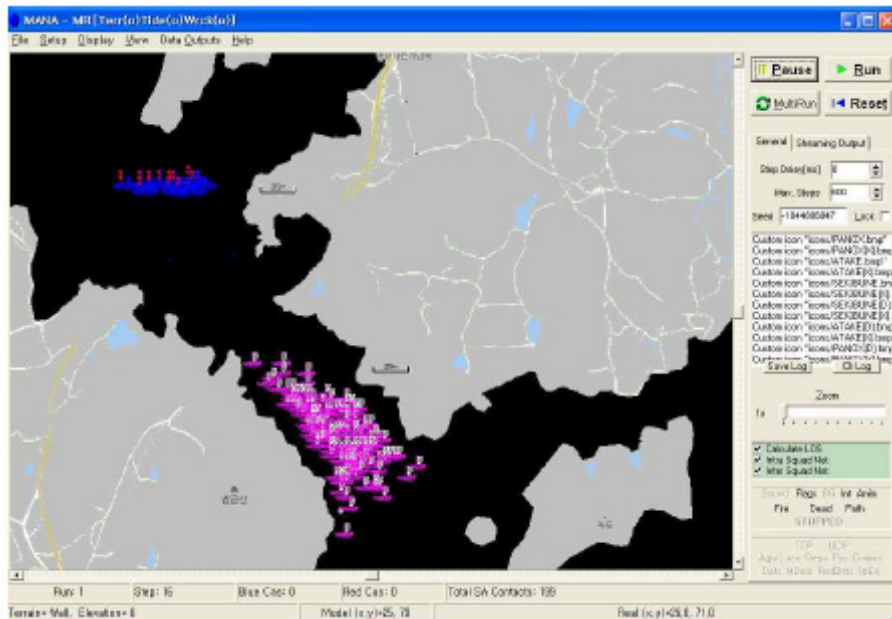
A. Software Diversity Research based on an Agent-Based Simulation Model



[Figure III-14] ABM Applications

(Source: NS&TC, 2015)

Recently, agent-based models (ABM) have found a wide range of application areas in real-world problems in economics, biology, ecology, and social systems (Figure III-1). ABM is known to be appropriate to model and analyze “the dynamics of complex adaptive systems.” Especially, it has been reported that military combat has the main features of a complex adaptive system (Ilachinski, 1997); therefore, ABM has been used to model the battle field. There even exist special purpose versions of ABM software to model military combat situations: ISAAC of the United States (Irreducible Semi-Automatic Adaptive Combat) (Ilachinski, 1997), EINSTEIN of the United States (Ilachinski, 1999), MANA of New Zealand (Lauren and Stephen, 2001), CROCADILE (Barlow and Easton, 2002) and so on.



[Figure III-15] An Example of MANA

Recently, ABMs to investigate the dynamics of malware propagation in an SFN were presented by Hosseini et al. (2016). They modeled the propagation of malware using ABM and an analytical model (SEIRS), and found ABM to have notable advantages over the analytical model: flexibility and dynamic reconfiguration. In addition, they stated that the dynamics of epidemic (or malware) spreading is an important aspect in complex networks, and the ABM is useful to model the dynamics of epidemic (or malware) spreading in complex networks using autonomous agents.

2. Applications to Defense Area

A. Wireless Sensor Networks (WSNs)

WSNs are used in various areas. Especially, in battle fields, sensor networks can be used for gathering environmental data, military monitoring, danger alarms and so on (Lee and Yang, 2013). WSNs contain there are two types of nodes: sensor and sink nodes. Sensor nodes collect data and communicate with each other via a wireless network.

The collected data is sent to sink nodes for further processing. The manufacturing costs for these are low (Yang et al., 2016; Liu et al., 2011); thus, these networks are not well protected by various security techniques. Malicious attacks are highly likely to start from these networks (Yang et al., 2016). The use of software diversity to defend WSNs against cyber-attacks such as worms have been investigated (Yang et al., 2016; Liu et al., 2011). As for WSNs, drones suitable for military purposes may not be sufficiently secure. Applying software diversity to this low-cost equipment can be considered.

3. Further Research Topics

Previous reports on software diversity are briefly reviewed in Section II. This allows further research topics to be derived. First, the impact of software diversity on virus propagation in SFNs where vulnerabilities are shared can be a research topic. It seems that there is a rich body of literature on the impact of immunization on epidemic spreading in SFNs. However, the impact of software diversity on virus propagation has not been considered yet. The relation between software diversity and the epidemic threshold, and resiliency, as a result, to virus propagation can be considered in more detail.

Second, earlier work has focused on either software diversity or epidemic spreading. Separately, these topics are well analyzed very well. However, it seems difficult to find previous efforts pertaining to the integrated model and methodology. Research on software diversity has generally assumed that there is no shared common vulnerability in different software products. However, different software products are shared because of their common components. For example, operating systems have many functions (equivalently termed programs such as notepad and office programs). These embedded programs may share vulnerabilities. Thus, another possible research topic can be the unit measure of vulnerabilities: OSs or programs included with OSs.

IV. Conclusion

Cyber-attacks are becoming more sophisticated and intensified with the advancement of ICT. The Canadian Forces recognize that cyber-attacks are inevitable in the future, with the strategies switched from the traditional defensive strategies to more proactive measures (Gherbi et al., 2011). As with the Canadian Forces, the Republic of Korea (ROK) military is very concerned about increasing cyber security capabilities. According to the “2014 Defense White Paper”(Ministry of National Defense (MND), 2014), the ROK military has developed the “Master Plan for Defense Cyber Policy” to secure offensive defense and response capabilities, and to ensure victory in cyber warfare. Based on the master plan, the ROK military took these following-up actions:

- Modification of related laws and regulations including “the United Defense Act” and the “National War Instruction Guidance”. It aims to conduct systematic and legal cyber operations.
- Early publication of a “Joint Cyber Operations Manual” to provide a unified guideline. The guideline is necessary for engaging in cyber warfare that considers both physical and cyber warfare.
- Establishment of a new office that handles overall cyber operations in the Joint Chiefs of Staff.
- Creation of an environment enables an immediate response during a crisis by amending the manuals and establishing a cyber-crisis management system for national defense.

In respect of the systemic development of technologies related to cyber warfare, the MND has developed “the Mid-to-Long-term Cyber Technology Roadmap”. Countermeasures against new cyber threats have been improved. The MND has also been developing a “cyber intrusion tolerant system” and other technologies. The technology “cyber intrusion tolerant system” enables the core function of the system to be maintained even during cyber-attacks. The objective of the “cyber intrusion tolerant system” is very similar to that of software diversity. In this sense, software

diversity, which has been discussed based on this report, can be very helpful in improving the cyber security capabilities.

Most of the general weapon systems in the military are specially designed by a specific defense firm. Therefore, it is possible to protect the source technology. However, it is known that the dependency of the cyber defense system on commercial products is relatively high (Baek and Moon, 2014). Vulnerabilities in those commercial software products can be exploited and this can cause devastating damage as a result of the high dependency on them. Therefore, adoption of the concept of software diversity would be required, for example, in the purchasing stage.

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China's South China Sea Policy after the International Arbitration

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China's South China Sea Policy after the International Arbitration

〈Abstract〉

On 22th January 2013 the Philippines unilaterally initiated an arbitral proceeding with respect to the dispute with China over the maritime jurisdiction of the Philippines in the West Philippine Sea under the Annex VII of the UNCLOS. Despite the rejection and disappearance of the arbitral proceeding by China, the Arbitral Tribunal in the Hague was composed and made the award that the Tribunal has jurisdictions to some of the Philippines' Submissions on 12th July 2016. China reacted strongly against the award on jurisdiction, which caused concerns on the regional maritime security. Given the situation, this study aims to examine China's response and its new South China Sea policy and find out implications to South Korea.

In terms of the South China Sea disputes, China declared that China would resolve the South China Sea dispute relying on diplomacy and dialogue. In 1990s and the early 2000s, China adjusted such a policy in regards to the relations with states directly concerned in South China Sea. For example, in 1990, China formally suggested Initiative of "Putting Aside Disputes and Taking Friendly consultation". China also agreed on "Code of Conduct in the South China Sea" through ASEAN+1 Summit Meeting in 2002. Since then China had implemented a cooperative development strategy in the region, maintaining amicable relations with other ASEAN members.

However, as China realized that the power beyond the South China Sea started to intervene the South China Sea disputes and its national power increased, China changed its policy on the South China Sea to more assertive one, defining the China's territorial claims to the South China Sea as a "core interest". There are three factors which have affected the China's assertive policy on the South China Sea. First, the response to the US's China containment policy. China considers that the US started to implement China containment policy in order to maintain and re-expand its influence in the region, thereby China emphasizes a bilateral solution on the dispute and maintain its hard line.

Secondly, the demand for its sustainable economic development. China tries to resolve domestic economic problems and maintain economic growth by exporting excess capacity in the domestic market by the "One Belt, One Road" initiative. Because China's new development plan includes the expansion to the South China Sea and the securing of sea routes in the region, China does not want to stand back from the disputes. Thirdly, China's strategy to be a naval power. With its economic growth, China endeavors to develop its corresponding naval power to its economy. Therefore, although China claims for the building of peaceful and cooperative surrounding environment, the growth of China's naval power causes a fear and concern to nations in the region.

According to study results, the award of the Arbitral Tribunal seemed to increase the uncertainties surrounding the South China Sea. The result of the arbitration unilaterally raised by the Philippines made China perceive new challenges in the South China Sea disputes, which are 1) legal contestation in the South China Sea dispute will continue unabated, especially because the US and Japan consider the award valid, 2) military and maritime competition between the US and China will become intensified, 3) difficulties will be added to the consultation process for the COC in the South China Sea, 4) conflicts between maritime law enforcement forces will be inevitable, 5) a possible crisis in the South China Sea may spill over to other areas.

In conclusion, China will be expected to implement more assertive and offensive policies on the South China Sea, even though the basic objective of China's South China Sea policy still is to maintain the stability and the protection of its national interests. At the same time, China recognizes that it will face more challenges and pressure, and in order to change the unfavorable situation for China in the South China Sea, China may take more active measures such as the Dual-Track Approach, which includes bilateral consultations and negotiations with respective states directly concerned.

Lastly, this study tries to think over implications to South Korea. There are some concerns in South Korea about the effect of the international arbitration and China's new policy on the South China Sea, regarding maritime demarcation negotiations between South Korea and China, the territorial dispute on the Dokdo with Japan, and South Korea's role in the South China Sea. First, the China's new policy will make little

influence on maritime demarcation negotiations, because of three reasons: 1) South Korea and China have high mutual understanding due to the high complementarity in exploiting the West Sea, 2) the status quo in the West Sea is well maintained, 3) the maritime demarcation for the West Sea is proceeding under the agreement of political leaders. Secondly, the result of the arbitration may trigger Japanese ambition on the Dokdo. Japan has showed its intention to bring the Dokdo issue to the ICJ. Likewise, The Japanese government considers the Dokdo issue is a legal dispute and endeavors to solve this issue with the international law, regardless of South Korea's claims. Because the international arbitration between China and the Philippines shows the possibility of a compulsory jurisdiction, the result of the international arbitration may cause Japan to initiate a unilateral arbitration to the ICJ. Therefore, South Korea needs to be well prepared. Thirdly, South Korea can increase its influence and obtain interests by participating in dealing with non-traditional security issues such as drugs, piracy, cyber security, and health in the region.

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I. Introduction

The South China Sea disputes have emerged since 1960s when a large amount of natural resource reserves were estimated in the area. After the third UN Conference for the Law of Sea, which was convened from 1973 to 1982, the new order was established as the UN Convention of the Law of the Sea (UNCLOS) was created. Nonetheless, the South China Sea disputes have been intensified due to respective nations' different interpretation of clauses related to the UNCLOS and the confrontation between the US and China.

In the situation, on 22th January 2013 the Philippines unilaterally initiated an arbitral proceeding with respect to the dispute with China over the maritime jurisdiction of the Philippines in the West Philippine Sea under the Annex VII of the UNCLOS. Since China rejected and returned the Philippines' Notification and Statement of Claims on 19 February 2013, China has not directly respond with an argument to settle the dispute through bilateral negotiations and friendly consultations. Despite the rejection and disappearance of the arbitral proceeding by China, the Arbitral Tribunal in the Hague was composed and the arbitration proceeded for more than 3 years. On 12th July 2016, the Tribunal made the award that the Tribunal has jurisdictions to some of the Philippines' Submissions. China reacted strongly against the award on jurisdiction, which caused concerns on the regional maritime security. Given the situation, it is valuable in understanding and predicting the security environment of East Asia to research China's new policy on the South China Sea after the arbitration.

In addition, although South Korea is not a party directly concerned involving in the South China Sea disputes, South Korea has a vital interest in this area, because the South China Sea plays a very significant role in South Korea's economy as a maritime transport route, through which roughly 90 % of energy resource South Korea imports passes. In this sense, it is meaningful to study China's South China Sea policy after the international arbitration and think over its implications to South Korea.

For this purpose, this research will review China's policy on the South China Sea policy before the arbitration from the early 20th century to 2012, and analyze main factors which influence China's policy on the South China Sea policy in Chapter 2. In Chapter

3, this study will explore the process and result of the international arbitration focusing on China's response. Then, we will examine the new policy of China on the South China Sea and its characteristics in Chapter 4. In Conclusion, we will summarize the study results and try to think over implications of China's policy on the South China Sea to South Korea.

II. China's South China Sea Policy before the Arbitration

Looking back to history, it seems that China's policy on the South China Sea would usually be adjusted when the situation faces China in the South China Sea suddenly change caused by some big events. For example, the discovery of the abundant oil and gas in the South China Sea in 1968, the Chinese military fought with the Vietnamese navy to capture the Johnson Reef in the Spratly Islands in 1988, the entry into force of the United Nations Convention on the Law of the Sea (UNCLOS) in 1994, China's ratification on UNCLOS in 1996 and the Mischief Reef conflict between the Philippines and China in 1995, Hilary Clinton's Speech on US intervention into the South China Sea in Hanoi in 2010 and the arbitration unilaterally initiated by the Philippines against China in 2013. Naturally, those events become the time nodes of the development of China's South China Sea policy.

In order to in-depth explore the China's South China Sea policy, literatures tend to take a segmental method which is to divide



[Figure. 1] Map of the South China Sea
source: Bill Hayton, *The South China Sea: the Struggle for Power in Asia*, Yale University Press, 2014.

the development of China's South China Sea policy into several segments based on those time nodes. In this sense, the arbitration unilaterally initiated by the Philippines against China in 2013 will be used as a new time node to divide the development of China's South China Sea policy into two segments, that is to say, one before the arbitration and the other after the arbitration. In this part, we divide the former period into several segments, which are from 1900s to 1949, from 1949 to 1968, from 1970s to 1980s and from 1990s to 2012, and then analyze factors which make China implement an assertive policy recently.

1. China's Policy on the South China Sea¹⁾

1) From 1900s to 1949

In the first part of the 20th century, the realization and utilization by human being of offshore maritime futures and its adjacent and relevant maritime areas are far from that of today. Despite that, China has always been resolute in upholding its territorial sovereignty and maritime rights and interests in the South China Sea. From 1900s to 1949, China policy on the South China Sea was characterized as recovering and exercising territorial sovereignty over the South China Sea Islands by military activities, protecting territorial sovereignty over the South China Sea Islands by diplomatic protests and declaring territorial sovereignty and maritime rights by mapping the South China Sea. The relevant historical facts include as follows:

When France and Japan invaded and illegally occupied by force some islands and reefs of China's Nansha Qundao in the 1930s and 1940s, the Chinese people rose to fight back strenuously and the Chinese government took a series of measures to defend

1) Some parts which examine China's policy on the South China Sea is mainly described from the perspective of China to understand China's stance on the South China Sea and the international arbitration. In contradiction to China, other countries, such as ASEAN members and Japan, argue that China's hard-line stance has caused more serious conflicts and tension in the region. See Iida Masafumi, *New Developments in China's Policy on the South China Sea*, NIDS Security Reports, No. 9, December 2008, Tokyo, The National Institute for Defense Studies, http://www.nids.mod.go.jp/english/publication/kiyo/pdf/2008/bulletin_e2008_2.pdf.

China's sovereignty over Nansha Qundao.

In 1933, France invaded some islands and reefs of Nansha Qundao and declared "occupation" of them in an announcement published in *Journal Official*, creating the "Incident of the Nine Islets". The French aggression triggered strong reactions and large scale protests from all walks of life across China. The Chinese fishermen living on Nansha Qundao also took on-site resistance against the French aggression. Chinese fishermen Fu Hongguang, Ke Jiayu, Zheng Landing and others cut down the posts flying French flags on Taiping Dao, Beizi Dao, Nanwei Dao, Zhongye Dao and others.²⁾

Shortly after this Incident happened, the Chinese Ministry of Foreign Affairs made clear through its spokesperson, referring to the relevant islands of Nansha Qundao, that "no other people but Chinese fishermen live on the islands and they are recognized internationally as Chinese territory".³⁾ The Chinese government made strong representations to the French government against its aggression.⁴⁾ And in response to the French attempt to trick Chinese fishermen into hanging French flags, the government of Guangdong Province instructed that administrators of all counties should issue public notice forbidding all Chinese fishing vessels operating in Nansha Qundao and relevant waters from hanging foreign flags, and Chinese national flags were distributed to them to be hung on Chinese fishing vessels.⁵⁾

China's Committee for the Examination for the Land and Sea Maps, which was composed

2) Han Zhenhua, Lin Jinzhi & Wu Fengqi eds., *Wo Guo Nan Hai Zhu Dao Shi Liao Hui Bian* (Collection of Historical Materials Concerning Our Country's Islands in the South China Sea), Beijing, Dong Fang Chu Ban She (Orient Publishing), 1988, p. 8.

3) Xu Gongsu, "Fa Guo Zhan Ling Jiu Xiao Dao Shi Jian (France Occupied the Nine Islets)," in Han Zhenhua, Lin Jinzhi & Wu Fengqi eds., *Wo Guo Nan Hai Zhu Dao Shi Liao Hui Bian* (Collection of Historical Materials Concerning Our Country's Islands in the South China Sea), Beijing, Dong Fang Chu Ban She (Orient Publishing), 1988, p. 149.

4) (Taiwan) "Wai Jiao Bu" Yan Jiu Yuan She Ji Wei Yuan Hui (The Design Commission of Institute of "the Ministry of Foreign Affairs" of the Republic of China), *"Wai Jiao Bu" Nan Hia Zhu Dao Dang An Zi Liao Hui Bian* (Collection of Materials and Documents concerning the Islands in South China Sea of "the Ministry of Foreign Affairs" of the Republic of China), Volume 2(1), Taipei: Bian Zhe Yin (Editors Publishers), 1995, p. 6.

5) Wu Shicun, *Nan Sha Zheng Duan De Qi Yuan Yu Fa Zhan* (The Origin and Development of South China Sea Disputes), Beijing: Zhong Guo Ji Jing Chu Ban She (China Economic Publishing House), 2010, p. 27.

of representatives of the Ministry of Foreign Affairs, Ministry of the Interior, Ministry of the Navy and other institutions, reviewed and approved the names of individual islands, reefs, banks and shoals of Nanhai Zhudao, compiled and published Zhong Guo Nan Hai Ge Dao Yu Tu (Map of the South China Sea Islands of China) in 1935.⁶⁾

Japan invaded and illegally occupied Nanhai Zhudao during its war of aggression against China. The Chinese people fought heroically against the Japanese aggression. With the advance of the World's Anti-Fascist War and the Chinese People's War of Resistance against Japanese Aggression, China, the United States and the United Kingdom solemnly demanded in the Cairo Declaration in December 1943 that all the territories Japan had stolen from the Chinese shall be restored to China. In July 1945, China, the United States and the United Kingdom issued the Potsdam Proclamation. That Proclamation explicitly declares in Article 8: "The terms of the Cairo Declaration shall be carried out."⁷⁾

In August 1945, Japan announced its acceptance of the Potsdam Proclamation and its unconditional surrender. In November and December 1946, the Chinese government dispatched Colonel Lin Zun and other senior military and civil officials to Xisha Qundao and Nansha Qundao to resume exercise of authority over these Islands, with commemorative ceremonies held, sovereignty markers re-erected, and troops garrisoned. These officials arrived at these islands on four warships, namely Yongxing, Zhongjian, Taiping and Zhongye. Subsequently, the Chinese government renamed four islands of Xisha Qundao and Nansha Qundao after the names of those four warships.⁸⁾

In March 1947, the Chinese government established on Taiping Dao Nansha Qundao Office of Administration and placed it under the jurisdiction of Guangdong Province.

6) Wu Shicun, *Nan Sha Zheng Duan De Qi Yuan Yu Fa Zhan (The Origin and Development of South China Sea Disputes)*, Beijing: Zhong Guo Ji Jing Chu Ban She (China Economic Publishing House), 2010, p. 34.

7) Wu Shicun, *Nan Sha Zheng Duan De Qi Yuan Yu Fa Zhan (The Origin and Development of South China Sea Disputes)*, Beijing: Zhong Guo Ji Jing Chu Ban She (China Economic Publishing House), 2010, pp. 27-32.

8) Wu Shicun, *Nan Sha Zheng Duan De Qi Yuan Yu Fa Zhan (The Origin and Development of South China Sea Disputes)*, Beijing: Zhong Guo Ji Jing Chu Ban She (China Economic Publishing House), 2010, pp. 29-31.

China also set up a meteorological station and a radio station on Taiping Dao, which started broadcasting meteorological information in June of that year.⁹⁾

On the basis of a new round of geographical survey of Nanhai Zhudao, the Chinese government commissioned in 1947 the compilation of *Nan Hai Zhu Dao Di Li Zhi Lue* (A Brief Account of the Geography of the South China Sea Islands), reviewed and approved *Nan Hai Zhu Dao Xin Jiu Ming Cheng Dui Zhao Biao* (Comparison Table on the Old and New Names of the South China Sea Islands), and drew *Nan Hai Zhu Dao Wei Zhi Tu* (Location Map of the South China Sea Islands) on which the dotted line is marked. In February 1948, the Chinese government officially published *Zhong Hua Min Guo Xing Zheng Qu Yu Tu* (Map of the Administrative Districts of the Republic of China) including *Nan Hai Zhu Dao Wei Zhi Tu* (Location Map of the South China Sea Islands).

