

PROTECTING DEFENSE: MAKING SENSE OF JAPAN'S POST-WWII
ARMS PROCUREMENT POLICIES

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By

Ryoko Kato, B.A.

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Ryoko Kato, B.A.

Thesis Advisor: Victor C. Cha, Ph.D.

ABSTRACT

This research explores the root of the conventional practices of *sumiwake* in Japan's post-war defense industry and procurement policies, which have minimized domestic competition between firms thus rendering the industry costly and inefficient. It attempts to provide explanation as to why the Japanese government has pursued the custom of *sumiwake* to date despite knowing that absence of competition will necessarily generate inefficiencies in production and procurement of arms.

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Introduction

One key characteristic of Japan's defense procurement system is that there are conventional practices of *sumiwake* (棲み分け), which intentionally protects contractors from competing with one another by allocating them production of different arms or splitting the share of contract to a multiple contractors. Although *sumiwake* was never articulated as a blueprint (i.e. it was not promoted as "Sumiwake Policy"), it is a tendency that persists today since its advent in the late 1960s.¹

In most cases this has naturally led to the specialization of production for contractors; jetfighters are habitually manufactured by Mitsubishi Heavy Industry (MHI), train aircrafts by Kawasaki Heavy Industry (KHI), engines by IHI, and so on. In other cases, production was charged with more than one prime contractor, so that their sub-contractors would be shared with work. Most notably, MOD procures a *soryu*-model submarine every year from Mitsubishi and Kawasaki alternatively. Sumiwake is a practice unique to Japan; both the US and Europe have induced competitions to raise efficiency of procurement and have shifted their attention increasingly to the global arms market.

Unsurprisingly, this relative absence of domestic competition has made Japan's defense production notorious for being both expensive and inefficient; it is said that procurement of weapons involve thousands of contractors in Japan, skyrocketing their cost two to threefold than foreign arms of the equivalent capability.² Why, then, did the

¹ Yukari Kubota, "Nihon no Bouei Sangyo no Tokushitsu", *Kokusai Seiji*, 131, October 2002, 119.

² Board of Audit of Japan, 2007, accessed May 10 2016,

Japanese government decide to pursue the custom of sumiwake instead of following the trend for increased competition in other advanced democracies, despite knowing that absence of competition will necessarily generate inefficiencies in production and procurement of weapons?

It is a particularly important moment in the history of Japan's defense to consider this question that observes the very root of its current arms production and procurement system, as it has been incrementally reviewed under the leadership of Prime Minister Abe. While this paper does not encompass the possible future shape of Japan's defense industry, it provides a critical account to understand an area of the key industry and defense policy of Japan.

Development of Sumiwake – Background of Japan's Post-WWII Procurement Policy

In order to comprehend the development of Japan's defense industrial policies, Japan's post-WWII history needs to be briefly revisited. In particular, there have been two key milestones to its procurement policies that have shaped Japan's unique defense industrial structure.

First is the introduction of two self-imposed constraints on defense capability; the ban on the export of arms in 1967 and defense budget capping to 1% in 1976. Prior to the enforcement of export prohibition, Japan was quite proactively transferring arms and

equipment to the countries in Southeast Asia, such as Thailand, South Vietnam and Burma, upon regaining weapons production capability through providing equipment to the United States during the Korean War. In the first decade and half following the war, it is estimated that defense comprised over 50% of export in 1950. In 1960s, too, due to the government's cooperative stance towards, arms exports to these countries increased sharply.³

The turning point came when the public disapproval of the Indonesian government's misuse of Japanese technologies for predatory purposes and fear of entanglement into Vietnam War arose, The Three Principles on the Arms Export was formulated by Prime Minister Eisaku Sato in his speech in the diet session.⁴ It then developed as the official view of the government in 1976 with the submission of the Unified View of the Government by Prime Minister Miki Takeo, which imposed stricter regulations by introducing stringent definition of "arms".⁵ It was also Prime Minister Miki who asserted 1% of GDP limit on defense spending.^{6,7}

Second is the articulated *kokusanka* (indigenization of arms production) policy

³ Reinhart Drifte. *Arms Production in Japan*. Colorado: Westview Press, 1986, 73

⁴ Mitsubishi Research Institute (MRI), "Heisei 28 nendo Anzen Hosho Boueki Kanri Taisaku Jigyo (Anzen Hosho Boeki Kanri Eikyo Jittai Chosa) Chosa Houkoku Sho", February, 2014, 107

⁵ Kenneth Pyle, *Japan Rising*. (New York: PublicAffairs, 2008), 290.

⁶ However, it should be mentioned that Japan's defense spending was at its highest with 1.78% of its GDP in 1955, and was decreasing ever since until 1976. Even a year before Prime Minister Miki announced the 1% limit, the defense budget only accounted for 0.84% of its GDP. In this respect, the capping not so much as *reduce* the high expenditure to *assure* that modest spending will continue.

⁷ It is important to keep in mind, however, that there have been exceptions to both restraints. There have been 22 elusions to this Joint research and development of systems such as anti-missile defense with the US was launched in 1992 and used ships and aircrafts have been sold to Southeast Asian as a part of capacity building assistance. Although revised in 2014 April, the 3 principles remained as a cornerstone to Japan's defense policy throughout the postwar era. The 1% cap, too, have been mildly exceeded by a few hawkish leaders, such as Prime Minister Nakasone and Abe.

Fore more, see: MRI, "Heisei 28 nendo Anzen Hosho Boueki Kanri Taisaku Jigyo (Anzen Hosho Boeki Kanri Eikyo Jittai Chosa) Chosa Houkoku Sho", 2-3, 16-17.

issued in 1970 under the defense hand Prime Minister Yoshiro Nakasone. Incorporating the long-asserted desire of defense contractors and JDA, Nakasone provided basic principles regarding the development of defense technologies and weapons procurement to “maintain Japan’s industrial base as a key factor in national security” and “acquire equipment from Japan’s domestic R&D and production efforts” among the other guidelines.⁸ This particular decision of the government has received overwhelming academic attention, as will be discussed later.

These uniquely Japanese defense policy events have had important implications for Japan’s defense industry; they have essentially rendered the military market small, with its Self Defense Force (SDF) as the only viable customer, in which then economies of scale is not possible. As the sole consumer of defense, the government has adopted a procurement mechanism that allocates contracts very carefully, so as to allow coexistence of a large number of firms. *Sumiwake* – literally translated as “habitat isolation”, is a process of intentional allocation of procurement order or contract work designed to prevent internal competition among firms.⁹ *Sumiwake* have taken three main different forms. First, JDA has sought to prevent competition by ordering specific types of arms consistently to the same firms, as mentioned in the introduction. As a result, it has led to creation of “territories” of systems within the industry by creating the “go-to” firm for specific arms.

⁸ Ministry of Defense of Japan, “Shiryo 6 Dai4ji Boueiryoku Seibi 5kanen Keikaku”, Accessed May 5 2016, http://www.clearing.mod.go.jp/hakusho_data/1976/w1976_9106.html.

⁹ Just to be sure, a minimum degree of competition does exist – but only to a very small extent that is almost negligible. Specifically, competition is only evident in the production of low-value added items, such as uniforms, helmets, globes, etc. For more, see: Chinworth, 1992, 56

Second, JDA has deliberately split a single contract among multiple contractors. For example, in the procurement of Patriot, missile systems, Mitsubishi Electric and Nissan Motors received sufficient subcontracting work even though MHI was chosen the prime contractor.¹⁰ Third, JDA has procured the exact same system from multiple firms. As already mentioned, submarines are a shining example of this; JDA has procured a single submarine from the only two shipbuilders in the country with production capability, MHI and KHI, alternatively every year since 1977. In essence, procurement is designed so that there will be no clear winners and losers of the recipient of the production.

This general compartmentalization of procurement order has had some adverse effects in the process of practical arms acquisition. Because procurement order has been allocated based on the firms' *history* rather than superior capability, as will be explained later, not only does the Japanese government pay two to three times pay more for indigenously produced weapons, it has probably missed opportunities for the improved military capacity that could have been attained from competition. Additionally, *sumiwake* has rendered the SDF's procurement system *per se* inefficient; the price for opting for coexistence of firms with similar capability is that MOD can only afford to order a small unit of arms at once; purchasing a single submarine every year from MHI and KIH is a case in point. In a nutshell, worker productivity in the defense sector was only half the level for workers in other businesses, labor costs were as much as 250 times higher, and profit rates

¹⁰ Michael Chinworth. *Inside Japan's Defense: Technology, Economics and Strategy*. (New York: Brassey's, Inc, 1992), 56-57, 68.

for defense production were often far lower than commercial markets. JDA payments were frequently delayed, and firms at times under-recover a significant portion – as much as 24% in defense electronics – of their R&D costs.¹¹

This is a stark contrast to defense markets of other advanced democracies, such as the United States and Europe, where defense market – like any other markets – have pursued efficiency. In the US, more than 10 potential prime contractors compete for the leading contractor stature. Most of these firms specialize in defense-making with little dependence on other goods. The winners take care of most of the production from R&D to assembly and final testing, and the remaining 40-70% of the subcontracting share of the work are placed directly from the government, according to the subcontractor's capability. European cases are largely similar, with their consortia, such as Airbus, most often playing the role of prime contractors and individual national enterprises as serving as subcontractors. Both structures are export-dependent and economies of scale are in place.¹²

Literatures

At a glance, this sumiwake practice may appear as an inscrutable mystery, especially to the Western eyes; certainly, Japanese government could have leveraged its discretion power to choose the contractor as a way to induce competition even under the

¹¹ Richard J. Samuels. *“Rich Nation, Strong Army”*: National Security and the Technological Transformation of Japan. (New York: Cornell University Press, 1996), 164.

¹² Richard J. Samuels and Benjamin C. Whipple. *Politics and Productivity* ed. Chalmers Johnson, Laura D’Andrea Tyson, John Zysman. (California: Ballinger Publishing Company, 1989), 289.

constraints of export ban and strictly bound defense spending so that the ballooned market inefficiency would be somewhat relieved. What have the Japan hands had to say about this distinctly Japanese approach to defense?

In fact, never having been the official policy of the Japanese government, *sumiwake* practice *per se* has rarely been shed scholarly light on.¹³ Rather, it has more frequently been taken as a smaller piece of the *kokusanka* puzzle, Japan's effort to build autonomous defense industry. However, there are a few possible ways to interpret the government decision to adopt defense policies and contract systems that shape the industry characterized by relative lack of competition and resulting inefficiency.

The first strands find its roots in one of the most compelling literatures on Japan's miraculous economic growth; that it was a deliverable of predatory industrial policies advocated by traditionally powerful Japanese bureaucrats, most notoriously the Ministry of International Trade and Industry (MITI).¹⁴ First proclaimed by Chalmers Johnson, this school of thought holds that as the predecessor to current Ministry of Economy, Trade and Industry (METI), MITI oversaw economic policies that led Japan to attain spectacular *keiretsu*-led growth in its GDP. James Fallows (1989) and Clyde Prestowitz (1993) are other leading 'revisionists' who advocates that Japanese elites and companies were primarily motivated by their ambition to restore its post-WWII hegemonic power status and

¹³ Hughes is perhaps the only English-writing scholar who officially uses the term *sumiwake* in depicting Japan's defense production. See: Christopher, W. Hughes. "Techno-Nationalism? Emerging Comparative Lessons for China's Defense Production". *The Journal of Strategic Studies*, 34(4), June 2011, 451-479.