In June 1949, the Chinese government promulgated *Hai Nan Te Qu Xing Zheng Zhang Guan Gong Shu Zu Zhi Tiao Li* (Regulations on the Organization of the Office of the Chief Executive of the Hainan Special District), which placed Hainan Dao, Dongsha Qundao, Xisha Qundao, Zhongsha Qundao, Nansha Qundao and some other islands under the jurisdiction of the Hainan Special District.¹⁰⁾

2) From 1949 to 1968

Prior to 1968, China's policy on the South China Sea focused on the proclamation of China's sovereignty over the South China Sea islands i.e., Dongsha Qundao (Pratas Islands), Xisha Qundao (Paracel Islands), Zhongsha Qundao (Macclesfield Bank) and Nansha Qundao (Spratly Islands), by political statements, national legislation and administrative installation. The historical facts include as follows:

9) See "China Adheres to the Position of Settling Through Negotiation the Relevant Disputes Between China and the Philippines in the South China Sea," 13 July 2016, http://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/t1380615.shtml, visited on 18 October 2016.

10) See "China Adheres to the Position of Settling Through Negotiation the Relevant Disputes Between China and the Philippines in the South China Sea," 13 July 2016, http://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/t1380615.shtml, visited on 18 November 2016.

Since its founding on 1 October 1949, the People's Republic of China has repeatedly reiterated and further upheld its sovereignty over Nanhai Zhudao and relevant rights and interests in the South China Sea by measures such as adopting legislations, establishing administration and making diplomatic representations. China has never ceased carrying out activities such as patrolling and law enforcement, resources development and scientific survey on Nanhai Zhudao and in the South China Sea.

In August 1951, Foreign Minister Zhou Enlai, in his Statement on the United States-British Draft Peace Treaty with Japan and the San Francisco Conference, pointed out that "as a matter of fact, just like all the Nan Sha Islands, Chung Sha Islands and Tung Sha Islands, Si Sha Islands (the Paracel Islands) and Nan Wei Island (Spratly Island) have always been China's territory, occupied by Japan for some time during the war of aggression waged by Japanese imperialism, they were all taken over by the then Chinese Government, following Japan's surrender", "Whether or not the United States-British Draft Treaty contains provisions on this subject and no matter how these provisions are worded, the inviolable sovereignty of the People's Republic of China over Nan Wei Island (Spratly Island) and Si Sha Islands (the Paracel Islands) will not be in any way affected."¹¹⁾

In September 1958, China promulgated the Declaration of the Government of the People's Republic of China on China's Territorial Sea, explicitly providing that the breadth of China's territorial sea shall be twelve nautical miles, that the straight baselines method shall be employed to determine the baselines of territorial sea and that such provisions shall apply to all territories of the People's Republic of China, including "Dongsha Qundao, Xisha Qundao, Zhongsha Qundao, Nansha Qundao and all the other islands belonging to China".¹²⁾

In March 1959, the Chinese government set up, on Yongxing Dao of Xisha Qundao, the Office of Xisha Qundao, Nansha Qundao and Zhongsha Qundao. In March 1969,

11) Wu Shicun eds., *Nan Hai Wen Ti Wen Xian Hui Bian (Collection of Documents concerning South China Sea Disputes)*, Haikou: Hai Nan Chu Ban She (Hainan Publishers), 2001, p. 45.

12) See Wu Shicun eds., *Nan Hai Wen Ti Wen Xian Hui Bian (Collection of Documents concerning South China Sea Disputes)*, Haikou: Hai Nan Chu Ban She (Hainan Publishers), 2001, pp. 51, 53.

the Office was renamed the Revolutionary Committee of Xisha Qundao, Zhongsha Qundao and Nansha Qundao of Guangdong Province. In October 1981, the name of the Office of Xisha Qundao, Nansha Qundao and Zhongsha Qundao was restored.¹³⁾

In this period, except for the Republic of Vietnam (RVN), the States concerned, including Malaysia, the Philippines and Brunei, almost never took any military activities and protested against China's territorial sovereignty over the South China Sea Islands. The Philippines ever attempted to occupy some islands, but never expressed this intention explicitly. Generally speaking, the situation in the South China Sea was peaceful within this period. Against this background, it was not necessary for China to declare territorial sovereignty by occupation.

3) From 1970s to 1980s

Since the late 1960s and early 1970s, the littoral States concerned including Vietnam, the Philippines, Malaysia and Brunei, started to crazily seize China's islands in the South China Sea.¹⁴⁾ Among others, Vietnam seized 28 maritime features, the Philippines seized 9 ones, Malaysia seized 5 ones and Brunei seized 1.¹⁵⁾ If China did not win the two sea wars against Vietnam, maybe the eight maritime features would not be left to China. It was obvious that the main task and purpose of China's South China Sea policy was to recover territorial sovereignty over those seized islands as soon as possible. Taking into account the situations home and abroad, China took a comprehensive solution, which involved protecting territorial sovereignty over some maritime features by taking direct military counterattack, declaring China's territorial sovereignty over the South China Sea Islands by diplomatically protesting, publishing geographical names for part

13) See "China Adheres to the Position of Settling Through Negotiation the Relevant Disputes Between China and the Philippines in the South China Sea," 13 July 2016, http://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/t1380615.shtml, visited on 18 November 2016.

14) See Wu Shicun, *Nan Sha Zheng Duan De Qi Yuan Yu Fa Zhan (The Origin and Development of South China Sea Disputes)*, Beijing: Zhong Guo Ji Jing Chu Ban She (China Economic Publishing House), 2010, pp. 1-2.

15) Li Jinming, *Nan Hai Bo Tao: Dong Nan Ya Guo Jia Yu Nan Hai Wen Ti (Great Waves in the South China Sea: ASEAN and South China Sea Issue)*, Nanchang: Jiang Xi Gao Xiao Chu Ban She (Jiangxi Colleges and Universities Publishers), 2005, pp. 32-36, 47-52, 68-78, 88-93.

of the South China Sea Islands and establishing the Hainan Administrative District with jurisdiction over Xisha Qundao, Nansha Qundao and Zhongsha Qundao and the relevant maritime areas, and seeking for the peaceful solution on the South China Sea issues by presenting new way of thinking, i.e., Putting Aside the Disputes and Promoting Joint Development.

4) From 1990s to 2012

Since 1990s, the South China Sea issue was characterized as follows: (a) Tensions between China and Vietnam increased, while that between China and the Philippines decreased; (b) Littoral States in the South China Sea started to consult with each other about the South China Sea issue; (c) With the entry into force of UNCLOS, the scope of disputes extended from islands disputes to maritime ones; (d) The power beyond the South China Sea started to intervene the solution of the South China Sea disputes; (e) The China-ASEAN relation was promoted sustainably.

Faced with those new characters, China adjusted its South China Sea policy. In 1990, China's Premier formally presented an initiative of "Putting Aside Disputes and Taking Friendly Consultation". After that, "Putting Aside Disputes and Promoting Joint Development" has been declared as the part of China's South China Sea policy.¹⁶⁾ In order to effectively implement it, China has taken many new methods and measures to protect China's rights and interests in the South China Sea.

China went on declaring territorial sovereignty by relying on diplomacy. Besides that, China attached more importance to domestic legislation than previous. In February 1992, China promulgated the Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone, establishing China's basic system of territorial sea and contiguous zone. This Law explicitly states: "The land territory of the People's Republic of China includes ... Dongsha Qundao; Xisha Qundao; Zhongsha Qundao; Nansha Qundao; as well as all the other islands belonging to the People's Republic of China." In May 1996, the Standing Committee of the Eighth National People's Congress made

16) Yue Deming, "A Study on China's South China Sea Policy (Zhong Guo Nan Hai Zheng Ce Chu Yi)," *Strategy and Management (Chinese)*, No. 3, 2002, p. 57.

the decision at its Nineteenth Session to ratify UNCLOS, and at the same time declared that, "The People's Republic of China reaffirms its sovereignty over all its archipelagoes and islands as listed in Article 2 of the Law of the People's Republic of China on the Territorial Sea and the Contiguous Zone which was promulgated on 25 February 1992." In May 1996, the Chinese government announced the baselines of the part of the territorial sea adjacent to the mainland which are composed of all the straight lines joining the 49 adjacent base points from Gaojiao of Shandong to Junbijiao of Hainan Dao, as well as the baselines of the territorial sea adjacent to Xisha Qundao which are composed of all the straight lines joining the 28 adjacent base points, and declared it would announce the remaining baselines of the territorial sea at another time. In June 1998, China promulgated the Law of the People's Republic of China on the Exclusive Economic Zone and the Continental Shelf, establishing China's basic system of exclusive economic zone and continental shelf. This Law explicitly states: "The provisions in this Law shall not affect the historic rights that the People's Republic of China enjoys."

Although the China-the Philippines' conflicts and disputes in the South China Sea increased, even faced with the Philippines' serious provocation, China has always been taking a very self-restrain attitude towards them. On 10 August 1995, China and the Philippines jointly declared that the two Parties consented to comply with "eight principles" including peaceful settlement with a view to establish the Code of Conduct of the Parties in the South China Sea before the settlement of the disputes.¹⁷⁾ Afterwards, the Chinese side has still been taking a very self-restrain attitude and abiding by "eight principles", though the facts that Philippines arrest Chinese fishing boats and maltreat Chinese fishermen occurred continuously and frequently.

China attached more importance to promote cooperation with the claimants and ASEAN in respect to maritime affairs in order to reduce differences, increase mutual trust and effectively manage and control disputes. For example, China and Indonesia reached the agreement that there were no disputes regarding the South China Sea issue between

17) See Wu Shicun eds., *Nan Hai Wen Ti Wen Xian Hui Bian (Collection of Documents concerning South China Sea Disputes)*, Haikou: Hai Nan Chu Ban She (Hainan Publishers), 2001, pp. 51-53.

them; China has welcome and participated in the consultation and formulation concerning DOC and COC; China has increasingly broadened and strengthened cooperation with ASEAN in the field of economy and trade.

With regard to the intervention of outside forces, China has been keeping an self-restrain attitude. On one side, China has recognized and protected the legal rights and interest, such as the freedom of aviation and flight through international sea lanes and flight lines, owned by outside countries in accordance with international law. On the other side, China has emphasized that any dispute should be resolved by the States directly concerned and pointed out that it would be in vain for outside forces to destroy the friendly relationship between China and ASEAN under the pretext of so-called South China Sea issue.

In terms of external propaganda, aimed at strengthening mutual trust and reducing misunderstanding, China has taken great efforts to rebut some misleading views, such as rendering and exaggerating disputes and so-called "China Threat Theory". For example, China's leaders have kept a low profile in various kind of international places and avoided referring to the South China Sea issue as much as possible; China has tried to clarify its conception of cooperation and security at the ASEAN Regional Forum; To dispel the suspicion of ASEAN and outside countries, China has taken calm and restrain measures to deal with various threats.

2. Factors Affecting China's Policy on the South China Sea

As noted above, China declared that China would resolve the South China Sea dispute relying on diplomacy and dialogue. China adjusted such a policy in regards to the relations with states directly concerned in South China Sea. For example, in 1990 China formally suggested "Initiative of Putting Aside Disputes and Taking Friendly consultation". China also agreed on "Code of Conduct in the South China Sea" through ASEAN+1 Summit Meeting in 2002. Since then China had implemented a cooperative development strategy in the region, maintaining amicable relations with other ASEAN members.

However, the South China Sea disputes have been intensified since around 2010. With

the change of situations in the South China Sea, China also changed its policy on the South China Sea to more assertive one. In other words, in dealing with South China Sea disputes, China seems to utilize military force rather than to focus on diplomacy and dialogue.

For example, China arrested more than 30 Vietnam fishermen in the first-quarter in 2010, insisting the fishermen were in Chinese waters off Hainan island. In May 2011, Chinese fishing vessels cut cables of a Vietnamese vessel, the Binh Minh 20 ship, while doing seismic oil exploration work in the South China Sea. Regarding the protest of the Vietnam government, China denied any wrongdoing, accusing that Vietnam was seriously infringing China's interests and sovereignty. In the same month, China's maritime patrol boats confronted Vietnam's oil exploration ship. In addition, The Scarborough Shoal standoff incident happened in April 2012, in which two China's maritime surveillance ships and a Philippine Navy frigate confronted in the Scarborough Shoal. Also, China has constructed artificial islands, installations, and structures at Cuarteron Reef, Fiery Cross Reef, Gaven Reef (North), Johnson Reef, Hughes Reef, Subi Reef, and Mischief Reef in the disputed South China Sea.

Likewise, China's growing assertion over the South China Sea has increased mistrust, drove up tension in the region, and caused serious concerns of states concerned. Given these behaviors of China in the South China Sea, China has implemented more assertive policy since 2010. Factors influencing China to make its South China Sea policy more assertive are as follows:

1) Geopolitical factor: the response to the US's China containment policy

In March 2010, Chinese officials had identified the defense of China's territorial claims to the South China Sea as a "core interest" in a private meeting held in Beijing with senior US officials.¹⁸⁾ Likewise, China defines the South China Sea as a core interest. For China, the term "core interest" refers to non-negotiable part, including sovereignty and territorial integrity.

18) New York Times, April 23, 2010, <http://www.nytimes.com/2010/04/24/world/asia/24navy.html>.

Especially, China considers the US tries to hurt its core interests. In a meeting on the sidelines of the G20 summit in St. Petersburg on 6th September 2013, Chinese President Xi Jinping stated that the US should not play a negative role in the issues regarding the South China Sea issue ... the US make sure that Washington's rebalancing policy in the Asia-Pacific does not hurt China's core interests.¹⁹⁾

As South China Sea territorial disputes have been intensified, China considers one of new characteristics about the South China Sea disputes is that outside powers, especially the US, started to intervene the solution of the South China Sea disputes. Therefore, China urged that China is obliged to implement assertive policy due to the US's China containment policy, which is represented by rebalancing policy.²⁰⁾

The US's assertive intervention to the South China Sea emerged, recognizing the rise of China in the region after the 2008 financial crisis. To maintain and re-expand its influence in the region, the US started to implement China containment policy. Especially, the Obama administration has reinforced security cooperation with its allies in the region since 2011 through the rebalancing policy whose purpose is to enhance the relations between the US and the Asia-Pacific region. When President Obama visited Australia, he emphasized the role of Australia in the implementation of rebalancing policy by confirming that the US would deploy more troops in Australia.²¹⁾ Especially, the US enhanced the structure of security alliance in the process of implementing rebalancing policy, focusing on nations which have direct territorial disputes with China, e.g., Japan, Taiwan, and ASEAN members such as Philippines and Vietnam. Considering the first island chain which connects through Japan, Taiwan, Philippines, Malaysia, Brunei, and Indonesia, we can see that the chain is the geographical alliance line for the US to contain China and prevent China from expanding its military power into the Pacific Sea.

19) China Daily, September 7, 2013, http://www.chinadaily.com.cn/china/2013xivisitcenterasia/2013-09/07/content_16950899.htm.

20) Zhou Qi, *US Strategy of Rebalancing to Asia-Pacific: Execution and Challenge*, Tsinghua Report on National Strategic Studies, 2015, p. 29.

21) Heraldnews, November 16, 2011, http://news.heraldcorp.com/view.php?ud=20111116000699&md=20120317054814_BL.

Also, the US tried to contain China to reach the Indian Ocean with the "The Hire a Port & Push Out to Sea (Jiegang Chuhai)" strategy by increasing interdependence through the development and connection of infrastructure between India and ASEAN members. For instance, Hillary Clinton confirmed India's "Look East Policy", which was practiced by Asian Development Bank (ADB), and ASEAN's "Look West Policy" to justify the US's intervention to the South China Sea in 2011. She also claimed the "New Silk Road" initiative to support the development of the Turkmenistan-Afghanistan-Pakistan-India (TAPI) Pipeline and build industrial zones in order to block China's West Development strategy.²²⁾ President Obama also improved the relations with Myanmar and Vietnam, which would become a main manufacturing plant against China in the progress process of the Tran-Pacific Partnership (TPP).

Likewise, in response to the rise of China, the US is performing the rebalancing policy to restrain the rise of China, to support nations in the region whose national interests collide with that of China, and to recover the losing balance in the region. Such strategy of the US implies the US's intervention in the South China Sea disputes, which induces China to perform more assertive policy to the South China Sea issue.

Considering the above stated US's policy, China's assertive South China Sea policy includes a military strategic intention to expand the axis of national defense outward through the South China Sea, notably the Spratly Islands. Because the Spratly Islands also can be used as a key place to penetrate the containment of the US and reach the Pacific Ocean, and as a early warning base against various maritime threats in Southeast Asia in the time of emergency.

2) Geoeconomic factor: securement of sea routes in the South China Sea for a sustainable development

Economically the South China Sea is very crucial to China. At present, more than 50 % of world annual merchant fleet tonnage passes through the Strait of Malacca, the

22) Geoffrey Pyatt, "Delivering on the New Silk Road", Principal Deputy Assistant Secretary, Bureau of South and Central Asian Affairs, Tokyo Symposium on a new Silk Road, July 9, 2012, <http://www.state.gov/p/sca/rls/rmks/2012/194735.htm>.

Sunda Strait, and the Lombok Strait, and the amount of oil which passes through the Strait of Malacca reaches 10 million barrels. After China became a oil importing nation in 1993, China imports large amount of oil. Notably, because roughly 85.85 % of imported oil comes to China through the Indian Ocean, of which 65% through Strait of Malacca.²³⁾, it is very significant for China to secure safe sea transport routes to continue to develop its national economy. In addition, large amount of oil and gas reserves is one of factor which makes China implement more assertive policy in the South China Sea.

Besides, Chinese President Xi Jinping suggested "the Silk-Road Economic Belt" during the lecture at Nazarbayev University in Kazakhstan in September 2013, and he claimed "the 21st-Century Maritime Silk Road" during the speech to the Indonesian Parliament in October. Since then, China has implemented the "One Belt, One Road" initiative. Although the initiative mainly focuses on the economic integration of the region through the construction of infrastructure, it is a national development plan to accomplish "Chinese Dream". In terms of its domestic economy, China's economy went into the stage of New Normal (XinChangtai), in which structural reform needs to be progressed from quantitative growth to qualitative growth for the economic development. In this sense, China tries to resolve domestic economic problems and maintain economic growth by exporting excess capacity in the domestic market. Because China's new development plan, the One Belt, One Road initiative includes the expansion to the South China Sea and the securement of sea routes in the region, China does not want to stand back from the disputes.

3) China's strategy to be a naval power

China With the rapid economic growth since the open door policy in 1978, China has emerged as a great economic power which competes against the US as a member of G2. As its national power and the global status rose, China struggles to expand its influence to Asia and the world. Historically, hegemons exert their influence on the

23) Ma Xiaojun & Shu Yuan, A Study on the Security of China's Oil and Gas Land Transportation Routes, Tsinghua Report on National Strategic Studies, 2015, pp. 78-80.

world by expanding their power in the sea as well as in the continent. In other words, a nation which secures the sea control can emerge as a hegemon in the world. In this sense, China endeavors to develop its correspond naval power to its economy.

Since the former president of China, Hu Jintao called for the building of a powerful navy at a meeting of delegates to a Communist Party meeting of the navy on 27th October 2006, China has increased national defense expenditure and developed various relevant equipment and weapons.²⁴⁾ According to the report on the Chinese military of the Pentagon of 2014, the Chinese Navy possessed 77 principal surface combatants, more than 60 submarines, 55 medium and large amphibious ships, and roughly 85 missile-equipped small combatants. In 2012, China's first aircraft carrier, the Liaoning entered service. Besides, China is developing respective high tech weapons, e.g. the 5th generation fighter aircraft J-20, the Dong-Feng-21D anti-ship ballistic missile, SLBM Junlang-2.²⁵⁾ Although China has claimed for the building of peaceful and cooperative surrounding environment, the growth of China's naval power causes a fear factor to nations in the region.

3. Conclusion

According to China's perspective, China had been keeping a self-restrain attitude towards so called the South China Sea issues before the Arbitration. China's purpose was to maintain the status quo. For that, the territorial and maritime disputes were not resolved by relying on national strength especially military strength in most cases. On the contrary, it is emphasized that all kinds of disputes should be resolved through bilateral political negotiation. Objectively speaking, China's self-restrain policy indulged other claimants' infringements on the maritime features of the South China Sea to a certain extent. This policy, however, effectively eased tensions and worries caused by the rapid development of China and greatly contributed to China's peaceful rise.

24) Michael Chambers, 'Framing the Problem: China's Threat Environment and International obligations', *Right Sizing the People's Liberation Army: Exploring the contours of China's Military*, Carlisle: Strategic Studies Institute of the US Army War college, 2007, p. 25.

25) Annual Report to Congress: Military and Security Developments Involving the People's Republic of China 2014, Office of the Secretary of Defense, May 2014.

However, China's current South China Sea policy has become more assertive due to the confrontation between the US and China, demands for sustainable economic development, and the rise of its national power. Therefore, we can determine China's current policy with two aspects. First, in terms of military security, China implements an assertive policy to the South China Sea disputes to protect its national interests and respond the US's China containment strategy. Such a policy, however, seems to be offensive enough to negate all diplomatic investment and endeavor to build cooperative relations with ASEAN members in 1990s and in the early 2000s, sequentially damaging China's global image. Secondly, in terms of economic development, despite local conflicts with direct stakeholders in the region, it is more possible for China to continue to emphasize cooperation and dialogue to build a stable environment for its sustainable economic development.

III. The Process and Results of the Arbitration

Legally speaking, the so-called "arbitration" initiated by the Philippines against China over the South China Sea disputes started with the delivery of Notification and Statement of Claim dated 22 January 2013 and ended with the rendering of the Award of 12 July 2016. Taking into account the research purpose of this article, however, it is necessary to explore China's responses to the Award of 12 July 2016. In this part, the concepts of



[Figure. 2] the South China Sea Dispute between China and the Philippines

source: <http://bbc.com/news/world-asia-pacific-11152948>

the process and results will be more broadly used in the sense of national policy or international relations but not within the domain of international law.

The process of the arbitration may be generally divided into three stages. The first stage includes the initiation of the arbitration, the constitution of the Tribunal and the appointment of the PCA as registry and China's response. The second one includes the written arguments, bifurcation of proceedings, hearing on jurisdiction and admissibility, provisional scheduling of hearing on the merits and appointment of expert, the issuance of the Award of Jurisdiction and Admissibility and China's response. The last one includes hearing on the merits, post-hearing proceedings, deposits for costs of the arbitration, the issuance of the Award and China's response.

1. The First Stage

1) Initiation of the Arbitration

By Notification and Statement of Claim dated 22 January 2013, the Philippines initiated arbitration proceedings against China pursuant to Articles 286 and 287 of the Convention and in accordance with Article 1 of Annex VII of the Convention. The Philippines stated that it seeks an Award that: (1) declares that the Parties' respective rights and obligations in regard to the waters, seabed and maritime features of the South China Sea are governed by UNCLOS, and that China's claims based on its "nine dash line" are inconsistent with the Convention and therefore invalid; (2) determines whether, under Article 121 of UNCLOS, certain of the maritime features claimed by both China and the Philippines are islands, low tide elevations or submerged banks, and whether they are capable of generating entitlement to maritime zones greater than 12 M; and (3) enables the Philippines to exercise and enjoy the rights within and beyond its exclusive economic zone and continental shelf that are established in the Convention.²⁶⁾

2) Constitution of the Tribunal and Appointment of the PCA as Registry

The Philippines appointed Judge Rüdiger Wolfrum, a German national, as a member of the Tribunal. As China did not appoint an arbitrator, the President of the International

²⁶⁾ Notification and Statement of Claim of the Republic of the Philippines, 22 January 2013, para. 6 (Annex 1).

Tribunal for the Law of the Sea (ITLOS), appointed Judge Stanislaw Pawlak, a national of Poland, as the second arbitrator. The President of ITLOS also appointed the remaining three arbitrators, namely Judge Jean-Pierre Cot, a national of France; Professor Alfred H.A. Soons, a national of the Netherlands; and as the Presiding Arbitrator, Judge Thomas A. Mensah, a national of Ghana. The present Tribunal was constituted on 21 June 2013.

On 12 July 2013, the Tribunal issued Administrative Directive No. 1, pursuant to which the Tribunal appointed the Permanent Court of Arbitration as Registry and set in place arrangements for a deposit to cover fees and expenses. Copies of Administrative Directive No. 1, as with all subsequent documents issued by the Tribunal and correspondence issued on its behalf by the Registry, were transmitted to the Agent and Counsel for the Philippines, and the Embassy of the People's Republic of China in the Kingdom of the Netherlands.

3) China's Response

In response to the Philippine's Notification, China presented a Note Verbale to the Department of Foreign Affairs of the Philippines on 19 February 2013, rejecting the arbitration and returning the Notification and Statement of Claim to the Philippines.²⁷⁾ In its Note Verbale, China stated that its position on the South China Sea issues "has been consistent and clear" and that "at the core of the disputes between China and the Philippines in the South China Sea are the territorial disputes over some island sand reefs of the Nansha Islands." China noted that "the two countries also have overlapping jurisdictional claims over parts of the maritime area in the South China Sea" and that both sides had agreed to settle the dispute through bilateral negotiations and friendly consultations. China did not appoint an arbitrator. The Chinese Embassy has returned the communications transmitted by the Registry and reiterated that "it will neither accept nor participate in the arbitration unilaterally initiated by the Philippines."

27) Note Verbale from the Embassy of the People's Republic of China in Manila to the Department of Foreign Affairs, Republic of the Philippines, No. (13) PG-039, 19 February 2013 (Annex 3).

2. The Second Stage

1) Written Arguments

On 30 March 2014, the Philippines submitted its Memorial and accompanying annexes, addressing all aspects of the case including issues of jurisdiction, admissibility, and the merits. The Memorial concluded with 15 specific submissions setting out the relief sought by the Philippines (the “Submissions”).²⁸⁾

On 5 December 2014, the Vietnamese Embassy sent to the Tribunal a “Statement of the Ministry of Foreign Affairs of the Socialist Republic of Viet Nam Transmitted to the Arbitral Tribunal in the Proceedings between the Republic of the Philippines and the People’s Republic of China” and annexed documents (“Vietnam’s Statement”). Vietnam’s Statement requested that the Tribunal give due regard to the position of Viet Nam. Viet Nam stated that none of the maritime features referred to by the Philippines in these proceedings can “generate maritime entitlements in excess of 12 nautical miles since they are low-tide elevations or ‘rocks which cannot sustain human habitation or economic life of their own’ under Article 121(3) of the Convention.” Viet Nam reserved “the right to seek to intervene if it seems appropriate and in accordance with the principles and rules of international law, including the relevant provisions of UNCLOS.” Viet Nam also asked to receive copies of all relevant documents in the arbitration.²⁹⁾

On 16 December 2014, the Tribunal established a timetable for further written submissions from both Parties and annexed a Request for Further Written Argument by the Philippines (the “Request for Further Written Argument”). The Philippines submitted its Supplemental Written Submission and accompanying annexes (the

28) See Award on Jurisdiction and Admissibility, 29 October 2015, para. 99 (hereinafter “Award on Jurisdiction”); Amended Notification and Statement of Claim of the Republic of the Philippines, pp. 17-19.

29) Socialist Republic of Viet Nam, *Statement of the Ministry of Foreign Affairs of the Socialist Republic of Viet Nam Transmitted to the Arbitral Tribunal in the Proceedings Between the Republic of the Philippines and the People’s Republic of China*, pp. 1-3, 5-6 (14 December 2014) (Annex 468) (hereinafter “Viet Nam’s Statement”). As noted in the Award on Jurisdiction, the Tribunal had granted Viet Nam access to copies of the Memorial, after seeking the views of the Parties, on 24 April 2014.

“Supplemental Written Submission”) on 16 March 2015.

On 17 February 2015, the Tribunal stated that it would address the permissibility of intervention in these proceedings “only in the event that Viet Nam in fact makes a formal application for such intervention.”

2) Bifurcation of Proceedings

On 21 April 2015, the Tribunal issued Procedural Order No. 4, in which the Tribunal stated that if it determined after the Hearing on Jurisdiction “that there are jurisdictional objections that do not possess an exclusively preliminary character, then, in accordance with Article 20(3) of the Rules of Procedure, such matters will be reserved for consideration and decision at a later stage of the proceedings.”

3) Hearing on Jurisdiction and Admissibility

The Hearing on Jurisdiction took place from 7 to 13 July 2015 at the Peace Palace in The Hague. A list of attendees is contained in the Award on Jurisdiction. Copies of the daily transcripts, questions from the Members of the Tribunal, answers from the Philippines and all materials submitted during the hearing were made available to both Parties. A press release was issued by the Registry at the close of the hearing and the transcripts were subsequently published.

4) Provisional Scheduling of Hearing on the Merits and Appointment of Expert

The Tribunal informed the Parties on 7 August 2015 that, after reviewing a number of candidates, it proposed to appoint Mr. Grant Boyes as the Tribunal’s expert hydrographer. The Parties were invited to comment on his curriculum vitae, declaration of independence, and draft Terms of Reference. The Philippines reported that it had no objection, but proposed a clarification to the Terms of Reference that “[i]n providing the Arbitral Tribunal with technical assistance ... the Expert shall respect that it is the Arbitral Tribunal, and not the Expert, that makes any determination as to legal questions, in particular the application of Article 121(3) of the Convention.” With this clarification,

and having received no comments from China, the Tribunal and Mr. Boyes finalized the appointment.

On 10 September 2015, the Parties were invited to comment on a provisional schedule for a merits hearing to take place between 24 to 30 November 2015 and also on a request from the Embassy of the Republic of Singapore in Brussels seeking observer status at any future hearing. The Philippines agreed with the proposed schedule and, consistent with its position in support of transparency, expressed that it had no objection to the attendance of a Singaporean delegation at any future hearings. China did not comment on the proposals and, consistent with its practice throughout the proceedings, returned the correspondence to the Registry and reiterated its position of non-acceptance and non-participation.

5) Issuance of the Award of Jurisdiction and Admissibility

On 29 October 2015, the Tribunal issued its Award on Jurisdiction. The Award, which was unanimous, only addressed matters of jurisdiction and admissibility; it did not address the merits of the Parties' dispute.

6) China's Response

On 7 December 2014, the Ministry of Foreign Affairs of the People's Republic of China published a "Position Paper of the Government of the People's Republic of China on the Matter of Jurisdiction in the South China Sea Arbitration Initiated by the Republic of the Philippines," copies of which the Chinese Embassy deposited with the PCA for distribution to members of the Tribunal.³⁰⁾ The Chinese Embassy expressed in a Note Verbale that "the Chinese Government reiterates that it will neither accept nor participate in the arbitration unilaterally initiated by the Philippines. The Chinese Government here by makes clear that the forwarding of the aforementioned Position Paper shall not be regarded as China's acceptance for its participation in the arbitration."

30) By the terms of Procedural Order No. 2, issued by the Tribunal on 2 June 2014, China's Counter-Memorial was due by 15 December 2014.

On 6 February 2015, the Chinese Ambassador to the Kingdom of the Netherlands wrote individually to the members of the Tribunal, setting out “the Chinese Government’s position on issues relating to the South China Sea arbitration initiated by the Philippines.”

On 2 June 2015, the Tribunal confirmed the schedule for the Hearing on Jurisdiction. On 1 July 2015, the Chinese Ambassador to the Kingdom of the Netherlands sent a second letter to the members of the Tribunal recalling China’s “consistent policy and practice of [resolving] the disputes related to territory and maritime rights and interests with States directly concerned through negotiation and consultation” and noting China’s “legitimate right” under the Convention not to “accept any imposed solution or any unilateral resorting to a third-party settlement,” a right that it considered the Philippines breached by initiating the arbitration.

On 23 July 2015, the Philippines filed written responses to questions posed by the Tribunal. China did not respond to the invitation to submit by 17 August 2015, comments on matters raised during or after the Hearing on Jurisdiction. However, on 24 August 2015, China published “Foreign Ministry Spokesperson Hua Chunying’s Remarks on the Release of the Transcript of the Oral Hearing on Jurisdiction by the South China Sea Arbitral Tribunal Established at the Request of the Philippines.”³¹⁾

The Tribunal confirmed that it was ready to proceed in late November with a hearing on the merits and any outstanding questions of jurisdiction and admissibility (the “Hearing on the Merits”) and stated that it was willing to make appropriate adjustments to the schedule if China decided to participate. The Philippines confirmed the schedule, and China did not comment on it. However, on 30 October 2015, the Chinese Ministry of Foreign Affairs issued a “Statement … on the Award on Jurisdiction and Admissibility of the South China Sea Arbitration by the Arbitral Tribunal Established at the Request of the Republic of the Philippines”.³²⁾

31) Ministry of Foreign Affairs, People’s Republic of China, *Foreign Ministry Spokesperson Hua Chunying’s Remarks on the Release of the Transcript of the Oral Hearing on Jurisdiction by the South China Sea Arbitral Tribunal Established at the Request of the Philippines* (24 August 2015), available at <www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2535_665405/t1290752.shtml> (Annex 635).

3. The Third Stage

1) Hearing on the Merits

The Hearing on the Merits took place in two rounds on 24, 25, 26, and 30 November 2015 at the Peace Palace in The Hague, the Netherlands. As with the Hearing on Jurisdiction, it was not open to the general public. A press release was issued upon its commencement.

The Registry delivered daily transcripts to the Philippines' delegation and to the Chinese Embassy, along with copies of all materials submitted by the Philippines during the course of their oral presentations.

During the first round of oral argument, several questions were posed by individual arbitrators and answered by the Philippines. On 27 November 2015, the Tribunal circulated to the Parties (a) "Questions for the Philippines to Address in the Second Round," (b) "Questions for Professor Schofield," and (c) "Questions for Professor Carpenter." Copies of the questions were subsequently made available to the observer delegations.

On 30 November 2015, during the second round of the hearing, the Philippines responded to the Tribunal's written questions circulated on 27 November 2015, as well as to oral questions posed by individual arbitrators.

In keeping with its prior practice and in accordance with Article 16 of the Rules of Procedure, the Registry issued a Press Release after the closure of the Hearing on the Merits.

32) Ministry of Foreign Affairs, People's Republic of China, *Statement of the Ministry of Foreign Affairs of the People's Republic of China on the Award on Jurisdiction and Admissibility of the South China Sea Arbitration by the Arbitral Tribunal Established at the Request of the Republic of the Philippines* (30 October 2015) (Annex 649).

2) Post-hearing Proceedings

The Agent for the Philippines submitted in written form the Final Submissions of the Republic of the Philippines on 30 November 2015.

By letter dated 1 December 2015, the Tribunal noted that the Philippines' final Submissions reflected three amendments—to Submissions No. 11, 14 and 15—requested by the Philippines in the course of the Hearing on the Merits.³³⁾

On 14 December 2015, the Philippines submitted documents that had been referenced or requested during the hearing.

In accordance with Article 19 of the Rules of Procedure, on 16 December 2015, the Tribunal granted leave to the Philippines to make the amendments incorporated in its final Submissions.

On 18 December 2015, the Philippines filed a supplementary response to one of Judge Wolfrum's questions posed during the Hearing on the Merits, referring to additional evidence about the alleged taking of giant clams and sea turtles by Chinese fishermen and alleged environmental damage to reefs.

On 21 December 2015, an official spokesperson for the Chinese Ministry of Foreign Affairs commented on the publication of the transcript of the Hearing on the Merits.

On 11 January 2016, the Tribunal noted that China had not submitted any comments on what was said during the Hearing on the Merits or subsequently filed by the Philippines.

3) Issuance of the Award of 12 July 2016

On 12 July 2016, the Tribunal unanimously issued an Award, which addresses the issues of jurisdiction not decided in the Award on Jurisdiction and Admissibility and the merits

33) For earlier versions of the submissions, *see* Award on Jurisdiction, paras. 99-102; Memorial, pp. 271-272.

of the Philippines' claims over which the Tribunal has jurisdiction. The Award is final and binding, as set out in Article 296 of the Convention and Article 11 of Annex VII.

4) China's Response

On 21 December 2015, an official spokesperson for the Chinese Ministry of Foreign Affairs commented on the publication of the transcript of the Hearing on the Merits. The Chinese side will neither accept nor participate in the South China Sea arbitration unilaterally initiated by the Philippines.³⁴⁾

On 12 May 2016, the Director-General of the Chinese Department of Treaty and Law of the Chinese Ministry of Foreign Affairs, Xu Hong, gave a "Briefing on the South China Sea Arbitration Initiated by the Philippines." He made the following overview statement on "the relevant policies and positions of the Chinese Government, especially from the international law perspective".³⁵⁾

On 20 May 2016, representatives from the Chinese Embassy in The Hague presented to the Registry a letter from the new Ambassador, with the request that it be delivered to each member of the Tribunal. The letter enclosed for reference, the "relevant position expounded on 20 May 2016 by the Spokesperson of the Ministry of Foreign Affairs of the People's Republic of China on the Philippines' South China Sea arbitration." The Ambassador reiterated that "China does not accept or participate in the Philippines' South China Sea arbitration."³⁶⁾

The new Chinese Ambassador sent a second letter to the individual members of the

34) Ministry of Foreign Affairs, People's Republic of China, *Foreign Ministry Spokesperson Hong Lei's Regular Press Conference* (21 December 2015), available at http://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/t1326449.shtml.

35) Ministry of Foreign Affairs, People's Republic of China, *Briefing by Xu Hong, Director-General of the Department of Treaty and Law on the South China Sea Arbitration Initiated by the Philippines* (12 May 2016) available at www.fmprc.gov.cn/mfa_eng/wjdt_665385/zyjh_665391/t1364804.shtml.

36) Ministry of Foreign Affairs, People's Republic of China, *Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference* (20 May 2016). A slightly different English translation, published by the Chinese Ministry of Foreign Affairs is available at www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2511_665403/t1365237.shtml.

Tribunal on 3 June 2016, enclosing a statement expounded by a Foreign Ministry Spokesperson in response to a question about the status of Itu Aba. The Ambassador emphasized again that his letter does not constitute a plea or participation in the arbitration.³⁷⁾

On 8 June 2016, representatives from the Chinese Embassy delivered to the Registry a third letter from the Chinese Ambassador to the individual members of the Tribunal. The letter, which was said not to constitute a plea or participation in the arbitration, enclosed a “Statement of the Ministry of Foreign Affairs of the People’s Republic of China on Settling Disputes Between China and the Philippines in the South China Sea through Bilateral Negotiation.”³⁸⁾

On 10 June 2016, a fourth letter from the Chinese Ambassador was delivered to the Registry, addressed to the individual members of the Tribunal, enclosing a statement by the Chinese Society of International Law, entitled “The Tribunal’s Award in the ‘South China Sea Arbitration’ Initiated by the Philippines is Null and Void.” The statement repeated many of the same jurisdictional points that were covered in the Position Paper and dealt with in the Award on Jurisdiction.

4. Conclusion

On 22 January 2013, the government of the Republic of the Philippines unilaterally initiated the South China Sea arbitration. In doing so, the Philippines has turned its back on the consensus reached and repeatedly reaffirmed by China and the Philippines to settle through negotiation the relevant disputes in the South China Sea and violated its own solemn commitment in the DOC. Deliberately packaging the relevant disputes as mere issues concerning the interpretation or application of UNCLOS while knowing

37) Ministry of Foreign Affairs, People’s Republic of China, *Foreign Ministry Spokesperson Hua Chunying’s Remarks on Relevant Issue about Taiping Dao* (3 June 2016), available at <www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/2535_665405/t1369189.shtml>.

38) Ministry of Foreign Affairs, People’s Republic of China, *Statement of the Ministry of Foreign Affairs of the People’s Republic of China on Settling Disputes Between China and the Philippines in the South China Sea Through Bilateral Negotiation* (8 June 2016), available at <http://www.fmprc.gov.cn/mfa_eng/wjdt_665385/2649_665393/t1370476.shtml>.

full well that territorial disputes are not subject to UNCLOS and that maritime delimitation disputes have been excluded from the UNCLOS compulsory dispute settlement procedures by China's 2006 declaration, the Philippines has wantonly abused the UNCLOS dispute settlement procedures. This initiation of arbitration aims not to settle its disputes with China, but to deny China's territorial sovereignty and maritime rights and interests in the South China Sea. This course of conduct is taken out of mistrust.

First, by unilaterally initiating arbitration, the Philippines has violated its standing agreement with China to settle the relevant disputes through bilateral negotiation. In relevant bilateral documents, China and the Philippines have agreed to settle through negotiation their disputes in the South China Sea and reaffirmed this agreement many times. China and the Philippines made solemn commitment in the DOC to settle through negotiation relevant disputes in the South China Sea, which has been repeatedly affirmed in bilateral documents. The above bilateral documents between China and the Philippines and relevant provisions in the DOC are mutually reinforcing and constitute an agreement in this regard between the two states. By this agreement, they have chosen to settle the relevant disputes through negotiation and to exclude any third party procedure, including arbitration. *Pacta sunt servanda*. This fundamental norm of international law must be observed. The Philippines' breach of its own solemn commitment is a deliberate act of bad faith. Such an act does not generate any right for the Philippines, nor does it impose any obligation on China.

Second, by unilaterally initiating arbitration, the Philippines has violated China's right to choose means of dispute settlement of its own will as a state party to UNCLOS. Article 280 of Part XV of UNCLOS stipulates: "Nothing in this Part impairs the right of any States Parties to agree at any time to settle a dispute between them concerning the interpretation or application of this Convention by any peaceful means of their own choice." Article 281 of UNCLOS provides: "If the States Parties which are parties to a dispute concerning the interpretation or application of this Convention have agreed to seek settlement of the dispute by a peaceful means of their own choice, the procedures provided for in this Part apply only where no settlement has been reached by recourse to such means and the agreement between the parties does not exclude any further

procedure". Given that China and the Philippines have made an unequivocal choice to settle through negotiation the relevant disputes, the compulsory third-party dispute settlement procedures under UNCLOS do not apply.

Third, by unilaterally initiating arbitration, the Philippines has abused the UNCLOS dispute settlement procedures. The essence of the subject-matter of the arbitration initiated by the Philippines is an issue of territorial sovereignty over some islands and reefs of Nansha Qundao, and the resolution of the relevant matters also constitutes an integral part of maritime delimitation between China and the Philippines. Land territorial issues are not regulated by UNCLOS. In 2006, pursuant to Article 298 of UNCLOS, China made an optional exceptions declaration excluding from the compulsory dispute settlement procedures of UNCLOS disputes concerning, among others, maritime delimitation, historic bays or titles, military and law enforcement activities. Such declarations made by about 30 states, including China, form an integral part of the UNCLOS dispute settlement mechanism. By camouflaging its submissions, the Philippines deliberately circumvented the optional exceptions declaration made by China and the limitation that land territorial disputes are not subject to UNCLOS, and unilaterally initiated the arbitration. This course of conduct constitutes an abuse of the UNCLOS dispute settlement procedures.

Fourth, in order to push forward the arbitral proceedings, the Philippines has distorted facts, misinterpreted laws and concocted a pack of lies:

In short, the Philippines' unilateral initiation of arbitration contravenes international law including the UNCLOS dispute settlement mechanism. The Arbitral Tribunal in the South China Sea arbitration established at the Philippines' unilateral request has, ab initio, no jurisdiction, and awards rendered by it are null and void and have no binding force. China's territorial sovereignty and maritime rights and interests in the South China Sea shall under no circumstances be affected by those awards. China opposes and will never accept any claim or action based on those awards.³⁹⁾

39) The State Council Information Office of the People's Republic of China, China Adheres to the Position of Settling Through Negotiation the Relevant Disputes Between China and the Philippines in the South China Sea, 13 July 2016, available at <http://www.scio.gov.cn/ztk/dtzt/34102/34818/34829/Document/1483643/1483643.htm>, visited on 26 October 2016.