¹⁴ Chalmers Johnson. *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-1975*. (California: Standard University Press 1983).

were ready to “trade its place with the Untied States”.¹⁵ Following this logic, sumiwake was an epitome of Japanese effort to nurture its selected ‘national champions’ and thus raise manufacturing capacity domestically, including arms.

Later contributions to this field of research started taking different form. Reinhard Drife (1986) was one of the firsts to comprehend kokusanka as actually indicative of Japan’s need to strengthen its self-reliance.¹⁶ Michael Chinworth (1995) and Michael Green (1998) write that kokusanka is understandable in the context of deepening US-Japan alliance.¹⁷ These scholars would interpret sumiwake as Japan’s strategic decision that would enhance its self-reliance. Richard Samuels (1996) offers an interesting mix; while acknowledging that kokusanka was definitely a manifestation of Japan’s internal balancing, he argues that there was an innegligible emotional drive to it. Essentially, he compares the mounting emotional drive for technology and arms during the late-nineteenth century and late-twentieth century Japan and concludes that Japan has always been technonationalistic, that is, measuring national security strength in terms of technological development rather than actual military capability.¹⁸ Samuels also links this argument with that of the revisionist’s argument and claims that these hunger for world-class power status and

¹⁵ See: James Fallows, “Containing Japan”, *The Atlantic Monthly*, May 1989, 40-54., Clyde Pretowitz, *Trading Places: How We Are Giving Our Our Future to Japan and How to Reclaim It* (New York: Basic Books, 1993).

¹⁶ Arthur Alexander, “Of Tanks and Toyotas: An Assessment of Japan’s Defense Industry”. RAND, California, 1993, 25. Drife, 1986, 12-13.

¹⁷ Chinworth, 1995. Michael Green, *Arming Japan*, (New York, Columbia University Press, 1995)

¹⁸ Samuels, 1996.

technonationalism were mutually reinforcing.¹⁹

There have also been a small number of scholars who put forward the political component of sumiwake. Pekkanen (2003) is one of them, and writes that the distinct procurement process campaign contributions and lobbying efforts through the established political access to the influential organizations.²⁰

Self-Reliance First - The Optimal Choice of Relative Enhancement of National Defense

Having these preceding works in mind, this paper argues that the sumiwake practice was a product of Japan's realist internal balancing, which is the process to advance its overall military capability, with the objective to enhance its self-reliance on its security.

²¹ Specifically, it argues that the procurement system characterized by the absence of internal competition among firms was the rational and strategic short cut to improved self-reliance tailored to the existing constraints and features of Japanese defense policy and industrial structure; that is, with the stated goal of achieving a sufficiently autonomous defense technological base, sumiwake was the most optimal choice that assured the urgent challenge of obtaining enhanced self-reliance. In so doing, industrial efficiency was a secondary concern because the primary goal was to facilitate indigenization of

¹⁹ Both Samuels and Chalmers write a chapter in: *Politics and Productivity* ed. Chalmers Johnson, Laura D'Andrea Tyson, John Zysman (Florida: Ballinger Publishing Company, 1989)

²⁰ Saadia M. Pekkanen *Picking Winners? From Technology Catch-up to the Space Race in Japan*. (California: Stanford University Press, 2003), 159.

²¹ John Mearshimer. *The Tragedy of Great Power Politics*. (New York: W.W.Norton & Company, 2014), 157.

procurement.

At the same time, in understanding the rationale of sumiwake, it needs to be mentioned that Japanese policymakers sought to acquire *relatively* greater autonomous defense within the context of established relations with the United States, which converted into an alliance in 1960; that is, it never attempted to bolster its self-reliance absolutely better than that of the US, so as to risk the abrogation of the alliance.²² Nor could Japan pursue an absolute self-help in security that is completely independent from the US, both in terms of international and domestic constraints. Therefore, sumiwake was a product of carefully done calculation reflecting Japan's international and domestic concerns.

Burden of Proof and Evidences

To put forth this argument, there needs to be evidences in the three arenas of international, domestic and functional realms. Internationally, there needs to be clear threat perception that instigated internal balancing of enhancing its defense, but only to the extent that it does not become completely reliant on the procurement of foreign arms. Domestically, it needs to be proven that there were domestic concerns that made sumiwake the most rational way of procurement system. Operationally, there needs to be proof that inefficiencies generated by sumiwake were in the end offset by the primary objectives of achieving indigenous defense.

²² Green, 1995, 153.

International Concerns and Pressures

There have been ample evidences from the late 1950s to the 1970s that Japanese policymakers were facing imminent need for improved self-reliance. First and most powerful force has come from, in fact, its relations with the United States. In contrast to the mature US-Japan alliance today, the embryonic relations were vulnerable to changing internal dynamics. In particular, Japan was consistently plagued with the classic dilemma of alliance politics: abandonment and entanglement. For the purpose of this paper, Japan's continued anxiety with abandonment deserves extended focus, because Japan has been protected from the entanglement concern with the shield of the Article 9 of the Constitution.

Japan's fear towards continued US commitment to Japanese security first arose towards the end of the 576 billion yen worth of US defense assistance program under the Mutual Security Agreement.²³ In the late 1950s, the US started to flash its intention of reduced military aid and demand more robust dedication from the Japanese side. This was especially a powerful discourse in the Congress, who asserted that such assistance should be cut by half.²⁴ Such abandonment fear was briefly taken over by that of entrapment as the two countries signed a Bilateral Security Treaty in 1960. However, in less than a decade the abandonment complex occupied the minds of security policy makers again as they

²³ MRI, 2014, 200.