IV. China's New Policy on the South China Sea

Although China maintains the position of non-acceptance of the awards of the Arbitral Tribunal, the result of the international arbitration is regarded as a major defeat for China. In this situation, China seems to need to improve its policy toward the South China Sea and relevant nations. This Chapter will examine China's perception on new challenges and characteristics of its new policy on the South China Sea.

1. Macro Background

It is generally recognized that the formulation and implementation of China's South China Sea policy must satisfy the need of coming true China's national overall strategy and be made in accordance with the objective and accurate evaluation and judgment of the overall situation facing China and China's comprehensive national strength.

Undeniably, the arbitration unilaterally initiated by the Philippines against China has produced a certain degree of influence over China's internal affairs and diplomacy. But this kind of influence has been considerably limited so far. As far as the Macro background including national overall strategy, overall domestic and outside situation and national strength is concerned, the effects given by the arbitration has been very little.

In any event, the mission of China's overall diplomatic strategy, which is to serve for China's national development strategy, would remain unchanged. National development, such as prosperity of economy, people's happiness, national security and so on, need a good outside environment, which is created and safeguarded by effectively implementing China's overall diplomatic strategy. So the so-called "a good outside environment" inherently has two aspects, i.e., in favor of maintenance of stability and protection of rights and interests. Therefore, the formulation and implementation of China's South China Sea policy must satisfy the need of maintenance of stability and protection of rights and interests. This is reflected in the content of the Strategy of Ocean Power and the Belt and Road Initiative. The Report to the 18th National Congress of the Communist Party of China clearly set forth that China should improve its ability

in developing ocean resources, develop marine economy, protect ecological environment, and sincerely maintain its marine rights and interests so as to build an ocean power.⁴⁰⁾

It is generally accepted that the conception of peace, development, cooperation and win-win has been the modern theme of today world and will last for a considerably long time. This would not change because of the Arbitration.

The comprehensive national strength of China, including the strength of military, economy and culture, has been increasingly promoted recent years. The first aircraft carrier designed and constructed by China will probably be launched in the end of 2016. This is China's second aircraft carrier. China has officially become the world's second largest economy since 2010.⁴¹⁾ The trend seems that China's strength of economy will be closer and closer to America's. Confucius Institutes have got off to a roaring start. Statistically, as of 2015, about 500 Confucius Institutes and 1000 Confucius Classes has been established in 134 countries and regions with around 1.9 million students.⁴²⁾

2. New Characters of the South China Sea Issue and New Situation in This Area

After the release of the final award by the arbitral tribunal, China has taken a series of timely and effective diplomatic and public opinion responses, which have helped to bring a period of relative calm to the South China Sea. But the current calm is only temporary. The situation in the South China Sea will soon enter an entirely new stage of development. The overall forecast is that it will become more turbulent, more complex, and more difficult to manage. The specific features of this approaching 'new normal' in the South China Sea are as follows.

40) See Shi Ba Da Bao Gao (The Report Presented by Hu Jintao at the opening ceremony of the 18th National Congress of the Communist Party of China) 19 November 2012, http://www.xj.xinhuanet.com/2012-11/19/c_113722546_2.htm, visited on 18 November 2016.

41) IMF, World Economic Outlook (WEO) Update, January 2015, <http://www.imf.org/external/pubs/ft/weo/2015/update/01>, visited on 18 November 2016.

42) Guan Yu Kong Zi Xue Yuan/Ke Tang (About Confucius Institutes), http://www.hanban.org/confuciousinstitutes/node_10961.htm, visited on 18 November 2016.

First, the uncertainties surrounding the South China Sea situation will increase.

Second, legal contestation in the South China Sea dispute will continue unabated because the United States and Japan hold that the award stands as valid while China deems that it is null and void. This contestation regarding the legal and strategic status quo will not end until China's land reclamation efforts in the South China Sea reach a point of finality and a Code of Conduct (CoC) for the South China Sea signed.

Third, into the future, China will continue not to accept or recognize the award and will continue its facility construction on South China Sea islands in a bid to uphold its rights in the South China Sea. This may lead China to face more challenges and pressure at multilateral diplomatic forums. The United States, Japan, and some ASEAN countries will certainly use all the multilateral venues and mechanisms available to hype these issues under the pretext of their pet 'China threat' theory and heap pressure on China.

Fourth, the positive general direction of recent improvement in Sino-Philippine relations will not change, but at the same time it will not necessarily proceed smoothly due to the hindrance of various obstacles and forces. The dispute over "traditional fishing rights" in the waters around Huangyan Island will be one of the main obstacles to rapid improvement in bilateral ties. Parenthetically, China finds it to be totally contradictory that Philippines can enjoy a non-exclusively exercised traditional fishing right in the territorial seas around Huangyan Island where China enjoys sovereignty, yet China cannot enjoy an equivalent right in the exclusive economic zones of other South China Sea littoral states (within the nine-dash line) where these states, by the way, are only allowed to enjoy 'sovereign rights'— not sovereignty.

Fifth, military and maritime competition - particularly between China and the United States - will become a significant feature of the geopolitics of the South China Sea. The United States, either alone or in concert with its allies, will make routine entries into the waters within 12 nautical miles of the insular features under Chinese control under the guise of supposedly upholding 'freedom of navigation'. Japan's participation in US-led joint patrols will certainly increase the possibility of a military conflict due to lack of political mutual trust, divergence of military strategies, and the lack of a

crisis management mechanism. Regarding Japan, it is also worth pointing out that with the passage of bills in the Diet last year reinterpreting its right to self-defense (i.e. reinterpretation of Article 9 of Japan's Constitution), a military contingency involving the US and China in the South China Sea will automatically become what it defines to be an 'important (security) influence' situation. This will, in turn, compel Japan to provide logistical support to US Navy in the event of a contingency and entangle it further during the outbreak of hostilities.

Sixth, the award has changed the rules of the game in the South China Sea, led the parties concerned to adjust their own interests, and added uncertainties and difficulties to the consultation process for the CoC in the South China Sea. The area of application of the CoC's rules is premised on the existence of unresolved maritime boundary areas of concerned parties in the South China Sea. By pretending to furnish a de facto delimitation of the China-Philippines maritime boundary in the South China Sea, the award has undercut this important justification that sustains the envisaged Code and has thus disturbed the consultation process associated with it.

Seventh, a possible crisis in the South China Sea may spill over to other areas. The separatist inclination of the present Taiwan authorities and the possible readjustment of their South China Sea policy may result in a crisis. In terms of their South China Sea policy, the Taiwan authorities are likely to gradually drift away from the Chinese mainland, go in line with the US and Japan, and echo the position of certain ASEAN states. If Taiwan's South China Sea policy tries to conjoin itself to the strategic needs of the US and Japan or becomes part of the attempts to contain the Chinese mainland, then there will be a crisis that could spill over to other areas – notably to cross-straits ties.

Eighth, conflicts between maritime law enforcement forces may be inevitable between China and other countries in the South China Sea. All parties concerned have been trying to expand their respective maritime capabilities and presence and bolster effective control over insular features by conducting more law enforcement activities in disputed waters, yet there is a basic lack of a regional security mechanism and a crisis management mechanism is still under consultation. The coast guards of the

relevant countries currently stand little chance of establishing a mechanism like the Code for Unplanned Encounters at Sea (CUES) within a short period of time. Meantime, extra-regional actors such as the US, Japan and India continue to construct, fund or gift maritime law enforcement assets to certain ASEAN states on a lavish scale.

Ninth, maritime cooperation and joint development in the South China Sea may be confronted with more challenges. China is committed to promoting political trust with other claimants by means of maritime cooperation and joint development, and thereby building the South China Sea into a sea of peace, friendship and cooperation. Other claimants, however, seem more interested in consolidating and maximizing their respective vested gains in light of the new 'rules of the game' that the arbitral award has been instrumental in creating.

3. Content of New Policy

China is an important force for maintaining peace and stability in the South China Sea. It abides by the purposes and principles of the Charter of the United Nations and is committed to upholding and promoting international rule of law. It respects and acts in accordance with international law. While firmly safeguarding its territorial sovereignty and maritime rights and interests, China adheres to the position of settling disputes through negotiation and consultation and managing differences through rules and mechanisms. China endeavors to achieve win-win outcomes through mutually beneficial cooperation, and is committed to making the South China Sea a sea of peace, cooperation and friendship.

China is committed to maintaining peace and stability in the South China Sea with other countries in the region and upholding the freedom of navigation and overflight in the South China Sea enjoyed by other countries under international law. China urges countries outside this region to respect the efforts in this regard by countries in the region and to play a constructive role in maintaining peace and stability in the South China Sea.

On the territorial issues concerning Nansha Qundao, China is firm in upholding its

sovereignty over Nanhai Zhudao and their surrounding waters. Some countries have made illegal territorial claims over and occupied by force some islands and reefs of Nansha Qundao. These illegal claims and occupation constitute gross violations of the Charter of the United Nations and basic norms governing international relations. They are null and void. China consistently and resolutely opposes such actions and demands that relevant states stop their violation of China's territory.

China has spared no efforts to settle, on the basis of respecting historical facts, relevant disputes with the Philippines and other countries directly concerned, through negotiation in accordance with international law.

It is universally recognized that land territorial issues are not regulated by UNCLOS. Thus, the territorial issue in Nansha Qundao is not subject to UNCLOS.

On maritime delimitation in the South China Sea, China maintains that the issue of maritime delimitation in the South China Sea should be settled equitably through negotiation with countries directly concerned in accordance with international law, including UNCLOS. Pending the final settlement of this issue, all relevant parties must exercise self-restraint in the conduct of activities that may complicate or escalate disputes and affect peace and stability.

When ratifying UNCLOS in 1996, China stated that, "The People's Republic of China will effect, through consultations, the delimitation of the boundary of the maritime jurisdiction with the States with coasts opposite or adjacent to China respectively on the basis of international law and in accordance with the principle of equitability." China's positions in this regard are further elaborated in the 1998 Law of the People's Republic of China on the Exclusive Economic Zone and the Continental Shelf. This Law provides that, "The People's Republic of China shall determine the delimitation of its exclusive economic zone and continental shelf in respect of the overlapping claims by agreement with the states with opposite or adjacent coasts, in accordance with the principle of equitability and on the basis of international law", and that, "The provisions in this law shall not affect the historical rights that the People's Republic of China has been enjoying ever since the days of the past".

China does not accept any unilateral action attempting to enforce maritime claims against China. Nor does China recognize any action that may jeopardize its maritime rights and interests in the South China Sea.

On the ways and means of dispute settlement, based on an in-depth understanding of international practice and its own rich practice, China firmly believes that no matter what mechanism or means is chosen for settling disputes between any countries, the consent of states concerned should be the basis of that choice, and the will of sovereign states should not be violated.

On issues concerning territory and maritime delimitation, China does not accept any means of dispute settlement imposed on it, nor does it accept any recourse to third-party settlement. On 25 August 2006, China deposited, pursuant to Article 298 of UNCLOS, with the Secretary-General of the United Nations a declaration, stating that, "The Government of the People's Republic of China does not accept any of the procedures provided for in Section 2 of Part XV of the Convention with respect to all the categories of disputes referred to in paragraph 1 (a), (b) and (c) of Article 298 of the Convention". This explicitly excludes from UNCLOS compulsory dispute settlement procedures disputes concerning maritime delimitation, historic bays or titles, military and law enforcement activities, and disputes in respect of which the Security Council of the United Nations is exercising the functions assigned to it by the Charter of the United Nations.

Since its founding, the People's Republic of China has signed boundary treaties with 12 of its 14 land neighbors through bilateral negotiations and consultations in a spirit of equality and mutual understanding, and about 90% of China's land boundaries have been delimited and demarcated. China and Vietnam have delimited through negotiations the boundary between their territorial seas, exclusive economic zones and continental shelves in the Beibu Bay. China's sincerity in settling disputes through negotiation and its unremitting efforts made in this respect are known to all. It is self-evident that negotiation directly reflects the will of states. The parties directly participate in the formulation of the result. Practice demonstrates that a negotiated outcome will better gain the understanding and support of the people of countries concerned, will be

effectively implemented and will be durable. Only when an agreement is reached by parties concerned through negotiation on an equal footing can a dispute be settled once and for all, and this will ensure the full and effective implementation of the agreement.

On managing differences and engaging in practical maritime cooperation in the South China Sea, in keeping with international law and practice, pending final settlement of maritime disputes, the states concerned should exercise restraint and make every effort to enter into provisional arrangements of a practical nature, including establishing and improving dispute management rules and mechanisms, engaging in cooperation in various sectors, and promoting joint development while shelving differences, so as to uphold peace and stability in the South China Sea region and create conditions for the final settlement of disputes. Relevant cooperation and joint development are without prejudice to the final delimitation.

China works actively to promote the establishment of bilateral maritime consultation mechanisms with relevant states, explores joint development in areas such as fishery, oil and gas, and champions the active exploration by relevant countries in establishing a cooperation mechanism among the South China Sea coastal states in accordance with relevant provisions of UNCLOS.

China is always dedicated to working with ASEAN Member States to fully and effectively implement the DOC and actively promote practical maritime cooperation. Together the Parties have already achieved "Early Harvest Measures", including the "Hotline Platform on Search and Rescue among China and ASEAN Member States", the "Senior Officials' Hotline Platform in Response to Maritime Emergencies among Ministries of Foreign Affairs of China and ASEAN Member States", as well as the "Table-top Exercise of Search and Rescue among China and ASEAN Member States".

China consistently maintains that the Parties should push forward consultations on a "Code of Conduct" (COC) under the framework of full and effective implementation of the DOC, with a view to achieving an early conclusion on the basis of consensus. In order to properly manage risks at sea, pending the final conclusion of a COC, China proposed the adoption of "Preventive Measures to Manage Risks at Sea". This proposal

has been unanimously accepted by all ASEAN Member States.

On freedom and safety of navigation in the South China Sea, China is committed to upholding the freedom of navigation and overflight enjoyed by all states under international law, and ensuring the safety of sea lanes of communication.

The South China Sea is home to a number of important sea lanes, which are among the main navigation routes for China's foreign trade and energy import. Ensuring freedom of navigation and overflight and safety of sea lanes in the South China Sea is crucial to China. Over the years, China has worked with ASEAN Member States to ensure unimpeded access to and safety of the sea lanes in the South China Sea and made important contribution to this collective endeavor. The freedom of navigation and overflight enjoyed by all states in the South China Sea under international law has never been a problem.

China has actively provided international public goods and made every effort to provide services, such as navigation and navigational aids, search and rescue, as well as sea conditions and meteorological forecast, through capacity building in various areas, so as to uphold and promote the safety of sea lanes in the South China Sea.

China maintains that, when exercising freedom of navigation and overflight in the South China Sea, relevant parties shall fully respect the sovereignty and security interests of coastal states and abide by the laws and regulations enacted by coastal states in accordance with UNCLOS and other rules of international law.

On jointly upholding peace and stability in the South China Sea, China maintains that peace and stability in the South China Sea should be jointly upheld by China and ASEAN Member States.

China pursues peaceful development and adheres to a defense policy that is defensive in nature. China champions a new security vision featuring mutual trust, mutual benefit, equality and coordination, and pursues a foreign policy of building friendship and partnership with its neighbors and of fostering an amicable, secure and prosperous neighborhood based on the principle of amity, sincerity, mutual benefit and inclusiveness. China is a staunch force for upholding peace and stability and advancing

cooperation and development in the South China Sea. China is committed to strengthening good-neighborliness and promoting practical cooperation with its neighbors and regional organizations including ASEAN to deliver mutual benefit.

The South China Sea is a bridge of communication and a bond of peace, friendship, cooperation and development between China and its neighbors. Peace and stability in the South China Sea is vital to the security, development and prosperity of the countries and the well-being of the people in the region. To realize peace, stability, prosperity and development in the South China Sea region is the shared aspiration and responsibility of China and ASEAN Member States, and serves the common interests of all countries. China will continue to make unremitting efforts to achieve this goal.

4. Characters of New Policy

After the Arbitration, the basic objective of China's South China Sea policy remains the maintenance of stability and the protection of rights and interests. In comparison with that of before the Arbitration, however, China's policy after the Arbitration has some new features.

First, as far as the content of new policy is concerned, the Dual-Track Approach is definitely presented as a basic claim for resolving the South China Sea issue. The basic content of the Dual-Track Approach includes that consultations and negotiations by countries directly concerned are the most effective and viable way to resolve disputes, which also conform to international law and common practices and constitute one of the most important provisions in the DOC, and that peace and stability in the South China Sea concerns the real interests of all littoral countries of the South China Sea, including China and ASEAN countries. Obviously, the Dual-Track Approach is China's response to the judicialization of the settlement of the South China Sea dispute and the increasing intervention from outside powers. Objectively speaking, the basic content of the Dual-Track Approach is not new. But it is firstly expressed and definitely presented as part of China's South China Sea policy. It is as important as the presentation of Putting aside Disputes and Promoting Cooperation.

Second, it seems that the measures for implementing new policy are more active. Before the Arbitration, China mainly passively coped with all kinds of provocation from other claimants and outside powers and hardly actively changed the situation of the South China Sea. Undoubtedly, China's self-restrain greatly contributed to the long term peace and stability of the South China Sea. However, it meanwhile indulged the provocation and infringement on China's legal rights and interests. The Arbitration initiated by the Philippines caused China to in depth reflect on its past policy.

Finally, China realized that it was necessary to take more active measures to change the unfavorable situation for China. Typically, China has firmly pushed forward the building and construction on islands and reefs regardless of outside questioning and criticizing.

V. Conclusion

According to study results, the result of the arbitration unilaterally raised by the Philippines made China perceive new challenges in the South China Sea disputes, which are 1) legal contestation in the South China Sea dispute will continue unabated, especially because the US and Japan consider the award valid, 2) military and maritime competition between the US and China will become intensified, 3) difficulties will be added to the consultation process for the COC in the South China Sea, 4) conflicts between maritime law enforcement forces will be inevitable, 5) a possible crisis in the South China Sea may spill over to other areas. With these perceptions, China will be expected to implement more assertive and offensive policies on the South China Sea, even though the basic objective of China's South China Sea policy still is to maintain the stability and the protection of its national interests. In this situation, however, China recognizes that it will face more challenges and pressure, and in order to change the unfavorable situation for China in the South China Sea, China may take more active measures such as the Dual-Track Approach, which includes bilateral consultations and negotiations with respective states directly concerned.

In the short term, the award of the Arbitral Tribunal seemed to increase the uncertainties

surrounding the South China Sea. Especially, considering that Donald Trump won the presidential election and is expected to be inaugurated as the 45th president of the US, although Wu Shicun, the President of National Institute for South China Sea Studies, argued that there would be no subversive change in the US's rebalancing policy during the Trump administration⁴³), if the Trump administration implements more passive policy on East Asia unlike the Obama administration, it is possible for China to implement more assertive policy with its relatively increasing influence in the region. Therefore, further studies will be needed, whether it may encourage states concerned to exercise self-restraint over activities which escalate tension in the region in the long term.

1. Implications to South Korea

Given the situation, there are some concerns in South Korea about the effect of the international arbitration and China's new policy on the South China Sea, since South Korea has held maritime demarcation negotiations with China, and also has a territorial dispute on the Dokdo with Japan.

In this part, we try to think over implications to South Korea, focusing on 3 questions: (1) Will the result of the international arbitration affect the maritime negotiation between South Korea and China? (2) Will the result of the international arbitration cause Japan to initiate a unilateral arbitration to the International Court of Justice (ICJ)? (3) What kind of role can South Korea, which has its own economic interests in the region, play in the South China Sea?

1) Negotiations on the maritime demarcation between South Korea and China

China and South Korea's exclusive economic zones (EEZs) overlap in the West Sea (Yellow Sea), and as of yet the two sides haven't reached an agreement on the demarcation line. For defining demarcation line, South Korea has demanded that the EEZ be demarcated by drawing a median line, while China has demanded that the coasts

43) China News Network, 25 Nov 2016, <http://auto.chinanews.com/gj/2016/11-25/8074744.shtml>.

and the population must be taken into account to conduct a proportional EEZ demarcation. Historically, South Korea and China had held 16 negotiations over the EEZ between 1996 and 2008. Nevertheless, the negotiations did not reach any consensus. Subsequently, this has led to tensions over fishing rights in the sea with conflicts between the South Korean Coast Guard and Chinese fishermen. For example, in 2011, a Chinese fisherman stabbed a South Korean Coast Guard officer and in 2014, a Chinese fisherman was shot by the South Korean Coast Guard.

The situation changed in 2014 when Chinese President Xi Jinping visited South Korea. During the summit meeting, He and President Park Geun-hye agreed that two nations need to make official discussions on the maritime demarcation line in 2015. To fulfil the promise, on 22th December 2015, South Korea and China held the first formal negotiation to define the demarcation in Seoul. And the second negotiation was held in Beijing on 22th April 2016. Regarding negotiations on the maritime demarcation line, Hua Chunying, Chinese Foreign Ministry spokesperson, confirmed that "To fairly and properly demarcate the China-ROK maritime boundary through negotiations and consultations is of great significance to upholding tranquility and stability of the relevant waters."⁴⁴⁾

As noted above, the maritime demarcation between South Korea and China is different from the South China Sea disputes. First, South Korea and China have high mutual understanding due to the high complementarity in exploiting the West Sea, while the third parties such as the US and Japan intervenes the solution on the South China Sea disputes. Secondly, the status quo in the West Sea is well maintained, while the change of the status quo is emerging in the South China Sea. Thirdly, the maritime demarcation for the West Sea is proceeding under the agreement of political leaders, while political decisions are not enough made in the South China Sea disputes. Although North Korea's nuclear tests and the deployment of THAAD issue caused tensions between two nations recently, these tensions are limited in the national security fields.⁴⁵⁾

44) Spokesperson's remarks, Foreign Ministry Spokesperson Hua Chunying's Regular Press Conference, November 6, 2015, http://www.fmprc.gov.cn/mfa_eng/xwfw_665399/s2510_665401/t1312707.shtml.

45) Yang Hee-chul, "Tension of the South China Sea and Maritime Demarcation Negotiation between South Korea and China", KIMS Periscope, May 19, 2016, <http://www.kims.or.kr/peri42/>.

Since China has emphasized consultations and negotiations by parties directly concerned, China may participate in the negotiation with more sincere attitude. If China successfully negotiates a maritime demarcation with South Korea, it will be a good example adjusted by the rule of law. Through this success, China also show to parties concerned in the South China Sea disputes that it endeavors to resolve maritime disputes peacefully through consultations, as opposed to the Philippine approach of appealing to international law or the suggestion that ASEAN should handle the issues as a unit. In this sense, the influence of the international arbitration by the Philippines may produce a positive impact on the maritime negotiation between South Korea and China.

2) The Dokdo dispute with Japan

Although Dokdo, which consists of two small islands, is rocky to be of much value, the sea around the island contains a large amount of fish and possibly offshore deposits of oil and gas. According to the UNCLOS, nations are entitled to a 200 nautical mile exclusive economic zone (EEZ). Hence, the island would play a significant role in determining these lines.

Despite South Korea's possession of Dokdo, because Japan continues to assert its claim that Dokdo is its own territory, the territorial dispute on the islands remains unchanged. For instance, when South Korean postal service issued commemorative stamps of the Islands in 2004, Shimane local government in Japan celebrated Takeshima Day and continues to do every February 22. In 2008, Japan's Ministry of Education published a pamphlet for middle school teachers that encouraged them to remind their students of Japan's claim to Takeshima. In 2009, the Japanese Ministry of Defense published a White Paper that claimed Takeshima as its own territory.

One of Japan's strategy for Dokdo dispute is to propose the matter to ICJ. After President Syngman Rhee drew the maritime line in 1952, Japan proposed to have the matter decided by the ICJ in 1954. The Korean government, however, had already refused explicitly and clearly the proposal by Japan, describing it as nothing but another attempt at a false claim in judicial disguise. Recently, when President Lee Myung-bak visited Dokdo on 10th August 2012, Japanese Prime Minister Yoshihiko Noda recalled its

ambassador from Seoul in protest, and Japan again proposed bringing the matter to the International Court of Justice for "settlement" on August 17. This was the third proposal.

In fact, previous proposal was made in 1954 and 1962, before South Korea and Japan signed the treaty on basic relations between South Korea and Japan, which clearly confirmed that Dokdo is South Korea's territory. Therefore, according to the treaty, Japan has no right for Dokdo. However, Japan continues to propose the arbitration to ICJ. For example, during the speech at General Assembly of the UN on 26th September 2012, Prime Minister Noda stated "There are still a number of territorial and maritime disputes in many parts of the world. It is the philosophy of the Charter of the United Nations as well as a shared principle in the international community, to settle disputes in a peaceful manner based upon international law. ... The world should pay more attention to the role of the international juridical institutions can play in the peaceful settlement of disputes."⁴⁶) This statement shows that Japan's intention to bring the Dokdo issue to the ICJ again. So far, Japan can not initiative the arbitration to the ICJ, because South Korea did not accept Article 36 of the Statute of the ICJ, which involves in the UN's unilateral settlement of disputes. Nevertheless, the Japanese government considers the Dokdo issue is a legal dispute and endeavors to solve this issue with the international law, regardless of South Korea's claims.

In this situation, the international arbitration between China and the Philippines shows the possibility of a compulsory jurisdiction. In the process of the arbitration, although China denied the jurisdiction with the position of non-acceptance and non-participation, the arbitration tribunal carried out proceedings, decided that the dispute felled in the jurisdiction and recognized over some of the Philippines' Submissions. The result of the arbitration shows that a not-vigilant and careless nation could be established for possible international disputes. In this sense, the result of the international arbitration may cause Japan to initiate a unilateral arbitration to the ICJ. Therefore, South Korea needs to be well prepared.

46) Yoshihiko Noda, speech at General Assembly of the UN, September 26, 2012, <https://gadebate.un.org/en/67/japan>.

3) South Korea's role in the South China Sea as a middle power

In June 2015, Assistant Secretary of State Daniel Russel stated that South Korea should speak out against China's forceful assertion of its territorial claims in the South China Sea as a major stakeholder in the international order.⁴⁷⁾ Even though South Korea maintains a neutral stance on the South China Sea disputes, the US wants South Korea to make a remark about China's offensive behavior. On the contrary, China considers that South Korea does not support it. As the confrontation between the US and China is intensified, both sides want South Korea to be on one side and play a certain role on the South China Sea disputes.

Considering that China's South China Sea policy is a countermeasure to the US's China containment policy, South Korea can refer to cases of nations concerned in the region. Recently some ASEAN members, especially Myanmar and the Philippines try to escape from the confrontation situation and seek for their national interests to a certain degree by playing a role as a balancer between the US and China.

Myanmar is one of main transit countries through which goods of Wunnan Province in China can be transported directly to the Indian Ocean. In 2012 and 2014, President Obama visited Myanmar and had meetings with Daw Aung San Suu Kyi. She has endeavored to improve the relation with the US through the democratic route, different from previous military regimes of Myanmar who had pro-China characteristics. After visiting China, Daw Aung San Suu Kyi visited the US in September 2016. At that time, President Obama remarked the US would lift the Myanmar sanctions, thereby Myanmar finally escaped from 20-year sanctions to be a member of the international society.⁴⁸⁾ In addition, Myanmar can obtain the support for the construction of infrastructure from the US. This move has a strategic meaning that the US blocks the influence of China by implementing an engagement policy in the structure in which China exclusively has supported nations which are sanctioned in the international society. Myanmar's move shows that it is adopting a hedging strategy using its geopolitical value.

47) Korea Times, June 9, 2015, http://www.koreatimes.co.kr/www/news/nation/2015/06/116_180496.html.

48) New York Times, September 15, 2016.

Through conflicts with China on the sovereignty issue in the South China Sea and cooperation with the US, the Philippines became a very important link in performing the US's rebalancing strategy. Considering the Philippines' behavior to initiate an arbitration, the Philippines seemed to choose a diplomatic strategy against China and the relationships of them will be getting worse. However, after Rodrigo Duterte was inaugurated as a new president of the Philippines on 14th May 2016, the Philippines started a balancing diplomacy route by showing different move between the US and China. When Rodrigo Duterte visited the China during 18th to 21th October 2016, he declared separation from the United States both in military and economics.⁴⁹⁾ During the visit, Chinese President Xi Jinping and Duterte pledged to enhance trust and friendship and played down a maritime dispute in the South China Sea. With the visit, China is expected to provide \$13.5 billion and \$9 billion in low-interest loans to the Philippines. Duterte again visited Japan, which supports the US's side in the South China Sea disputes, during 25th to 27th October. During this visit to Japan, the Prime Minister Abe suggested ¥5 billion in loans for agricultural development in the southern Philippine island of Mindanao in order to reinforce the cooperation in the South China Sea disputes.⁵⁰⁾

The situation South Korea faces is different from states directly concerned in East Asia. While South Korea maintains a neutral stance for South China Sea disputes, in terms of national security, South Korea needs to enhance the alliance with the US, especially due to North Korea's nuclear threats. Since South Korea and the US agreed to deploy THAAD system, the relationships between South Korea and China is deteriorated rapidly. In this situation, it is hard for South Korea to implement a balancing diplomacy between the US and China. Although South Korea is in the situation separate from ASEAN members and it is not a party directly concerned in the South China Sea disputes, the South China Sea also is a very insignificant region to South Korea, which has its own economic interests at stake of freedom of navigation since the region serves as a main route for more than billion tons of South Korean trade and about 86 percent of its

49) New York Times, October 20, 2016.

50) Japan Times, October 25, 2016, http://www.japantimes.co.jp/news/2016/10/25/national/politics-diplomacy/duterte-eases-separation-stance-u-s-ahead-abe-visit/#.WCnY5JX_rIU.

oil imports. Therefore, South Korea needs to play a certain role for the stability and cooperation in the region.

One method is for South Korea to participate in dealing with non-traditional security issues. Considering the situation that the conflict of interest and maritime benefits are sharply increasing among nations, the efforts for maritime Confidence Building Measures (CBMs) is necessary. Maritime security involves issues that are far multifaceted and complex for any single nation to tackle and resolve alone. In this sense, South Korea have an opportunity to play a role as a middle power in the region by participating in improving the cooperation in non-traditional security fields with China and other ASEAN members. In fact, the ASEAN have been grappling with maritime security together for many years in recognition of the importance of cooperation. One example is the Malacca strait patrol, a joint missions conducted by Indonesia, Singapore, Malaysia and Thailand to tackle the risk of piracy. Another example is the Sulu Sea patrol, a new initiative among Malaysia, Indonesia, and the Philippines. These activities not only help to improve CBMs and establish the stability in the region, but also help participating nations to increase their influence in the region. Therefore, if South Korea cooperate with China and ASEAN members to deal with non-traditional security issues such as drugs, piracy, cyber security, and health in the region, South Korea can contribute to establish the stability of the region, at the same time, it can play a leading role in the region regardless of the confrontation between the US and China.

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European and Russian Responses to Korean Peninsula Crisis: Prospects and Policy Implications

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European and Russian Responses to Korean Peninsula Crisis: Prospects and Policy Implications

〈Abstract〉

This paper examines how Russia and Europe will respond to any Korean crisis scenarios because their responses are under-researched despite its significance. Russian response to Korean security crisis would be more strategic approach based on a new relation between the new U.S. administration and Putin's Russia while European response would be more focused on humanitarian issues because of its geopolitical distance and today's asylum experiences. In the European response's section, firstly, European experiences about recent refugee crisis, including Albanian and Syria refugees will be analyzed and, secondly, European response to North Korean crisis situation will be discussed. In the Russian response's section focuses on Russian response to Korean Peninsula crisis situations. Russian response would be not limited to European style humanitarian approach. Naturally, Russian strategic concerns to Korean Peninsula goes to geopolitical concerns, including its relations with the new U.S. Administration, China and Japan, because of Russian geographical close location to Korean Peninsula and its security and economic interests in shaping new Northeast Asia regional order.

Based on prospects about European and Russian responses, the final section suggests policy implications on how the Republic of Korean government to strategically prepare and use European and Russian response for peaceful Korean Peninsula. Policy implications toward European countries include a creation of a mid-level dialogue and association with European Union and Non-governmental organization in Europe in sharing their experiences on refugee crisis management and in preparing and planning European humanitarian support for Korean crisis situation. Policy implications towards Russia include starting confidence-building measures with the Russian government on U.S.-Russia consensus. It includes direct communications tools between the ROK and the Russian government in reducing any misunderstanding and miscommunications

during Korean Peninsula crisis. Annual Mid-level dialogue will be a good example. Low-level combine exercise for constructing refugee camps in the Far Eastern area would be also possible.

Recent years, ROK government's approach has largely focus on cooperation with U.S., Japan and China. Unsurprisingly, the European Union and Russia are very important 'forgotten partner' in supporting North Korean refugee crisis situation. This policy paper contributes not only to starting a new topic but also suggesting policy implications how the ROK government start cooperation initiatives with its forgotten partners, European countries and Russia.

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I. Introduction

Because North Korea's nuclear weapons program and sudden changes, including its collapse or regime change, are the most significant security matter to Korean peninsula, it is important to understand thinking and strategy of strong neighbors, including the U.S., China, Japan and Russia. For maintaining peaceful Korean peninsula, it is very important to check changes and continuity of other neighbors' strategy and foreign policy in that region. Many academic and policy papers mostly have focused on foreign policy of the U.S. and China. In general, stances of the U.S., China and Japan have been similar regarding North Korean problem because North Korea is not just a single issue but complicated issues relevant to Northeast Asian regional order. However, Russia and European countries are different cases. Their positions would be different based on their interest and international environment. Nonetheless, studies on Russian and European sides are still very few in the Northeast Asian or Korean security studies.

Thus, in this paper examines how Russia and Europe will respond to any Korean crisis scenarios. Russian response to Korean security crisis would be more strategic approach based on a new relation between the new U.S. administration and Putin's Russia while European response would be more focused on humanitarian issues because of its geopolitical distance and today's asylum experiences. Followed by this introduction section, the next section deals European response to Korean Peninsula crisis scenarios. European countries would mainly focus on their humanitarian approach to North Korean massive refugees situation because its geographical location and their recent refugee crisis experiences. In this section, firstly, European experiences about recent refugee crisis, including Albanian and Syria refugees will be analyzed and, secondly, European response to North Korean crisis situation will be discussed. The third section focuses on Russian response to Korean Peninsula crisis situations. Russian response would not be European style humanitarian approach. Naturally, Russian strategic concerns to Korean Peninsula goes to geopolitical concerns, including its relations with the new U.S. Administration, China and Japan, because of Russian geographical close location to Korean Peninsula and its security and economic interests in shaping new Northeast Asia regional order. Thus, while Russian response section focuses on Russian geopolitical concerns and strategic approaches to Korean Peninsula crisis situations

based on Russian recent political, economic and social situation and new U.S.-Russian relations, European response section focuses on their recent experiences of refugee crisis and their humanitarian approaches on Korean Peninsula crisis situation based on their experiences.

The final section, the most significant section, will be policy implications on how the Republic of Korean government to strategically prepare and use European and Russian response for peaceful Korean Peninsula. In particular, European humanitarian support will be critical for massive North Korean refugee crisis because it contributes international legitimacy for managing refugee chaotic situation and reducing possible Chinese critiques. European government and non-government organization's experiences will be very helpful in solving difficult refugee situation rather than the US and South Korean direct intervention. Naturally, Russian response will be more strategic approaches. Thus, the ROK government try to make confidence building measures with the Russian government for Korean Peninsula crisis, especially refugee crisis. Because refugee crisis is more humanitarian issues rather than political issues, the ROK and Russian government are able to make a mid-level government and non-government dialogue in discussing possible cooperation measures. This kind of dialogue or association will be very helpful in that crisis situation because it reduces misunderstandings between the twos and bureaucratic works in that situation. Because this paper is a policy paper not academic thesis, three authors try to produce policy implications for target audience, including policy makers and advisors with analysis on European and Russian perspectives on Korean Peninsula.

II. European Response to Korean Peninsula Crisis

1. European Co_untries and Korean Peninsula Crisis

A sudden change on the Korean Peninsula is defined, in general, as a state of emergency due to the collapse or the possibility of collapse of North Korea. There have been several occasions of similar emergency situation that actually took place on the Korean Peninsula. Since the Korean War in 1950, a possible outbreak of war or a possible collapse of the North Korean regime has occasionally been discussed. In particular,

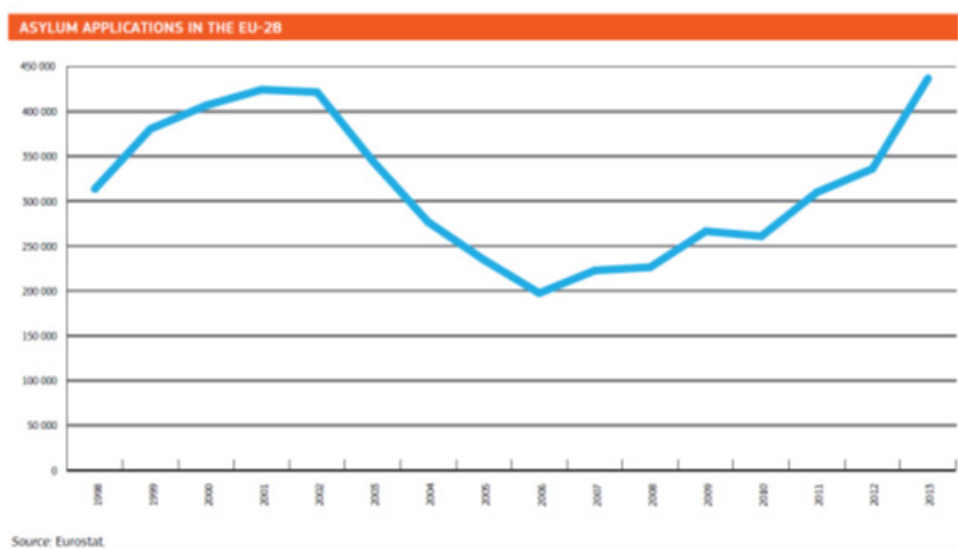
the response and policy approach of the US have gathered much interests and attention of the neighboring countries, since the US is in charge of the direct management of emergency situation on the Korean Peninsula. There are also other surrounding countries such as China, Japan, and Russia, which have a high interest in the possibility of war and emergency situation on the Korean Peninsula.

As such, sudden change on the Korean Peninsula is a subject of major interest not only of both South and North Korea but also of the four neighboring powers. The four powers are allegedly prepared with their own manuals for countermeasure and crisis management in response to the emergency situation following the collapse of the North Korean system and the outbreak of war. In fact, the four neighboring countries have adopted their own response measures in the cases of intense conflict between South and North Korea or in other urgent situations. In view of these aspects, any sudden change or emergency situation on the Korean Peninsula is not merely a problem of South Korea alone, but an international problem associated with the four neighboring powers.

Nonetheless, besides these four powers, Europe has had a continuous interest in the problem of the Korean Peninsula. Historically, Europe has been constantly interested in the Korean Peninsula since the Goryeo dynasty. In the 19th century those with whom the Joseon dynasty had established diplomatic relations, while confronting the other world powers, were mostly European countries. Many of the participants of the UN forces in the Korean War of 1950 were European countries as well. In addition, the EU constitutes the members of the Korean Peninsula Energy Development Organization (KEDO) which was established in accordance with the Geneva Convention following the death of Kim Il-sung in 1994 and the North Korea's request for the construction of a nuclear power plant.

Thus, in case of sudden change on the Korean Peninsula, the EU is expected to have, to some degree, an active and specific interest of intervention. In particular, European countries may undertake a significant role considering the fact that it was western countries such as Sweden and Italy who connected North Korea to the West, during which the direct communication and network of contacts between the US and western

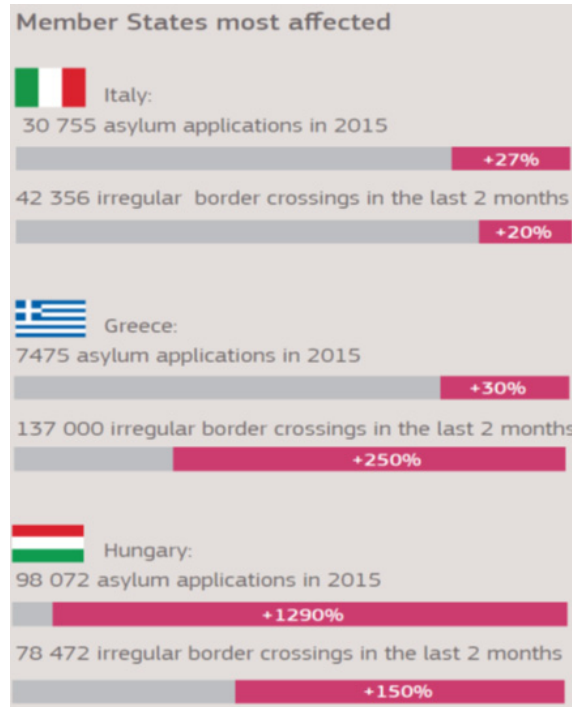
countries on one side and North Korea on the other side were severed. Regarding these aspects, the current report tries to analyze the measure of response, the process of intervention, etc of the EU or European countries in the case of sudden change or emergency situation on the Korean Peninsula by examining major cases.



[Table 1] Asylum Applications in the EU¹⁾

As both tables (above and below) show on asylum applications in the EU, including most affected states (Italy, Greece, Hungary) by refugee crisis. European countries have had diverse experiences of refugee crisis over decades. In particular, a recent Syria refugee crisis includes diverse aspects of refugee situation, including security matters and humanitarian issues. These European experiences about refugee crisis are very significant lessons for possible North Korean massive refugee situations. Moreover, it could be a great guideline to expect how European countries respond to Korean Peninsula crisis situations, including massive North Korean refugees.

1) EUROSTAT; <http://ec.europa.eu/eurostat> (Search: 2016. November. 1)

[Table 2] Asylum Applicants in Italy, Greece and Hungary²⁾

For this purpose, the research will briefly investigate the cases of the refugee crises in Europe. Through the EU's settlement of refugee crises, this study attempts to offer policy options or solutions for dealing with the management and response toward North Korean inflows in case of the emergency or sudden change in Democratic People's Republic of Korea (DPRK).

The section of European response consists of four sub-sections. Firstly, this sub-section gave an overview of various dimensions related to sudden changes on the Korean Peninsula and European countries. The second will briefly investigate the actual response measures and solutions implemented by the European countries in handling emergency situation occurred within the EU and the EU's response thereupon. The third will examine the EU's policies and response measures toward North Korean crisis. The final will summarize the implications that can be drawn from the EU's case for dealing

2) http://ec.europa.eu/dqs/home-affairs/what-we-do/policies/asylum/index_en.htm (Search: 2016. November. 1.)

with sudden change and emergency situation on the Korean Peninsula.

2. European Experiences on Refugee Crisis

Over the decades, European countries experienced diverse refugee crisis, including Albania 500,000 refugees. One of the United Nations Refugee Agency (UNHCR)'s important job was returning Albanian refugees to Kosovo less than three months. UNHCR has started diverse program, including restoring land and buildings for refugees, repairing water, sanitation, school and medical facilities. Training program on asylum matter was also included. From these experiences, European countries established refugee management system, including Asylum, Migration and Integration Fund.³⁾

First of all EU's asylum response system is operated in many international institutes, for example, European Commission, UNHCR and so on. I mention, in especial, the role and function of Migration and Integration Fund (AMIF). AMIF is one of the most useful methods for resolving and being stable EU's asylum policies. Actually AMIF was set up for the period 2014-20, with a total of 3.137 billion EUR for that period.