²⁴ Samuels, 1996, 162.

started to doubt American commitment in the Asia-Pacific region and the overall leadership: President Nixon shocked Tokyo with his visit to Beijing and let go of Okinawa, US lost the war in Vietnam and the discussion of potential retreat of troops in the Korean Peninsula developed in Washington. Meanwhile, the threat perception was also sharpened among the Japanese citizens as the Soviet began its rapid military buildup in the Northern Territories.²⁵ All these events empowered the long-desired goal of the defense hawks in Japan, both in business and policy community, to achieve a better autonomous defense, which has existed since the early 1950s²⁶

The increased eagerness to balance against these external dynamics was reflected in the defense plans, which continued to call for establishment of a stronger and more autonomous defense technological base; naturally, strengthening its defense meant Japan needed better technology and procure weapons on its own. Emphasis on the R&D spending on defense became more explicit from the First (1958-1960), Second (1962-1966) to the Third (1967-1971) Defense Buildup Plans. Japan's emphasis on the spending of R&D began in late 1950s; in 1958, JDA's R&D center Technology Research and Development Institute (TRDI) was established to reflect government's intention to cultivate indigenous production capacity. The Second Buildup Plan adopted in 1962 indeed stated "in order to increase defensive capabilities, research and development will be promoted", while the

²⁵ I. T. M. Gow, "Defense" from *Japan's Quest for Comprehensive Security*, ed. Chapman, J. W. M., Drifte, R., Gow, I.T.M. (New York: St. Martin's Press, 1982), 11.

²⁶ Michael Green. "Boeizoku: Defense Policy Formation in Japan's Liberal Democratic Party", *Massachusetts Institute of Technology (MIT)-Japan Program Working Paper*, April, 1992, 16.

previous plan merely “called for the efforts that will “put R&D to the extent necessary for self-defense”.²⁷

There was also a frustration within the Japanese bureaucracy in regards to US’s reluctance to share the production of key subsystems under license production.²⁸ Increased spending on TRDI was partially incentivized by the lessons learned by silence production, in which sensitive technologies were consistently hidden in “black boxes”. IHI, who won the prime contractor position of F-15’s engine in 1974, has revealed that of the 1,500 engine components, production of 400 items remained confidential.²⁹

Despite these tensions in the alliance politics and Japan’s increased indigenization of arms, its bottom line during this period remained clear; that, Japan would only pursue production autonomy to the extent it can hedge against the possible US abandonment and would not pursue an absolutely superior production of weapons to the US. Indeed, although conclusion of security treaty with US faced stringent opposition in 1960, voices for alliance abrogation remained much less powerless thereafter, both in the government and public. This bottom line, of course, has been largely informed by the domestic limitations in defense that exists in Japan.

²⁷ Drifte 1986, 32., Green 1995, 47.

²⁸ Green 1995, 51.

²⁹ Drifte, 1986, 34.

Domestic Interests and Restrictions

At the same time, unique constraints on defense in Japan imposed the industry a hard task of having to strengthen an industry in which market incentives and the economies of scale were not at work; The Three Principles on Arms Exports in 1967 virtually prohibited all transfer of arms and technology abroad and defense expenses, including spending on R&D for defense technology and procurement, were put a ceiling of 1% of GDP in 1976.

Among the relevant domestic stakeholders, defense producers have always been vehement supporters of increased defense production. Taking advantage of the heightened awareness for the need of greater defense, they proactively asserted their position through the activities of the Defense Production Committee (DPC) of *Keidanren* (Japan Business Federation). Since its establishment in 1952, DPC has functioned as the spokesman of defense industrialists towards business and policy communities through issuing reports and policy recommendations, hosting network events and informational exchanges, etc.³⁰

Government bodies differed considerably in their positions. Unsurprisingly, JDA largely remained in support of its contractors as the bureaucratic partner to DPC. In 1965, then-JDA Minister Matsuno Raizo stated, “Some day Japan will have to stand up and assume its own defense. As long as Japan does not have its own equipment, it will never

³⁰ “Defense Policy and the Business Community: The Keidanren Defense Production Committee” in *The Modern Japanese Military System*, ed. Buck James H. (London: Sage Publications, 1975), 150.

have the right to speak up”.³¹ Other players were more nuanced. Most notably, MITI was quite split; it generally only encouraged domestic production in so far as budget increase remains minimal.³² Needless to say, the Ministry of Finance (MOF), charged with the “power of purse”, held the position that defense spending represents a drain on civil industry and resources and thus needs to be limited.

Sumiwake Procurement System as the Solution

In light of these competing concerns and interests, JDA chose to develop a unique system of technology-management strategy and weapons procurement that is characterized by ambiguous distinction of military and commercial technology and relative lack of competition.

First, The Japanese government’s answer to this intricate challenge was to draw a less clear borderline between military and civil industrial technology; that is, to embed defense as a smaller component to bigger commercial industries. Indeed, TRDI has always emphasized the “dual-use” of the technology between defense and commercial, especially the “spin-on” application of commercial to military technology, to keep its R&D spending minimal.³³ A former TRDI head allegedly stated, “Our (defense) R&D base is like Mount Fuji; the civilian R&D provides a bottom that is very broad. And that is very useful”.³⁴

³¹ Samuels, 1996, 168.

³² Ibid, 170.

³³ Chinworth, 1992, 35.

³⁴ Ibid, 36.

This planned osmosis of defense and commercial technologies has had been informed by one notable feature of technology-management strategy of TRDI, which is that the state-of-art technology is *not* always necessary to enhance Japan's military capability. Instead, JDA prioritized the investment in programs that would invite enhancement in capabilities across a wide range of applications both in military and commercial.³⁵ TRDI also invests on the fields that may not aim to produce specific arms as the final deliverable.³⁶ Compared to the U.S. Department of Defense, which design its R&D programs precisely to stimulate breakthrough military technology, the difference is eye opening³⁷.