Objective	Goal
Asylum	strengthening and developing the Common European Asylum System by ensuring that EU legislation in this field is efficiently and uniformly applied
Legal migration and integration	supporting legal migration to EU States in line with the labor market needs and promoting the effective integration of non-EU nationals
Return	enhancing fair and effective return strategies, which contribute to combating irregular migration, with an emphasis on sustainability and effectiveness of the return process
Solidarity	making sure that EU States which are most affected by migration and asylum flows can count on solidarity from other EU States

[Table 3] AMIF's four objectives and goals⁴⁾

3) UNHCR Fundraising Report,

<http://www.unhcr.org/3e2ebc0ed.html>:UNHCR Fundraising Report,

<http://www.unhcr.org/3e2ebc0ed.html>:UNHCR Fundraising Report,

<http://www.unhcr.org/3e2ebc0ed.html>:UNHCR Fundraising Report,

<http://www.unhcr.org/3e2ebc0ed.html>:UNHCR Global Report,

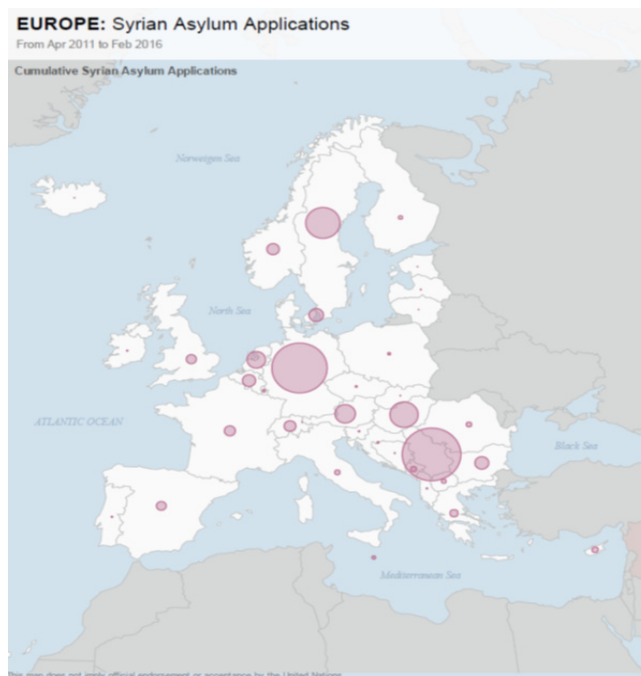
<http://www.unhcr.org/3e2d4d50d.html>

http://ec.europa.eu/justice/policies/intro/policies_intro_en.htm

4) Source: European Commission edited by author.

This AMIF also is useful to provide financial resources for the future development of the European Migration Network (EMN). EMN is one of institutes to respond to EU institutions and to EU State authorities and institutions. And also it provides some useful information on migration and asylum. Providing data from EMN is reliable and comparable source, with a view to supporting policy-making.

As the following map shows, major case of EU's response for refugees is Syrian asylum from 2015. The European Commission's package of proposals released on Wednesday 9 September 2015 to address the current refugee crisis in Europe. These proposals are timely, as the number of people having arrived in Europe via the Mediterranean Sea in 2015 so far exceeds 380,000 and is expected to continue rising rapidly over the coming weeks and months, thus creating a sense of urgency for their rapid implementation. The following graph is about size of Syrian asylum applicants from April 2011 to Feb 2016.

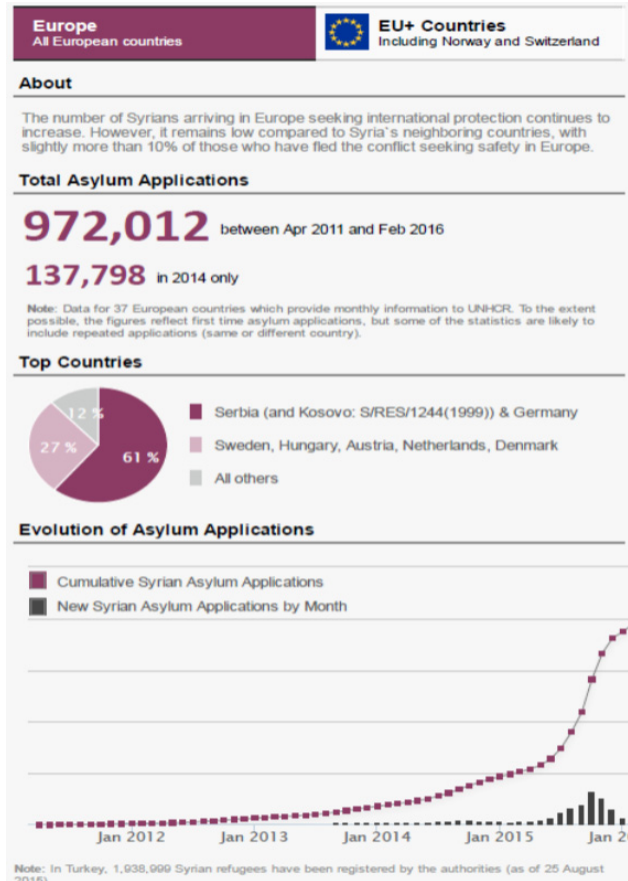


[Table 5] Syrian Asylum Applicants in Europe
(April 2011 to Feb 2016)⁵⁾

5) <http://data.unhcr.org/syrianrefugees/asylum.php> (Search: 2016 November. 22.)

European countries immediately responded how to resolve Syrian refugees a sense of humanitarian aid and EU's asylum policies. Thus UNHCR's proposals in light of the EU response to the refugee crisis and the EU package of 9 September 2015. EU's major responses were about 10 policies proposed by UNHCR. Those were emergency relocation proposal, reception/assistance/registration, expanded legal avenues for seeking protection in Europe, combating smuggling, protecting victims, safe countries of origin list, effective return policy, EU emergency response tool, actually AMIF emergency funding and the Temporary Protection Directive and actions outside the EU, addressing root causes. Also the European Union is in effectively responding to the present crisis in a human and protection sensitive manner.

As the following table shows, Syrian refugee crisis is serious problem that one country cannot solve by oneself. The number of asylum applicants increased to 1 million for five years (2011 to 2016). Thus, cooperation between European countries is significant. Now Syrian refugee's problem is settling in EU thanks to immediate and effective response by EU and UNHCR. Although there have been many problems in managing Syrian refugees over the years, European countries are only experienced countries has handled large number of refugee problems. Their unique experiences will be a great guideline for Republic of Korea who rarely handle large number of refugees. From European experiences, Northeast Asian countries + European Union for North Korean refugees hosted by the Republic of Korea may cooperate each other efficiently by learning European partners' successful and failed experiences.



[Table 6] Syrian Asylum Situations in Europe⁶⁾

One noteworthy refugee policy planned by UNHCR was *Winterization Plan for the Refugee Crisis in Europe* between 2015 and 2016 that helped to affected countries including Greece, the former Yugoslav Republic of Macedonia, Serbia, Ceotia and Slovenia caused by asylum from Middle East.

6) <http://data.unhcr.org/syrianrefugees/asylum.php> (Search: 2016. November. 22.)

OPERATION	TOTAL REQUIREMENTS (2015 - 2016)		
	Initial supplementary requirements (as of 30 September)	Supplementary winterization requirements	Total supplementary requirements
Regional procurement	-	43,147,194	43,147,194
Greece	25,415,810	31,968,469	57,384,279
The former Yugoslav Republic of Macedonia	11,779,872	2,267,475	14,047,347
Serbia	15,837,878	3,453,102	19,290,980
Croatia	-	3,757,416	3,757,416
Slovenia	-	4,065,751	4,065,751
Various operations*	13,459,201	-	13,459,201
HQ and regional activities related to the response in Europe	5,070,000	1,202,626	6,272,626
Subtotal	71,562,761	89,862,033	161,424,794
Support costs (7%)	5,009,393	6,290,342	11,299,735
TOTAL	76,572,154	96,152,375	172,724,529

*Includes activities in Bosnia and Herzegovina, Cyprus, Hungary, Italy, Malta, Spain, Turkey and other affected countries in Europe.

[Table 7] Financial summary of Winterization Plan for the Refugee Crisis in Europe⁷⁾

UNHCR's *Winterization Plan for the Refugee Crisis in Europe* had aims and strategy to focus on five areas of intervention for averting the risk of humanitarian catastrophe. This plan was very useful to aid refugees from the Middle East and to settle the affected countries caused by asylum. The below table shows the 5 areas and their contents of the Winterization strategy and aim.

7) <http://www.unhcr.org/partners/donors/563b26049/unhcrs-emergency-appeal-winterization-plan-refugee-crisis-europe-november.html> (Search: 2016. November. 23.)

Area	Contents
area 1–shelter	Winterization of shelter/reception facilities, as well as adequate site planning and site management solution
area 2–winter items	Provision of additional winter items in core relief items and non–food items packages
area 3–reception center	Provision of transportation to reception centers as an interim measure
area 4–meals	Provision of hot drinks and meals as an interim measure
area 5–other facilities	Winterization of WATSAN facilities

[Table 8] 5 areas and those contents of Winterization strategy: edited by author

3. EU Policies against North Korean Crisis⁸⁾

Promoting improvements in the human rights situation in DPRK remains a core issue of the EU's policy towards the country. The EU is very concerned by the continuing systematic, widespread and grave violations of civil, political, economic, social and cultural rights in the country. The EU has been unequivocal in its condemnation of the situation. This EU expresses its concerns at every occasion with North Korean representatives and in the context of the EU's annual political dialogue with DPRK, which exceptionally did not take place in 2012.

The EU continued to draw the attention of the UN Human Rights Council and the UN General Assembly to the persistent critical human rights situation in the DPRK. On 19 March 2012, the EU co-sponsored (with Japan) a Resolution by the UN Human Rights Council in which it expressed its very serious concern at the ongoing grave, widespread and systematic human rights violations in the Democratic People's Republic of Korea. Similarly, a UN General Assembly Resolution was adopted on 29 March 2012. The consensual adoption of the last HRC and UNGA resolutions on the DPRK sent a strong signal. The EU further supported the extension by one year of the mandate of the UN special Rapporteur on the situation of human rights in DPRK. As a result of the EU's active role in the UN, the DPRK has refused since 2003 to hold the specific EU-DPRK

8) This section is based on the edited extracts from the following sources:
http://ec.europa.eu/justice/policies/intro/policies_intro_en.htm:
<http://media.daum.net/foreign/europe/view.html?cateid=1044&newsid=20090702182110762&p=newsis> (Search: 2016. November. 5.)

human rights dialogue, initiated in 2001.

On 23 May 2012 the European Parliament adopted a Joint Resolution on the situation of North Korean refugees, underlining its concern about their plight. The EU urged DPRK to tackle the root causes of refugees and to ensure that any refugees returned to DPRK are able to return in safety and dignity. Besides the above approach, the EU continues to de-couple its humanitarian aid to the North Korean people from political considerations regarding the leadership in Pyongyang. In September 2012 the European Commission provided € 350.000 in direct aid to victims of severe flooding in the country. Where possible, the EU attempts to outreach to the most vulnerable groups in DPRK society such as disabled and young children.

Promoting improvements in the human rights situation in the DPRK remains at the core of EU policy on the country. The EU remained very concerned at continuing reports and testimonies describing systematic, widespread and grave violations of civil, political, economic, social and cultural rights. It was unequivocal in its condemnation of the situation and expressed its concerns at every opportunity with DPRK representatives.

Due to the EU's active role in the UN (see below), the DPRK has refused since 2003 to conduct the EU-DPRK human rights dialogue that began in 2001. The EU maintains diplomatic contacts with the DPRK authorities and has invited the DPRK to resume the dialogue.

The EU continued to draw the attention of the UN Human Rights Council to the persistent critical situation in the DPRK and co-sponsored a resolution (adopted on 21 March) which condemned the grave, widespread and systematic violations of human rights in the country and established a Commission of Inquiry to investigate these abuses. The EU has consistently and strongly supported the work of the Commission and its methodology.

The EU also supported the adoption of resolutions on human rights in the DPRK in the UN General Assembly's Third Committee (the latest adopted on 19 November) and the UN General Assembly itself (adopted in December) and lobbied strongly to aid the smooth passage of such resolutions.

It also monitored the situation of DPRK refugees abroad, calling when necessary for full respect of all relevant international obligations.

On 14 March, the European Parliament adopted a resolution on nuclear threats and human rights in the DPRK, expressing concern over the deteriorating human rights situation in the country and calling on it to abide by its international human rights obligations. The EU continued to provide humanitarian assistance to some of the most vulnerable groups in DPRK society, irrespective of political concerns.

The EU has adequately dealt with emergencies such as large scale or sudden change by institutionalizing the refugee protection system acquired through the Albanian crisis in 1995 and establishing financial stability. Above all, the systematic and continuous operation of the EU refugee protection system provides institutional implications for the sudden change on the Korean Peninsula to respond properly and rapidly.

2-4. Applicability of the EU Case to Korean Crisis

While it is difficult to compare the European response and the Italian method of management to the Albanian crisis with the case of North Korea in a uniform manner, there are several aspects of which meaningful policies and implications can be drawn.

First of all, the North Korean problem should not be limited to the problem of the South and the North. As already indicated by various circumstances, the effect of the North Korean sudden change on the Korean Peninsula is considered to be quite negative, thus response measures and policy preparations for the problem of North Korea are needed to be formulated on the basis of international political cooperation.

Secondly, a clear and urgent preparation for the expected financial sources and necessary budget is essential in the case of the occurrence of a massive refugee crisis. On this matter, a kind of the common EU fund can be suggested via the cooperation with the surrounding countries of the Korean Peninsula. There is a need to actively review the establishment and operation of a common fund, since the creation and management of the common fund could be applicable not only to North Korea but to other refugee crises in the neighboring countries.

Thirdly, it is significant to consider the fact that to trigger or promote an artificial refugee crisis for a specific purpose is not much helpful for resolving the refugee problem. While the intervention to the refugee crisis based on a clear justification of humanitarian intervention or human rights protection is worthy of consideration, yet a strategy or tactics to intentionally collapse a country or society may require a much more examination and considerate approach in that it is almost impossible to make clear predictions and judgments and that the size and the context of refugees would be hard to measure in the actual situation.

Ultimately, from the standpoint of South Korea it is the most critical and significant preparation in the present situation to devise effective policies and institutions along with legal arrangements, rather than anticipating the refugee situation—which may take place in the case of sudden change in North Korea—much artificially or as given.

In addition, several microscopic policies with prompt applicability can be offered by examining the response policies and measures which have been taken so far by the Italian government for the Albanian refugee crisis.

First, the most significant and urgent policies and institutions are related to the creation of funds, the expansion of existing funds, or the adoption of funds for refugee relief and maintenance which can be prepared in conjunction with neighboring countries.

Second, it can be suggested to utilize military bases, camps, or barracks that are not currently being used on the east and the west coast of Korea when considering the case of the Italian government using shelters or refugee camps. It would also be a good measure to utilize mountainous areas in Gangwon-do or closed schools whose surrounding areas are available for policing or guarding. Besides, to prepare recreational facilities, condominiums and resorts which are mostly concentrated in specific areas for coping with emergencies could also be a good preparation.

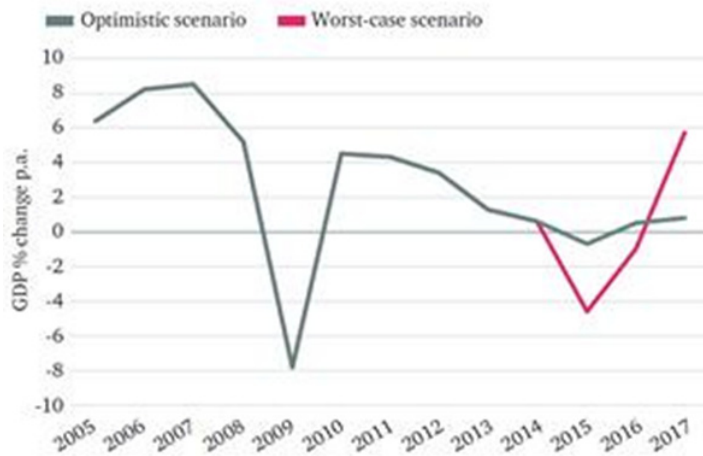
Third, it would be effective measures to monitor the pattern of refugee crises that are currently taking place around the world and to establish the framework and council for international cooperation based on the situation of the Korean Peninsula, while simultaneously making them permanent bodies at the level of a bureau or an office

at the central government. In particular, the creation of institutions for this purpose under the Ministry of Public Safety and Security, the Ministry of the Interior, or the Ministry of Unification could be suggested.

III. Russian Response to Korean Peninsula Crisis

1. Political and Economic Situation of Russia

Russia's General Election is over. The ruling party, the United Russian Party, largely won the election and now has 343 seats of total 450 seats. Although there are issues of rigged election again, it is undeniable that majority of Russian people chose the Putin's administration for their leader. Since 2008 financial crisis, Russian economy has been in crisis because of a decline of gas price. Russian industrial structure mainly based on energy industry, many experts expect that this economic problem is not a short time but a long time struggle. Thus, popularity to Putin's administration had fallen since 2008 financial crisis. Many Russian people lost their jobs and young people did not find jobs.

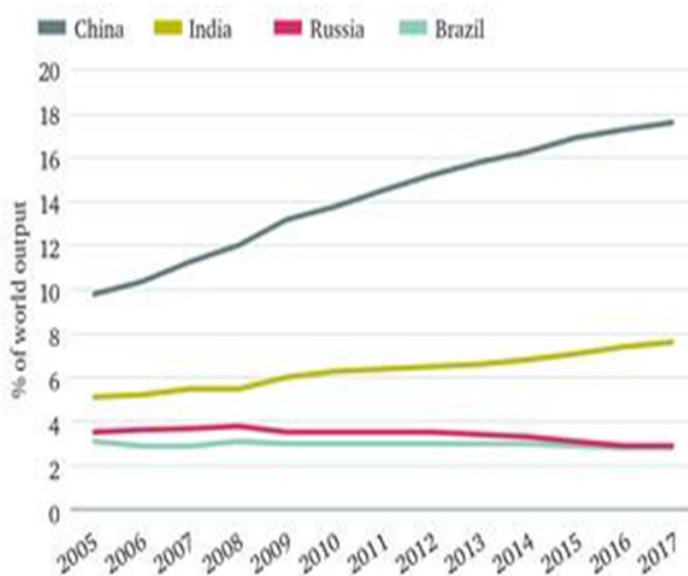


[Table 9] Russian real GDP, 2005–17 (% year-on-year change)⁹⁾

9) Keir Giles, Philip Hanson, Roderic Lyne, James Nixey, James Sherr and Andrew Wood, "The Russian Challenge," *Chatham House Report* (London: Chatham House, 2015), 14.; Sources: Rosstat (historical data); CBR (2014–17 projections)

As the table explains, Russian real GDP has sharply fallen and this decline is the worst case among G-20 states. Among BRICs, Russia's status has been in troubles. In particular, years of 2008 and 2009 were bad because of effects of financial crisis. Economic troubles since 2008 were not temporary but continuous situation. Some Russian people think that years after 2008 were more difficult economic situations than 1990's Yeltsin period.

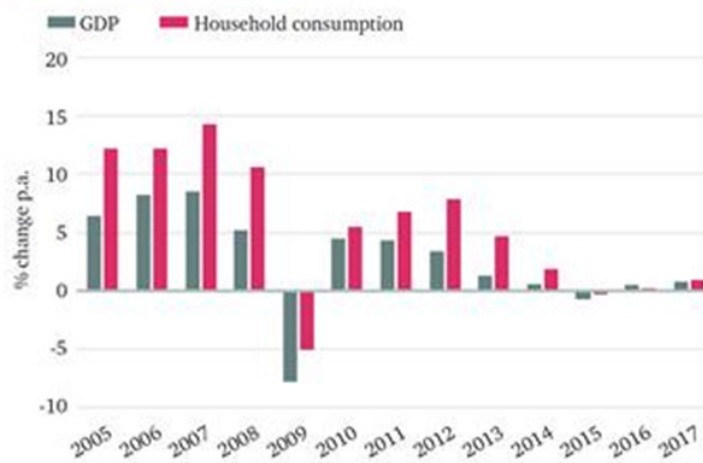
The following table explains that global output of Russia and Brazil has been low while China and India relatively high. Because of these economic troubles, unemployment rate has been high and housing market in troubles in Russia since 2008 and popularity of Putin's administration has declined. Economic growth has been one of the two significant factors (another foreign policy direction for Russia's greatness) in shaping a positive political environment for Putin over the decades. However, since 2008, economic issues became a major challenge against Putin's political popularity. Thus, these micro-level economic situations were real difficulties of Russian ordinary people's everyday lives.



[Table 10] The BRICs, 2005-17: % of Global Output¹⁰⁾

10) *Ibid.*, 15.