This stress on the spin-on application of technology, allowed JDA to keep its R&D spending as minimal as possible. In fact, Japan's defense R&D has consistently been funded by defense contractors, not the government³⁸; while it is difficult to measure the size of private sector R&D in defense, LDP's Policy Research Council estimates that the government only provides 3.7% of all defense R&D (public and private combined) in 2007³⁹, and it is hard to conclude that this ratio would have looked radically different 50 to 40 years ago.⁴⁰ Indeed, the ratio of Japan's public defense R&D spending, measured in

³⁵ Ibid, 39.

³⁶ Ibid, 43.

³⁷ Ibid. 32.

³⁸ Defense is not the odd one out in this regard; in Japan, industries are financed primarily by the private sector in regardless of the sector. Chinworth, 1992, 40.

³⁹ Research Commission on Science, Technology, and Innovation Strategy, Policy Research Council, Liberal Democratic Party of Japan. "Waga Kuni no Kenkyu Kaihatsu Kyouka ni Kansuru Teigen", May 2013, 11. Accessed May 10, 2016. <http://www8.cao.go.jp/cstp/gaiyo/kenkyu/1kai/siryu2-2.pdf>

⁴⁰ Chinworth, 1992, 34-35, 39

terms of TRDI budget, to the overall defense budget has fluctuated between 1.2% to 2.35% from 1965 to 1995, and in 2015 it was 2.9%.⁴¹ In the meantime, national defense expenditure was on decrease from 1.8-1.9% of its GDP in the 1950s, and by 1975 it only marked 0.84%.⁴² All in all, it is evident that Japan has been heavily reliant on private R&D for defense products.

Second, this strategy has had enormous ramifications for the procurement system. Limited defense R&D and the emphasis on the “spin-on” application of civilian to military technology meant that the firms that already had a sufficient commercial technological base to suffice the defense production – which is synonymous to keiretsu corporations - could enter the market in the first place. This is even more so as TRDI grants noncompetitive R&D award to the direct contractors, meaning that firms have had to anticipate the contract and invest R&D expenses *in advance*, which they hope to offset with the final contract. Furthermore, as government production contracts for the domestic firms are directly tied to R&D subsidies, companies that gain development contracts are almost always the ones who proceed with the production as the main contractor.⁴³ Additionally, the modest spending on public R&D and the noncompetitiveness of the contract naturally have privileged the companies who have produced similar weapons in the past and already have the high capability to make them swiftly at relatively lower cost.

⁴¹ Green, 1992, 17. Ministry of Defense of Japan, *Defense White Paper 2015*, Accessed April 29, 2016, <http://www.mod.go.jp/j/publication/wp/wp2015/html/n3132000.html>.

⁴² Ibid, 21.

⁴³ Chinworth, 1992. 56-57.

In essence, only the earliest birds get the worm in Japanese defense industry. Because it is nearly impossible for the newly entering firms to shoulder extremely high upfront cost and win the bid, this reproductive system has rendered the industry a playground of keiretsu, who were able to burden the initial cost of R&D at the birth of Japan's defense production. Sumiwake and the lack of competition are also visible in numbers; traditionally, 40% of the noncompetitive contracts constitute over 85% of total value of JDA procurement contract⁴⁴, and top 10 prime contractors have conventionally been responsible for about 80% of total outlays.⁴⁵ This again stands in a stark contrast to the procurement process in other developed countries, which are intended to promote competition. In the US, for instance, the recipients of R&D are not always the final producer of weapons due to competition among them and their rivals,⁴⁶ and once the contract is signed, government provides a considerable down payment first, followed by progress payments until the final product is delivered so that by the time it reaches to DOD, as much as 90% of payment would have been complete.⁴⁷

Another crucial piece of logic behind sumiwake is that it is well apt for the existing industrial structure in which prime and subcontractors are heavily dependent on each other.⁴⁸ That Japan's keiretsu conglomerates have largely inherited their long-term relations with their subcontractors from their preceding *zaibatsu* is a well-known fact and

⁴⁴ Ibid, 57.

⁴⁵ Ibid, 189

⁴⁶ Ibid, 56-57

⁴⁷ Ibid, 52

⁴⁸ Samuels, 1996, 326

defense industry is no exception; the thousands of medium- to small-sized enterprises have been feeding on the contract that their “boss” in the hierarchy, the large-scale prime contractors, bring from the government. Furthermore, because these small-scale subcontractors produce highly specialized, yet critical subsystems of weapons, introduction of competition risks a wash away of such military technological base in which event Japan will increasingly be dependent on importation; on the other hand, signing contracts with oligopolistic firms, then, ensured protection of these technologies that also make up the irreplaceable part of the defense of Japan. In this context, the 1967 “Three Principles on Arms Exports” was also a strategic decision that prevented *importation* of arms as well as sales of weapons to overseas, and thus enhancing its self-reliance of power. In fact, while only 40% of the arms were produced indigenously during 1950-1957, by and ever since 1969 close to 80-90% have been acquired domestically.⁴⁹

The Functionality of Sumiwake in Practice

As elaborated above, this paper argues that sumiwake was the optimal choice that the government of Japan could make to fulfill its objectives under strict policy restrictions. First and foremost, the sumiwake practice of allocating contracts and preventing internal competition, which have taken root by late 1960s, fulfills the primary objective of achieving the internal balancing aspect and a sufficiently advanced defense technological

⁴⁹ John Parma. “Nihon no Bouei Sangyo ha Kongo Dokoni Arubeki Ka?”. *The National Institute for Defense Studies*, 12(2&3), March 2010, 118.

base to counter the fear of abandonment by the US and heightened Soviet threat in the late 1950 to early 1970s. As already mentioned, by the time sumiwake had been institutionalized, the predominant portion of all arms acquired by SDF was produced domestically.