While GDP declined, household consumption decreased as well. Many economists analyze that Russia's annual GDP growth rate will be 2.25%, a very low level. Low growth rate and high unemployment were strong challenges against Putin's administration. These economic crises were structural challenges not a single problem of Russian economy, including corruption and energy market. It is clear that Putin's popularity continuously would decline because easy solutions did not exist. However, this situation met a turning point with a political event in a neighbor, Ukraine. The following table shows that changes of GDP and household consumption



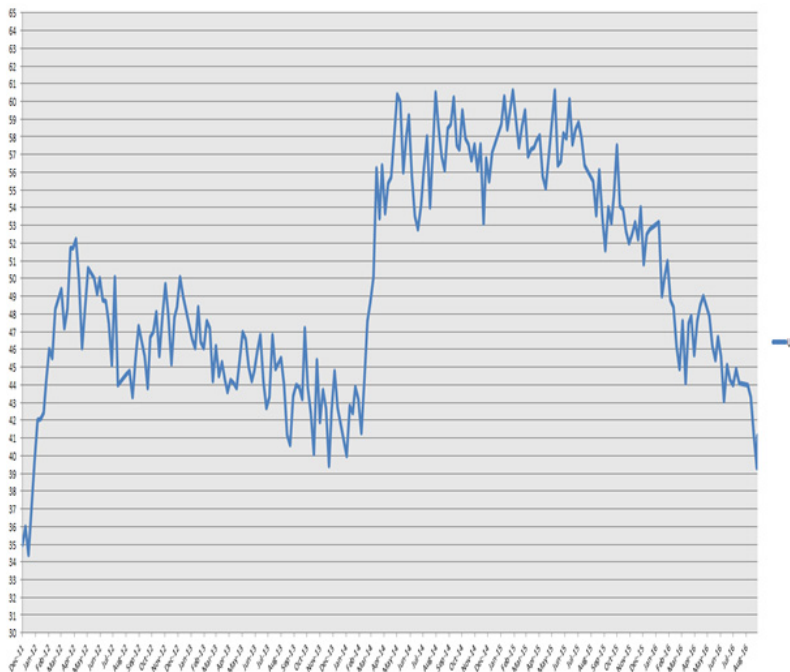
[Table 11] GDP and Household Consumption in Russia, 2005-17 (% p.a. changes)¹¹⁾

During the last Presidential Election in Russia, Putin strongly criticized that the US intervened in domestic politics of Russia by using Non-government organization's protests. Putin blamed that the protesters against Putin are spies of the US sponsored by the C.I.A. and directed the U.S. embassy in Moscow.¹²⁾ Putin and his men called color revolution as threats from the US against Russia. When political situations became a chaos and protesters dominated central Ukraine, Putin blamed that the US supported

11) *Ibid*, 15.

12) Kathryn Stoner and Michael McFaul, "Who Lost Russia (This Time)? Vladimir Putin." *The Washington Quarterly* 38(2) (Summer 2015): 167-187.; David Remnick, (2014, August 11). "Watching the Eclipse." *The New Yorker*; Marsha Gessen, *The Man Without a Face - The Unlikely Rise of Vladimir Putin* (New York: Riverhead Books, 2012)

so-called Ukraine ultra-nationalists and intervened Ukraine domestic politics. Tension between Ukraine nationalists (Ukraine nationality) and pro-Russian Ukraine people (Russian nationality), Putin declared that Russia is able to intervene in defending Russian people in Ukraine. Putin's hybrid warfare for Cream Annexation was successful and Putin's strong attitude got Russian people's strong support again in 2013.

























[Table 12] Popularity for United Russian Party (Ruling Party)¹³⁾

In 2011, the United Russian party obtained 49.32% of total vote and 238 seats of total 450 seats. The Communist Party became

the second place with 19.19 % vote and 92 seats while A Just Russia party as the third place obtained 13.24% vote and 64 seats. Liberal Democratic Party of Russia as the fourth place obtained 11.67% vote and 56 seats. In 2016, the United Russian party obtained 54.2% vote and 105 seats more than 2011, now 343 seats of total 450 seats.

13) https://en.wikipedia.org/wiki/Russian_legislative_election,_2016 (Search: 2016. Nov. 10.)

This is a huge victory for Putin and the ruling party. The Communist Party only obtained 13.34% vote and lost 50 seats, now only 42 seats. The Liberal Democratic Party of Russia only obtained 11.67% vote and lost 17 seats, now 39 seats. A Just Russia party only obtained 6.22 % and lost 41 seats, now 23 seats.

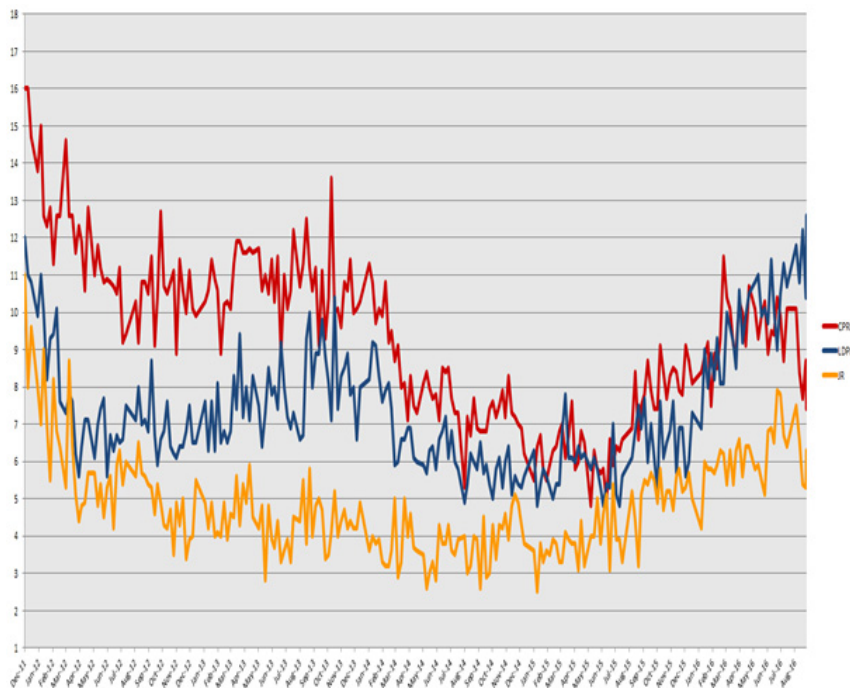
Date	Poll source	UR	CPRF	LDPR	JR
31 July 2016	FOM 	47%	9%	8%	8%
25 July 2016	Levada Centre 	39%	10%	10%	3%
24 July 2016	FOM 	44%	10%	11%	7%
24 July 2016	WCIOM 	44.1%	10.1%	10.7%	6.4%
17 July 2016	FOM 	45%	10%	12%	7%
17 July 2016	WCIOM 	44.9%	8.7%	11.3%	6.7%
10 July 2016	FOM 	46%	10%	12%	6%
10 July 2016	WCIOM 	44%	9.9%	10.5%	7.8%
3 July 2016	WCIOM 	44.3%	10.4%	9.0%	7.9%
3 July 2016	FOM 	46%	10%	11%	7%
27 June 2016	Levada Centre 	55.8%	18.2%	14.2%	5.1%
26 June 2016	WCIOM 	45.1%	9.4%	10.1%	6.5%
26 June 2016	FOM 	45%	10%	11%	6%
24 June 2016	FBK 	39%	6%	5%	4%
19 June 2016	WCIOM 	43.1%	9.5%	11.4%	6.9%
12 June 2016	WCIOM 	45.5%	8.9%	9.7%	6.8%
5 June 2016	FOM 	48%	10%	11%	5%
5 June 2016	WCIOM 	46.7%	10.3%	10.1%	5.1%
29 May 2016	WCIOM 	45.4%	9.9%	9.9%	5.5%
22 May 2016	WCIOM 	46.2%	9.3%	11%	5.9%
15 May 2016	WCIOM 	47.9%	10.1%	10.8%	5.8%
1 May 2016	WCIOM 	49%	10.7%	10.5%	6.4%

[Table 13] Popularity of Major Parties of Russia¹⁴⁾

The above table shows that the United Russian Party has continuously dominated its top popularity among voter during the election year. Economic problems have not gone away and will not go away soon. Nonetheless, Russian people have strongly supported Putin's administration and ruling party. The three opposition parties did not get an initiative despite economic failures of Putin's administration.

14) [https://en.wikipedia.org/wiki/Russian legislative election, 2016](https://en.wikipedia.org/wiki/Russian_legislative_election,_2016). (Search: 2016. November.10.)

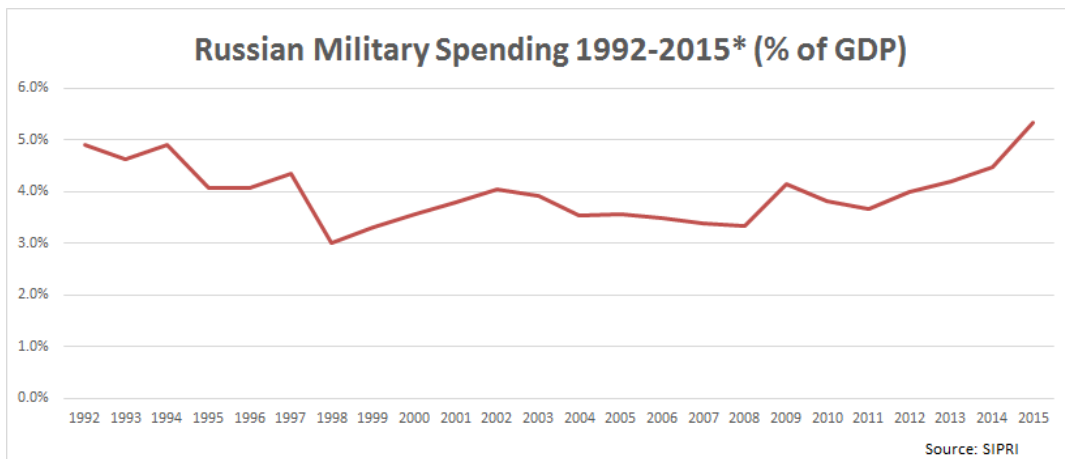
The following table clearly shows popularities of three opposition parties has declined since 2013 Ukraine crisis. Defending Russia's greatness was more significant issue to Russian people than economic difficulties. On the top of that, the main cause of Putin's popularity is a lack of political alternative. Many scholars argue that Putin has controlled most of media and manipulated media for his political interest. Nevertheless, many experts have a consensus for weak political alternatives against Putin in Russia. Opposition parties not only did not receive support from people regarding economic failures of the Kremlin but also did not show policy alternatives regarding Ukraine crisis and the United Nations' economic sanctions. Under these circumstances, the ruling party and Putin's government have continuously received massive support from people and the last election clearly shows this.



[Table 14] Popularities of Three Major Opposition Parties
(Red-Communist Party, Blue-Liberal Democratic Party, Yellow-A Just Russia)¹⁵⁾

15) *Ibid.*

Because economic problem needs a long-term solution, it seems that Putin's government maintained a same direction of foreign policy for a while in maintaining its political popularity. Patriotic movement is not just top-down policy of current government but bottom up movement. Recently, patriotic social and cultural movement is the most significant phenomenon in Russia. Stalin's revival and Immortal Regiment movement for Victory Day are clear examples. Stalin made people remind of greatness of Russia and Immortal Regiment movement makes today's diverse Russian society unite.¹⁶⁾ Because of this political, social and cultural background, Putin's foreign policy will be continued especially during Trump's administration period.



[Table 15] Russian Military Spending 1992–2015 (% of GDP)¹⁷⁾

16) Thomas de Waal, eds., *The Stalin Puzzle* (Washington D.C.: Carnegie Endowment for International Peace, 2013);
Tom Parfitt, "Proportion of Russians who respect Stalin is growing, poll suggests" (2015. May 31) *Daily Telegraph*.
<http://www.telegraph.co.uk/news/worldnews/europe/russia/11506970/Proportion-of-Russians-who-respect-Stalin-is-growing-poll-suggests.html> (Search. 2016. November.10.);
"Immortal Regiment: Thousands march to remember WW2 relatives" *BBC News*. (2016. May. 9.)
<http://www.bbc.com/news/in-pictures-36249817>
(Search 2016. November.10.);
"Putin joins the 'Immortal Regiment' march in Moscow" (2016. May. 9.) *Russia Beyond the Headlines*.
http://rbth.com/news/2016/05/09/putin-joins-the-immortal-regiment-march-in-moscow_591541
(Search: 2016. November.10.)

17) www.russiadefense.net (Search: 2016. Nov. 10.)

The table shows that Putin's administration has continuously increased its military spending percentage of GDP despite economic crisis. This explains that Putin will continue his policy for greatness of powerful Russia and people support Putin's ambition.¹⁸⁾ Because Russian people remembers their humiliation since the end of the Cold War, Russian people miss Russia's great power status.¹⁹⁾ Putin's defense reform receive strong support from Russian people. New defense minister Sergei Shougu emphasizes a continuous of defense reform for strong Russian military.²⁰⁾ Russian people sent their sons to Russian military and recognizes that Russian military has many problems, including outdated weapons, food, crime and drug.²¹⁾ Thus, in general, defense reform receives strong support from Russian people who sent their sons to Russian military.²²⁾ Safety and lives of Russian people abroad who still lives in the former Soviet Union are matter to Russian people. Thus, Putin's government will do a strong

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- 18) Stephen F. Cohen, *Soviet Fates and Lost Alternatives: From Stalinism to the New Cold War* (New York, NY: Columbia University Press, 2009); *Rethinking the Soviet Experience* (New York: Oxford University Press, 1985); *Failed Crusade - America and the Tragedy of Post-Communist Russia* (New York: W.W. Norton & Company, 2001); Stephen Kotkin, *Armageddon Averted - The Soviet Collapse 1970-2000* (New York: Oxford University Press, 2008); Serhii Plokhy, *The Last Empire - The Final Days of the Soviet Union* (New York: Basic Books, 2014); Geoffrey. Hosking, *Rulers and victims: the Russians in the Soviet Union* (Boston, Mass: Belknap Press of Harvard University, 2006)
- 19) Kathryn Stoner and Michael McFaul, "Who Lost Russia (This Time)? Vladimir Putin." *The Washington Quarterly* 38(2) (Summer 2015): 167-187.; Remnick, David. (2014, August 11). "Watching the Eclipse." *The New Yorker*; Marsha Gessen, *The Man Without a Face - The Unlikely Rise of Vladimir Putin* (New York: Riverhead Books, 2012)
- 20) Dmitri Trenin, "2014: Russia's New Military Doctrine Tells It All." *Carnegie Moscow Center Commentary* (2014, December 29); Olga Oliker, "Upacking Russia's New National Security Strategy," *Center for Strategic & International Studies Commentary* (January 7, 2016); Roger N. McDermott, *The Brain of the Russian Army: Futuristic Visions Tethered by the Past* (Fort Leavenworth, Kansas: Foreign Military Studies Office, 2013a); "Russia's Strategic Mobility: Supporting 'Hard Power' to 2020?" *FOI*. Stockholm, Sweden, Swedish Defense Research Agency (2013b)
- 21) Pavel K. Baev, *The Russian Army in a Time of Troubles* (London: SAGE Publications and PRIO, 1996); Roger N. McDermott, *The Brain of the Russian Army: Futuristic Visions Tethered by the Past* (Fort Leavenworth, KS: The US Army Foreign Military Studies Office, 2013a); Roger N. McDermott, "Russia's Strategic Mobility: Supporting 'Hard Power' to 2020?" *FOI*. (Stockholm, Sweden: Swedish Defense Research Agency, 2013b)
- 22) Katri Oynnoniemi, "Russia's Defence Reform: Assessing the Real 'Serdyukov Heritage.'" *Finish Institute of International Affairs Briefing Paper* 126. (2013, March); Roger N. McDermott, *The Reform of Russia's Conventional Armed Forces: Problems, Challenges and Policy Implications* (Washington D.C.: The Jamestown Foundation, 2011); Rod Thornton, *Military Modernization and the Russian Ground Forces* (Carlisle, PA: Strategic Studies Institute of the US Army War College, 2011)

action in defending Russian people in the former Soviet states. Despite Western criticism against Russian government's logic for a special status of Russian people in the former Soviet states, Putin's government will do a strong action if any serious conflicts happen in the former Soviet states. Ukraine crisis was a clear example.²³⁾ Under these circumstances, Putin and Shougu will continue its defense reform and maintain strong foreign policy against threats from West and terrorists for a while.

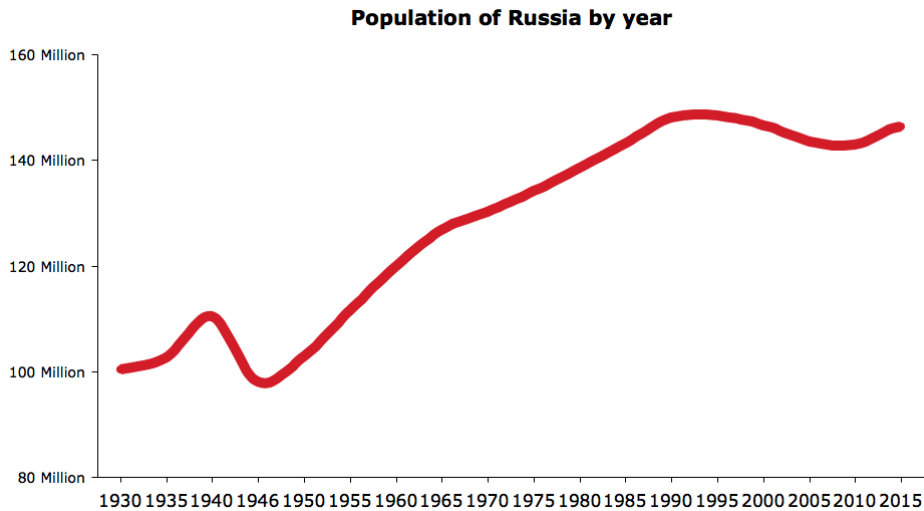
2. Russia Situations in the Far Eastern Area

Russia has huge territory from Far East to Europe. Thus, its foreign policy is tailored and diverse depends on areas. During the Cold War, Russia needed buffer zones for its security and has Eastern Europe in Europe while China and North Korea in Northeast Asia. During the Korean War, Stalin's strategy was maximum gain and minimum risk strategy. Stalin wanted to lure the enemy, the United States, in Korean peninsula by using its junior partners, China and North Korea, as long as possible in delaying another war in Europe.²⁴⁾ Stalin's strategy for the Korean War was a typical example of pragmatism and diversity of Russian security strategy. Today's Russian strategy for Northeast Asia is not very different. Russian foreign policy and strategy in Europe is different from Northeast Asia. Security matters in Europe while economic and pragmatic interest matters in Northeast Asia. This does not mean that neither economic matter in Europe is insignificant nor security matter is insignificant in Northeast Asia. Different geography, demography and situation are relevant priority of Russian foreign policy in different region. In particular, population changes in the Far East is the major concern

23) Edward Lucas, *The New Cold War: Putin's Russia and the Threat to the West*, 3rd edition (London: St. Martin's Griffin, 2014); Marcel H. Van Herper, *Putin's Wars: The Rise of Russia's New Imperialism* (New York, NY: Rowman & Littlefield Publishers, 2014) Pavel Felgenhauer, "Putin Signs a National Security Strategy of Defiance and Pushback," *Eurasia Daily Monitor* Volume 13 Issue 4. (2016, January 7); Polina Sinovets and Bettina, Renz, "Russia's 2014 Military Doctrine and Beyond: threat perceptions, capabilities and ambitions." *Research Paper* No.117 (Rome, Italy: The Research Division of the NATO Defense College, 2015)

24) Kim Donggil, "Stalin's U Turn: The USSR's Evolving Security Strategy and the Origins of the Korean War," *Seoul Journal of Korean Studies* 24(1) (June 2011): 89-114.; Shen Zhihua, translated by Neil Siver, *Mao, Stalin and the Korean War* (London and New York: Routledge, 2012); Sergei N. Goncharov, John W. Lewis and Xue Kiai, *Uncertain Partner: Stalin, Mao and the Korean War* (Stanford, CA: Stanford University Press, 1993)

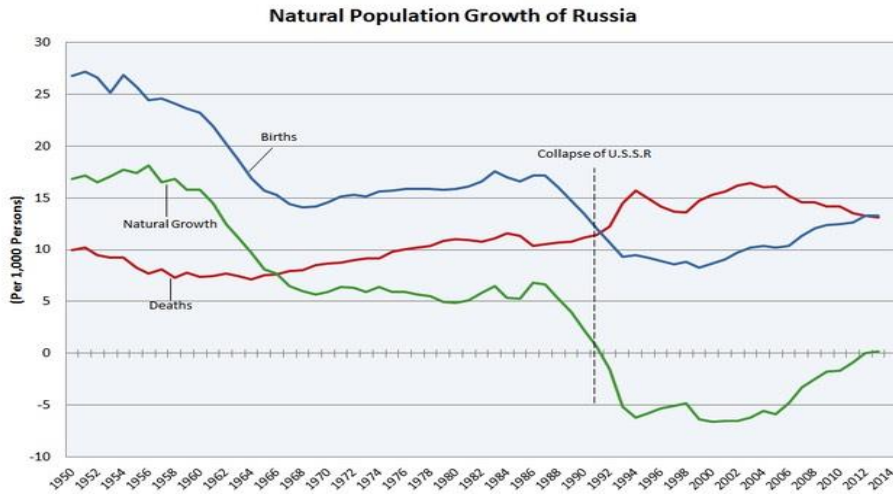
to Russian government. In the Far Eastern area, Russian population has continuously decreased although Russian government has tried to invest this area. As the following table shows, Russian population has increased nationwide. But, it has complicated pictures.



[Table 16] Population in Russia²⁵⁾

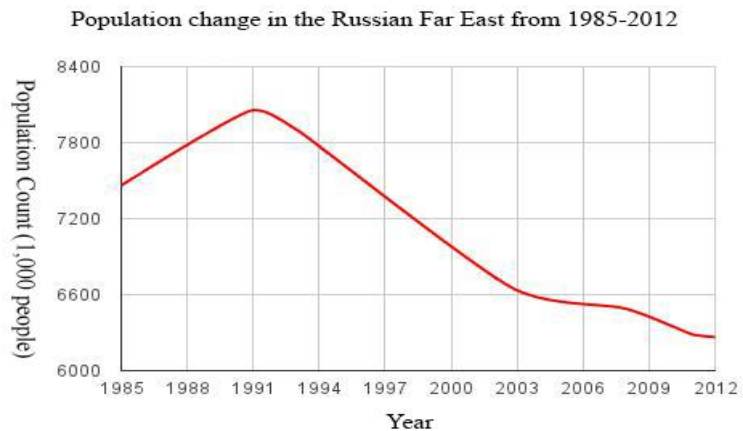
Russian population's growth is not because of birth rate but a migration. The following graph shows natural population growth of Russia. Natural growth has generally decreased. In particular, it sharply decreased since the end of the Cold War. Economic difficulties and political chaos clearly influence a decrease of birth rate. This means that population growth since the end of the Cold War is not because of a high birth rate but because of high immigrants.

25) https://en.wikipedia.org/wiki/Demographics_of_Russia (Search: 2016. Nov. 15)



[Table 16] Natural Population Growth of Russia²⁶⁾

This demographic situation in the Far Eastern area is very clear. As we easily expect, population in the Russian Far East has decreased because Russian youth move from country side to big city urban area for a quality and well-being of life, jobs and education. This is major reason of Russian population's decrease in the Far Eastern area. Instead, many Chinese immigrants as labor forces came this area. Russian people recognizes that Russian population's decrease is unavoidable in that region for a while and its military strength and economic status continue to weak in the Far East.



[Table 17] Population Change in the Russian Far East, 1985-2012²⁷⁾

26) *Ibid.*

Russian government tries to make Vladivostok San Francisco of Russia over the decades. Russian government built a new fashionable academic campus of Far Eastern University, local distinguished higher education, and this state university strongly market its undergraduate and postgraduate programs to international students, especially Chinese and Korean students. Education program for international students mainly focus on management, business and engineer program rather than humanities and arts because the Russian government wanted graduates of international students become engines of economic boom in the Far Eastern area. The Russian government also invested this region as recreation and resort area. Five star casino hotel were newly built and beautiful resort facilities near sea are under constructions. Nevertheless, it cannot stop Russian native people's move from Far East to big cities, such as Moscow and St. Petersburg. Thus, Chinese factory workers and peasants are main economic engine of this region.



[Table 18] Russia's Far Eastern Territories²⁸⁾

27) https://en.wikipedia.org/wiki/Russian_Far_East (Search: 2016 Nov. 15)

28) <https://alfinnextlevel.wordpress.com/2016/04/07/wholesale-movement-of-chinese-industry-and-workers-into-russian-far-east/>
(Search: 2016 Nov. 15)

3. Russian Strategy in the Northeast Asia

Because of a difficult situation in the Far Eastern area, Putin several times expressed his fear of Asian population growth in the Far East and Russia's weak position in Northeast Asia. Putin said that "I do not want to dramatize the situation, but if we do not make every real effort, even the indigenous Russian population will soon speak mostly Japanese, Chinese, and Korean."²⁹⁾ This fear originated Russian people's historical experiences and trauma in the Far Eastern area. I define the term 'Russo-Japanese War Complex' as a psychological shock or a collective memory of Russian people's humiliation due to an invasion of Asian people who have been regarded as an inferior nation economically and culturally and militarily.³⁰⁾

Since unforgettable humiliated experiences of Mogolian invasion and defeats of Russo-Japanese War, Japanese intervention in the Russian Civil War was another unexpected humiliation to Russian people. To support the White Army, the Japanese Imperial Army intervened in central regional area without any notice to the Russian Bolshevik government during the Russian Civil War. The Japanese Army came to Central Asian area. To Russians, German, Great Britain, French and U.S. interventions were not unexpected foreign enemies, but Asian intervention (Japanese) in domestic affairs, like Civil War, was unexpected and humiliated experience. Moreover, the most symbolic event in showing Russian fear of Asian threat in the Far Eastern area was 1931 Manchurian crisis. During 1920's, a political winner Joseph Stalin who argues 'Socialism in One Nation' over his political rival Leon Trotsky who supports 'Permanent Revolution' had emphasized economic development of Russia after a catastrophe of the Civil War. Because Stalin was pragmatic and realistic leader, not an ideal communist like Trotsky, his government's top priority was economic development for everyday lives of Russian people rather than a permanent revolution. At that time, General Mikhail Tukhachevski had continuously argued that the Soviet Union have to increase a military budget as

29) Vladimir Putin, "Vystupleniye na soveschaniyi O perspektivakh razvitiya Dal'nego Vostoka i Zabaikalya," Blagoveschensk, July 21, 2000.; Andrei P. Tsygankov, *Russia's Foreign Policy: Change and Continuity in National Identity* (New York: Rowman & Littlefield Publishers, INC. 2010), 146.

30) Youngjun Kim, "Russo-Japanese War Complex: A New Interpretation of Russia's Foreign Policy toward Korea" *The Korean Journal of International Studies* Vol. 13-3 (December 2015): 555-575.

many as possible in defending a future threat Germany. Stalin continued to reject Tukhachevski's argument and strongly criticized him for several years. In 1931, the Japanese Imperial Army invaded and occupied Manchuria. Stalin immediately sent his close fellow Defense Minister Voloshirov, who also criticized Tukhachevski's idea on military budget, to the Far Eastern area in checking a Japanese threat. Voloshilov was surprised by Japanese strong army and reported to Stalin about the rise of strong Japanese Imperial Army in that region. This became a huge event in the Kremlin because most of Kremlin elites, including Stalin, was shocked and in panic by a future Asian threat from the Far Eastern area. Because of a shock of 1931 Manchuria crisis, the Kremlin immediately accepted Tukhachevki's idea on military budget. Thus, Defense budget of the Soviet Union was sharply increased since 1931 and finally ended in 1991. Fear on Japanese threats in the Far Easter area was truely a major turning point of militarization of the Soviet Union society.³¹⁾

Russian fear against foreign threats continued during the Cold War. During the Cold War, many scholars and experts understood that the Soviet Union's security policy and military strategy were aggressive because of its political objective of Marxism-Leninsm and geographical expansionism for ice-free port. Since the end of the Cold War, many declassified documents of Russian side now show that Russian security policy and military strategy were based on fear and uncertainty of future threats.³²⁾ It is natural because 25-30 million Russian people died during the Second World War by invasion of the Nazi Army. Trauma and fear unsurprisingly has led to Russian people's trauma, complex, emotional patriotism and strong desire for strong motherland.³³⁾

31) David R. Stone, *Hammer and Rifle: The Militarization of the Soviet Union, 1926-1933* (Lawrence, KS: University Press of Kansas, 2000); Sally W. Stoecker, *Forging Stalin's Army: Marshal Tukhachevsky and the Politics of Military Innovation* (Boulder, CO: Westview Press, 1998); Lennar Samuelson, *Plans for Stalin's War Machine: Tukhachevskii and Military-Ecnomic Planning, 1925-1941* (New York, NY: St. Martin Press, 2000)

32) Vojtech Mastny, *The Cold War and Soviet Insecurity: The Stalin Years* (New York, NY: Oxford University Press, 1996)

33) David R. Stone, *A Military History of Russia: From Ivan the Terrible to the War in Chechnya* (London: Prager Security International, 2006); Adrain R. Lewis, *The American Culture of War: The History of U.S. Miliary Force from the Second World War to Operation Enduring Freedom* (New York, NY: Routledge, 2012); David M. Grantz and Jonathan M. House, *When Titans Clashed: How the Red Army Stopped Hitler* (Lawrence, KS: The University of Kansas Press, 1995)

This emotional patriotism continued since the end of the Cold War. During the 1990's, Russian people were humiliated because not only because they had economic difficulties and political chaotic situation but also they lost superpower status on world stage and Western countries ignored them a loser of the Cold War.³⁴⁾ Their humiliation during the 1990's naturally led to their desires for a strong leader who revives a greatness of motherland Russia. Today's Russian patriotic social and cultural movement originated from this community feeling of victimization as one nation. Every year Victory Day, millions of Russian people in Russia and abroad voluntarily marched together with pictures of their family and friends victims and veterans of the Second World War. This parade is very emotional event and Putin naturally join them with his tears and father's picture, a veteran of the Red Army during the Second World War.³⁵⁾ The revival of Stalin's popularity recent years in Russia is a similar phenomenon in showing Russians' desire for a nostalgia of Russia's great power status and a strong leader.³⁶⁾

This fear and security concern is particularly high in the Far Eastern region because Russian people's historical experiences and Russia's weak position in this area. Because of this security concern, a military build-up and economic investment became a top

34) Stephen F. Cohen, *Soviet Fates and Lost Alternatives: From Stalinism to the New Cold War* (New York, NY: Columbia University Press, 2009); *Rethinking the Soviet Experience* (New York: Oxford University Press, 1985); *Failed Crusade - America and the Tragedy of Post-Communist Russia* (New York: W.W. Norton & Company, 2001); Stephen Kotkin, *Armageddon Averted - The Soviet Collapse 1970-2000* (New York: Oxford University Press, 2008); Serhii Plokhy, *The Last Empire - The Final Days of the Soviet Union* (New York: Basic Books, 2014); Geoffrey Hosking, *Rulers and victims: the Russians in the Soviet Union* (Boston, Mass: Belknap Press of Harvard University, 2006)

35) "Immortal Regiment: Thousands march to remember WW2 relatives" (2016. May. 9.) *BBC News*. <http://www.bbc.com/news/in-pictures-36249817> (Search: 2016. November.10.); "Putin joins the 'Immortal Regiment' march in Moscow" (2016. May. 9.) *Russia Beyond the Headlines*. http://rbth.com/news/2016/05/09/putin-joins-the-immortal-regiment-march-in-moscow_591541 (Search: 2016. November.10.)

36) Thomas de Waal, eds., *The Stalin Puzzle* (Washington D.C.: Carnegie Endowment for International Peace, 2013); Tom Parfitt, "Proportion of Russians who respect Stalin is growing, poll suggests" (Search: 2015. May. 31.) *Daily Telegraph*. <http://www.telegraph.co.uk/news/worldnews/europe/russia/11506970/Proportion-of-Russians-who-respect-Stalin-is-growing-poll-suggests.html> (Search: 2016. November.15.);

priority to Russian government in Northeast Asia. First of all, military gestures are distinct in this area over the several years. Russia conducted large military exercises in the Far Eastern area in 2010 and 2014. These exercises were largest scales since the end of the Cold War. Vostok 2010 and Vostok 2014 showed Russian military strength in that area. During Vostok 2010 and 2014, Russian Army's enemy was unnamed large ground forces' invasion. Many experts agreed with that enemy was China's People's Liberation Army. Russia's fear in this area is not just because of the U.S. forces. Moreover, Russia has continuously expanded and build its military bases in Kuril Islands against Japanese territorial disputes.

In addition to a military build-up, the Russian government strongly started its business strategy in that area. The idea for Eastern Economic Forums in Vladivostok begins with this background. The Russian government tries to invite East Asian wealthy countries, such as Japan and South Korea, as investment partner. Because of economic partnership here with rich Asian countries not only good for economic interest but also good for reducing security concerns to Russia. Thus, Russian foreign policy's main focus in that region largely is building economic partnership rather than making military tensions just like Eastern Europe. Thus, Russia's military strategy in the Northeast Asia is largely defensive measures originated from its fear.

4. Trump's American and Putin's Russia: Reset Again?

The new U.S. President Donald Trump is clearly a symbol of new relationship between the U.S. and Russia. Unexpected election result made world people surprise and upset. However, Russian people generally supported Donald Trump not Hillary Clinton. During the U.S. Presidential election campaign period, Donald Trump openly argued that he wants to restore a relationship between the U.S. and Russian and understand Russia's actions in Ukraine and Syria. Except a very few radical left wing intellectuals, such as Stephen Cohen, most of academia, think tank experts, diplomats, intelligence agency analysts and journalists of the United States unanimously blamed Russia's actions in Ukraine. Thus, media, including liberal and conservative media has concerned Trump's

praise of Putin.³⁷⁾ The Obama administration pushed Russia with United Nations' economic sanctions for a while. Nonetheless, Donald Trump praised Putin as a strong leader and argued that Putin was much better national leader than Obama.³⁸⁾ Moreover, many journalists, intelligence agency analysts and Democrats strongly criticized Russian intervention in U.S. Presidential Election, including cyber hackings of Democratic Party's key figures.³⁹⁾ Russian Foreign Ministry said that it continuously contacted with Donald

- 37) Juan Williams, "Trump's Russia problem," *Fox News* (2016. August. 9.)
<http://www.foxnews.com/opinion/2016/08/09/trumps-russia-problem.html>
 (Search: 2016. November.10.);
 Stephen Blank, "Trump's Dangerous Bromance with Putin Is a National Security Threat," *The Atlantic Council Commentary* (2016. August. 3.)
<http://www.atlanticcouncil.org/blogs/new-atlanticist/trump-s-dangerous-bromance-with-putin-is-a-national-security-threat>
 (Search: 2016.November.10.)
- 38) David Remnick, "Trump and Putin: A Love Story," *The New Yorker* (2016. August. 3.);
 Karoun Demirjian, "Three House Democrats want to investigate Trump for urging Russia to meddle in Clinton's emails," *Washington Post* (2016. August. 9.)
<https://www.washingtonpost.com/news/powerpost/wp/2016/08/09/three-house-democrats-want-to-investigate-trump-for-urging-russia-to-meddle-in-clintons-emails/>(Search 2016.November.15.);
 Christina Coleburn, "Ex-CIA Director: 'No Doubt' Putin Views Trump as 'Unwitting Agent'," *NBC News* (2016. August. 8.)
<http://www.nbcnews.com/politics/2016-election/ex-cia-director-no-doubt-putin-views-trump-unwitting-agent-n624786>
 (Search: 2016. November. 10.);
 Tom Hamburger, Rosalind S. Helderman and Michael Birnbaum, "Inside Trump's financial ties to Russia and his unusual flattery of Vladimir Putin," *Washington Post* (2016. June. 17.)
https://www.washingtonpost.com/politics/inside-trumps-financial-ties-to-russia-and-his-unusual-flattery-of-vladimir-putin/2016/06/17/dbdcaac8-31a6-11e6-8ff7-7b6c1998b7a0_story.html
 (Search: 2016.November.25.);
 Sandy Garossino, "Trump's Putin connection draws fire from ex-Canadian prime minister," *National Observer* (2016. August. 8.)
<http://www.nationalobserver.com/2016/08/08/analysis/trumps-putin-connection-draws-fire-ex-canadian-prime-minister>
 (Search: 2016. November.10.)
- 39) Evan Perez, "Sources: US officials warned DNC of hack months before the party acted," *CNN*(2016. July. 26.)
<http://edition.cnn.com/2016/07/25/politics/democratic-convention-dnc-emails-russia/> (Search: 2016. November.12.);
 Philip Rucker, Robert Costa and Jose A. DelReal, "Trump invites Russia to meddle in the US Presidential Race with Clinton's emails," *Washington Post* (2016. July. 27.)
https://www.washingtonpost.com/politics/trump-invites-russia-to-meddle-in-the-us-presidential-race-with-clintons-emails/2016/07/27/a85d799e-5414-11e6-b7de-dfe509430c39_story.html
 (Search: 2016. November.10.)
 E. SANGER and ERIC SCHMITT, "Spy Agency Consensus Grows that Russia Hacked D.N.C.," *The New York Times* (2016. November. 26.)

Trump's campaign team during the Presidential Election despite Donald Trump's team's rejection. Because of this background, many experts unanimously expect that Trump administration will try to restore a relation with Russia relation sometime soon.

The starting point for cooperation between the US and Russia would be not from Europe because of strong oppositions of Western European countries against Russia without solving Ukraine problem. Thus, naturally, Asia will be on the table as a starting point for U.S.-Russia cooperation. Donald Trump and Vladimir Putin are realists and pragmatists, not idealists. Thus, mutual interest between the two will begin economic partnership. In 2013, Russian expert Jeffery Mankoff at Center for Strategic and International Studies in Washington DC suggested that the best idea for US-Russian cooperation will be Russian Far East development with Korea.⁴⁰⁾ His idea is now very likely because of Donald Trump's victory. Partnership between Donald Trump and Vladimir Putin is highly possible because of mutual pragmatic interest in the Far East.

5. Russian Response to Korean Peninsula Crisis

In this world situation, Russian response to Korean Peninsula crisis will be more focus on international cooperation, particularly with the U.S. If Russia has a bad relationship with U.S., Russian response to Korean Peninsula crisis will be focusing on military option, such as occupation of northeastern part of North Korea, because of a lack of trust to U.S. government. However, under Trump-Putin partnership, Russia's option is highly likely cooperative solution with U.S. A High level of dialogue and easy access/communication between both Presidents likely lowers uncertainty, miscommunications and misunderstanding between the two in Korean Peninsula crisis.

In this new world order, Russia's concern focus will be China's rise in Northeast Asia

http://www.nytimes.com/2016/07/27/us/politics/spy-agency-consensus-grows-that-russia-hacked-dnc.html?_r=0 (Search: 2016. November. 15.)

40) Jeffery Mankoff & Oleg Barabanov, "Prospects for U.S.-Russia Cooperation in the Asia-Pacific Region - The United States and Russia in the Pacific Century," *Working Group Paper 3* (July 2013) (Cambridge, MA: Working Group on the Future of U.S.-Russia Relations of Harvard University, 2013)

during Korean Peninsula situation. Now Chinese dominance of Central Asia region became true economically. Thus, Russia's choices and reactions to Korean Peninsula crisis situations are largely depend on Chinese reaction to that crisis. If Chinese forces enter North Korean territories and occupy some of territories, it is possible that Russian forces occupies some of North Korean territories as peace keeping forces. It is helpful for Russia's negotiation deals with other powers during post-crisis talks. In this scenario, Russia is able to choose limited military actions if it is necessarily because of China, not U.S. However, in general crisis situations, such as North Korean nuclear weapons/missile tests and low-level provocations to South Korea, Russia's approach is highly likely cooperative with U.S., Japan and South Korea for stability of this region. Making a peaceful environment of that region is very significant for Russia's Far Eastern economic development. Thus, Russian response to Korean Peninsula crisis is likely cooperative position with U.S., Japan and South Korea. However, if Chinese forces enter North Korean territories, Russian forces likely enters North Korean territories for obtaining better negotiation deals.

IV. Policy Implications

This paper examines European and Russian responses to Korean Peninsula crisis which are relatively under-studied despite its significance. Firstly, this paper expects that European response is likely humanitarian approaches because of its geographical distance. Based on European experiences of refugee crisis, European support for massive North Korean refugee situation will be very helpful. In particular, European countries' government and non-government organizations with the United Nations are acceptable humanitarian organizations to China and Russia during a Korean Peninsula crisis. China and Russia are not likely accept U.S., Japan and South Korea's humanitarian intervention in North Korea because of its political sensitiveness.

The Republic of Korean government need to make a mid-level dialogue and association with European Union and Non-governmental organization in Europe in sharing their experiences on refugee crisis management and in preparing and planning European humanitarian support for Korean crisis situation. For this, the ROK Department of

Foreign Affairs and Department of Unification made association for mid-level 1.5 track dialogue and research colloquiums with the European Union. Members of dialogue and research colloquium could be consist of government and NGO mid-level managers and field workers as well as scholars/ experts. Government and NGO people of both sides continuously need to share European experiences on refugee crisis management. And they plan together possible cooperation steps for massive North Korean refugees crisis. Association for research colloquium could be consist of scholars, experts, government and NGO people in talking and researching applicable tools from European experiences for North Korean refugee crisis management. Because Refugee crisis of Korean Peninsula will be very significant everyday issues, it needs a long-term solution. Therefore, the ROK government needs to start its initiative with European Union and plan a North Korean refugee crisis management initiatives with European counterpart.

Secondly, as this paper expects, Russian response to Korean crisis situation is likely geopolitical and strategic approaches due to its geopolitical and security interest in shaping new Northeast Asian world order. Because of newly U.S.-Russia relation, Russian government is likely cooperative with the U.S., Japan and South Korean for managing Korean Peninsula crisis. In this crisis situation, only significant variable Russia concerns is if Chinese forces enter North Korean territories or not. Chinese intervention is likely leading to Russian forces' entering North Korean territories because Russia would like to keep its better negotiation deals during post-crisis talks.

The ROK government needs to start confidence-building measures with the Russian government based on U.S.-Russia consensus. Direct communication tools and confidence-building between the ROK and the Russian government are very significant in reducing any misunderstanding and miscommunications during Korean Peninsula crisis. Making of ROK-Russia dialogue channel is needed. Annual meetings between mid-level diplomats and military official of the two states are good example. During this dialogue, both sides need to have talks about possible cooperation measures together, such as low-level combine exercises on constructing and managing medical and residential refugee camps in the Far Eastern area. The ROK government needs to begins this kind of confidence building measure with U.S. consensus because the U.S.-Russia relations will be optimistic. The ROK Department of Foreign Affairs, the Department

of Unification and the National Ministry of Defense need to start ROK-Russia dialogue initiatives with Russian counterparts for managing Korean Peninsula crisis.

V. Conclusion

Studies on European and Russian response to Korean Peninsula crisis are under-researched despite its significance. Recent years, ROK government's approach naturally focus on cooperation with U.S., Japan and China. Unsurprisingly, the European Union is very important 'forgotten partner' in supporting North Korean refugee crisis situation. Because of European experiences on refugee crisis management and lack of Chinese/ Russian opposition to European governments and NGO's humanitarian supports for Korean Peninsula crisis, the ROK need to build a mid-level 1.5 track dialogue and an association for research colloquium between the two. European and the ROK government officials, NGO managers, scholars and experts are able to share experiences and plan together possible cooperation tools for future.

And Russia is one of the most significant neighbors in sharing new Northeast Asian world order during Korean Peninsula crisis. Nevertheless, not surprisingly, Russia's importance is easily forgettable because of importance and influences of U.S., China and Japan in Korean Peninsula issues. Thus, naturally, a lack of dialogues and communications between the ROK and Russian government are established. It was because of not only both states's non-interests but also tensions between U.S. and Russia over a decade. Now optimistic U.S.-Russia relations starts with the new U.S. administration. This is a new opportunity in building confidence measure and cooperation between ROK and Russia for peaceful Korean Peninsula. Stability of this region are mutual interests between the ROK and Russia. Both states are able to build confidence building measures and plan together details of possible cooperation tools. For instance, a building direct communication and conducting low-level combine exercises on constructing refugee camps in the Far Eastern area are possible examples. The ROK governments needs to continuously talk about this with Russia.

Authors hope that this policy paper contributes not only to opening under-researched topic 'European and Russian responses to Korean Peninsula crisis' but also producing policy implications how the ROK government starts cooperation initiatives with forgotten partners, the European Union and Russian government.

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