It also effectively limits defense spending and R&D by taking advantage of the establishing trust between JDA and contractors based on the procurement history and existing technology. As a by-product effect, it enables the government to manage the market more easily, by making the entry of new firms extremely difficult. Sumiwake also utilizes the established vertical integrity to prevent endangering the technology loss. From the industry side, firms are still able to develop the production capability and overall technology, although often having to burden the initial R&D cost.⁵⁰

Sumiwake was, then, the result of pursuing strategic priorities of enhancing self-reliance in a uniquely constrained defense market in Japan. Japanese defense market is an oligopoly, and government procurement decisions reinforce a pattern in which only a few firms can develop specific manufacturing and production capabilities.⁵¹ The absence of market incentive naturally led to more expensive and less competitive weapons than the government could have acquired otherwise. However, so far as to the government's objective was to gain a greater autonomy in defense in the context of the US-Japan alliance to internally balance against alliance instability and external pressure, this market structure

⁵⁰ Chinworth, 1992, 46.

⁵¹ Ibid, 47.

was more than sufficient.

Why Not Pursue Efficiency?; Thinking the Opposite

Let's now consider the possible alternatives that Japanese government could have pursued in light of larger need for internal balancing. First, with the JDA's discretion in choosing the R&D recipient and final contractors, it could have stimulated competition even to a small extent. This approach would have forced uncompetitive firms out of the defense market, but in turn JDA would have been able to procure higher quality weapons at cheaper price. As such, it may well have achieved better autonomous defense. The fact that JDA have nonetheless chosen to strategically allocate contracts among contractors illustrates their relative lack of interest in achieving the state-of-art weapons. More practically speaking, competition and robust vertical integration of firms could not coexist.

Alternatively, JDA could have continued to rely on the imported weapons or license production. This would have certainly allowed them to acquire better arms at cheaper prices with some extent of technological growth obtained by local production. However, this was an option quite out of the question as Japan will not be able to enhance its self-reliance increasingly demanded, which was the principal challenge for the Japanese policymakers.

In sum, as Chinworth nicely encapsulates, "if one objective is to build a domestic industry that is self-sustaining and sufficiently competitive with international players, this

system would be preferable to other approaches for financing the defense budget”.⁵² The case of Japan’s pursuit of sumiwake practice is manifestation of its meticulously calculated act of internal balancing in the face of heightened regional security tension and alliance politics with the US as well as uniquely constraining domestic conditions.

The Powerful Alternatives

A brief historiography of kokusanka illustrates how it has been vulnerable to negative and skeptical assessments, especially from foreign scholars. Although these are impactful alternatives to understanding kokusanka and thus sumiwake custom, they fail to address the fundamentality of these practices, especially as it pertains to the inefficiency that sumiwake necessarily causes due to the intentional assuage of internal competition between firms.

Bureaucracy – Nurturance of the Industrial National Champions

One other possible way to take into account JDA’s adoption of sumiwake procurement system is that it was the bureaucracy’s ambition to foster the National Champions of Defense. In this approach, relevant ministries –JDA, MOF, and most importantly, MITI - and industries were partners in crime; the lack of competition was the testimony to ministries’ intent to effectively build a handful of defense victors that would

⁵² Chinworth, 1992, 58.

continue to siphon off benefits of defense production. This love-call from the bureaucracy was answered with passion by the defense firms, who had always advocated for expansion of defense production. Furthermore, MITI and the defense giants' obsession with advanced technology was propelled by the shared sense of technonationalism to measure its national security strength with technological development rather than actual military capability of its soldiers.

Built off of the 'revisionists' line of narrative, this account assumes that MITI, as post-Japan's economy planner, enforced industrial policies on the premise that market alone will never create momentum for growth and thus needs to be guided via government intervention, such as R&D funds. In this "plan-oriented market economy system", MITI invested in the development of strategic industries, that is, industries that they viewed would be vital in the future growth of Japanese economy, defense included.⁵³ In so doing, it necessarily created winners and losers in the defense industry though sumiwake; the highly oligopolistic nature of the industry is indicative of MITI's selection of those keiretsu firms as the qualified champions. Especially highlighted in this logic the extremely high stature of MITI in the post-WWII era; JDA, as an agency under the Cabinet Office, lacked institutional strength and voices that MITI and MOF enjoyed.⁵⁴

⁵³ Johnson, 1983, 10.

⁵⁴ Harrison, M. Harrison. *Managing Defense: Japan's Dilemma*. (New York: University Press of America, 1988), 14.

Burden of Proof and Evidences

The verification of this approach requires the proof that, first of all, defense was positioned as the strategically crucial sector which deserves to be financed with sufficient public funds. Bureaucrats would have received rents from the enthusiastic industrial patrons; defense industry associations would be active and there should have been intricate government-business ties.⁵⁵ The technonationalistic drive both from the officials and industrialists would have advocated some distance away from Japan's only treaty ally, the United States.

Indeed, there are sufficient reasons to believe this compelling logic. It is no secret that the aforementioned kokusanka policy was a clearly-stated JDA initiative, also supported by MITI, to promote indigenization of weapons procurement. Specifically, MITI identified the aviation industry, of which 70-80% of output has conventionally been consumed by defense needs, as a knowledge-creating, technology-generating, high-value added industry that is worth subsidizing.⁵⁶ National Champions nurturance had been complete even prior to the kokusanka policy articulation; by 1966, the biggest defense dons – IHI, NEC, KHI, IHI, and Japan Aviation Electronics (NEC's subsidiary) processed more than half of Japan's total military production,⁵⁷ and by early 1970s, the top 5 firms comprised more than half of the whole defense business.⁵⁸ As Pekkanen nicely puts, “the

⁵⁵ Pekkanen, 2003, 159.

⁵⁶ Ibid, 155.

⁵⁷ Samuels, 1996, 163.

⁵⁸ Ibid, 170

(bureaucrats') emphasis on defense... is the main reason why the market mechanism does not apply to the industry, nor should it be allowed to."⁵⁹

Meanwhile, there were certainly evidences for the government-business ties and hunger for improved technology both in policy and business communities. A number of industry cooperative associations, such as Japan Defense Industry Association (Formerly Ordnance Association), Japanese Aircraft and Space Industry Association, Society of Japanese Aerospace Companies, and Japanese Shipbuilding Assertion, each consisting of 100-200 contractors, lobbied JDA and MITI heavily.⁶⁰ Of particular importance in the maintenance of government-industrial ties is the roles played by DPC of Keidanren. Long having been functioning as the spokesman of defense industrialists towards business and policy groups, DPC has invested enormous resources to be hand in glove with some key offices, including Defense Section of the Budget Bureau of the Ministry of Finance, the Security Section of the North American Affairs Bureau of Foreign Ministry, the Aircraft and Weapons Division of the Bureau of Heavy Industry of the MITI. Still, it has invested most resources to JDA, for obvious reasons that needs to elaboration.⁶¹

Another crucial element in the bureaucracy-industry relations is the practice of *amakudari* (descent from heaven) of ministry officials, which is the reemployment of retired senior bureaucrats or more commonly, admirals and generals of SDF to the defense

⁵⁹ Pekkanen, 2003, 155.

⁶⁰ Ibid, 156.

⁶¹ Hopper, 1975, 138. It should be mentioned that much of the efforts towards JDA was directed towards the General-Director, who had always been politically appointed from members of LDP, and thus less focus of DPC was given to bureaucrats in the other Bureaus of the Agency.

dons. Conventionally, it is said that a defense contractor receives one military “Old Boy” per every 20 billion yen it makes from defense.⁶² Amakudari has created a critical channel of communication for the industries, and the strategic prestige of having retired JDA and SDF high-level officials as their senior advisors have supposedly privileged them in the selection of procurement contractors and in sustaining close relations with the government.⁶³

Loopholes

Nonetheless, the account that government pursuit of sumiwake practice was a MITI-defense industry conspiracy to nurture industry lacks some decisive evidences. First, as already mentioned, the public R&D in military production continued to remain slight. On the contrary, it was the private industry that continued to shoulder the financial burden⁶⁴; again, LDP estimates that the percentage of public defense R&D to overall defense R&D remains as low as 3.7%. Government’s defense R&D spending is also very small compared to commercial subsidies, with 80-90% of all R&D funds customarily going to non-military applications.⁶⁵ This indicates the traditional reluctance of the government to finance defense sectors.

Furthermore, in direct contrast to the belief that defense production is high-value

⁶² Steven Vogel. “New Weapons Label: Made in Japan”, *The Bulletin of the Atomic Scientists*, 40(1), 1990, 31.

⁶³ Johnson, 1983, 70.

⁶⁴ Chinworth, 1992, 35.

⁶⁵ Ibid.

added, it was never as lucrative as commercial sales.⁶⁶ High front cost and the absence of the economies of scale rendered defense a low area of return; some firms which were unable to neutralize that initial cost abandoned the indigenous programs and shifted to more stable, cost-efficient subcontracting work for Boeing, etc.⁶⁷ For this reason, MITI has always been quite divided on the promotion of indigenous weapons procurement. There were also a significant number of opponent within MITI to actively promote defense industry. For instance, Vice Minsiter Sahashi Shigeru believed that given the instability of defense market, military aircraft should be imported⁶⁸. While defense production did increase consistently from the early 1950s to early 1980s, in terms of its ration to the total industrial output, its highest during the early 1950s with more than 1% of the total industrial output, but remained in the range of 0.5 – 0.36% from late 1950s and early 1980s.⁶⁹

In addition, contrary to the images portrayed by the technonationalism and bureaucracy advocates, government has traditionally spent very little on defense, especially compared to other advanced democracies. As already explained, TRDI's emphasis on the development of technology that would be applied interchangeably between military and civil sectors, rather than purely military state-of-art technology, is indicative of the relative

⁶⁶ Recall Samuels (1996)'s explanation that the worker productivity in the defense sector was only half the level for workers in other businesses, labor costs were as much as 250 times higher, and profit rates for defense production were often far lower than commercial markets.

⁶⁷ Green 1995, 19.

⁶⁸ Samuels, 1996, 170.

⁶⁹ Green, 1995, 18, Samuels, 1996, 163.

irrelevance of technonationalism.

It is clear, too, that even the National Champions of defense did not find the business all that attractive. Given the persistently low political profile as the “merchants of the death” in addition to the unstable and small nature of the market, firms continue to hedge towards small defense dependency; while many American and European defense contractors make over 80-90% of their output from defense production, in Japan, the average dependency on defense among the 40 biggest remain as low as 4.9%.⁷⁰ This figure was just as modest in the late 1950s, albeit somewhat higher than today.⁷¹ The reality is that none of these prime-contractor level firms have ever positioned or advertised defense production as the flagship, biggest, highest-value added industry; thus, it has been the case that “the purely defense-oriented perspective is dissipated at the level of the individual weapons-producing company”.⁷²

The strength of business-government partnership had not been as strong as this approach suggests. While the lack of official data renders it difficult to make the case for, it is believed that rent-seeking activities occurred not very often among high officials in the

⁷⁰Major firms, such as Lockheed Martin, BAE, and Raytheon, rely heavily on revenue from defense, with more than 90% of total profits obtained from military section. Even among the top 100 defense-associated companies, Japanese firms earn a much more modest share of their profits from defense. See: “Top 100 Global Defense Companies Webinar”, *Defense News*, 2014. Accessed May 5, 2016. <http://people.defensenews.com/top-100/>. , Ministry of Defense of Japan, Defense White Paper 2014, Accessed May 5, 2016. <http://www.mod.go.jp/j/publication/wp/wp2014/pc/2014/html/n4111000.html>. , Hopper, 1975, 142.

⁷¹ Samuels, 1996, 163.

⁷² Hopper, 1975, 142.

ministries, but in junior, non-career officials who are looking into promotion.⁷³ The closeness of the relation between of MITI and DPC in respect to the expansion of autonomous defense is also overemphasized. DPC and MITI's relationship was never significantly enough, as DPC was most enthusiastically lobbying JDA. Even in regards to DPC and JDA, their meetings were often just a platform for dialogue and information exchanges without any tangible deliverables.⁷⁴ Additionally, although mutually dependent, their relations were not always like a happy marriage; as JDA was not responsible for the government's purse strings, conflict was often invoked in respect to procurement budget. Lastly, the convention of uniquely Japanese amakudari has also been romanticized, especially in the Western literature. In practice, the custom has become largely symbolic with virtually no influence in policy formulation in favor of their firms⁷⁵. In addition, MITI officials did not go to major defense contractors⁷⁶; the main pool of amakudari candidates to the industries have been the SDF staff with a smaller number of civilian JDA officials, who never had policy-making powers even when incumbent.

Thus, while this “nurturance” approach can well explain the notable concentration in defense industry in Japan, it does not explain the absence of competition at its foundation; if MITI truly wanted ever high-value added production using the state-of-art technologies, the lack of competitive pressure is a hindrance to it. Additionally, this

⁷³ Johnson, 1983, 68.

⁷⁴ Shopper, 1975, 143.

⁷⁵ A number of interviews with the retired SDF generals and admirals who are currently reemployed at major defense contractors.

⁷⁶ Johnson, 1983, 73.

“National Champions” account does not make sense of the “coexistence” dimension of sumiwake; procurement of same-model submarines every year from MHI and KHI, or sharing large bids of contracting work remains a mystery in this industrial policy approach.

Politics – LDP’s Favoritism of Its Supporters

The second powerful candidate to explain the sumiwake system highlights the political influence of leading defense contractors, who are all part of keirestu groups. LDP has an autonomy in picking the contractors, and thus allocated the contracts in accordance with the amount of electoral and financial support they receive from the defense contractors; the sumiwake procurement system was, then, the manifestation of predominant political power of the defense enterprises which is so great and beneficial to the firms that it basically cancels out the burden industrial inefficiency.

Burden of Proof and Evidences

This rationale is built on the premise that there have been conventional linkages between the interests of politicians and defense business. The logic is straightforward and linear; LDP receives significant rents from the large-scale defense firms, and the monetary value of the procurement order these firms receive should be proportional to the size of the funds they donate to the party.

Again, there are many reasons to believe that there has been potent political

pressure for the JDA to adopt custom of *sumiwake*. The identity of the largest defense contractors as former-*zaibatsu* entity does naturally make the industry susceptible to politicization. And indeed, defense firms have historically been vigorous supporters of LDP; the amount of financial contributions made from these companies to LDP more than doubled in 2012 LDP comeback from the Democratic Party of Japan (DPJ) rule.⁷⁷

The interaction between the defense business and LDP have consolidated through the activities of DPC of Keidanren, which is also one of the main supporting pillars of LDP.⁷⁸ Perhaps noteworthy here is that DPC is one of the most influential bodies within Keidanren, consisting of more than 800 firms and accounting for 10% of its total membership in the Keidanren⁷⁹, and also assembles more than 20 industry associations. As “one of the four committees with special assignments”, DPC has been granted different level of autonomy and finance backing from the 33 other committees.⁸⁰ This is partly because 50-60% of the funds have been provided by members and the rest by Keidanren, which is a ratio that has barely changed since its establishment in 1952.⁸¹ DPC has also unique in the sense that it had a clearly defined role to “promote arms production” as opposed to those grappling with business interests of “Foreign Policy” or “General Policy”,

⁷⁷ From a blog post of Councillor Tetsushi Inoue, who is a member of the Upper House from the Japanese Communist Party member. “Bouei Sangyo kara Jiminto eno Kenkinga Baika!” June 3, 2015. Accessed March 21, 2016. <http://blogos.com/article/114714/>.

⁷⁸ Hopper, 1975, 113

⁷⁹ Chinworth, 1995, 24.

⁸⁰ Hopper, 1975, 121.

⁸¹ Ibid, 122.

whose goals are ambiguous and prone to alteration by nature.⁸²

Functioning in the nexus of defense industry as business and politics, DPC has been the primary lobbying avenue for defense contractors, as stated in the previous section. It has issued a number of policy recommendations with specific processes, such as allocation of yearly budget, weapons acquisition, establishment of an advisory organ in the Cabinet.⁸³ It has also routinely held *kondankai* (get-together between business and policy communities) to make sure that business ties to these politicians do not dissipate. One of the examples DPC reach-out to LDP took place in 1961, DPC held a “Defense Equipment Indigenization Forum”⁸⁴ with Japan Ordnance Association and other relevant industry association. Defense industries utilized the group to channel funds to LDP politicians who would support the expansion of defense industrial base in Japan.

DPC have worked especially closely with the Defense *zoku* (division) of Policy Affairs Research Council (PARC), LDP’s main policy-formulating body, such as Funada Naka and Genda Minoru. The relationship has conventionally been a two-way kind; politicians have participated in the events and briefing activities of DPC and industrial cooperatives, and DPC members have often attended the study groups hosted by LDP defense experts. Another politician that the DPC has been eager to maintain a close relationship with is the Director-General of JDA, who was politically appointed from LDP

⁸² Ibid, 122.

⁸³ Ibid, 135.

⁸⁴ Translated by author from 防衛装備国産化懇談会.

much of the post-war era. DPC's zeal towards JDA intensified when Nakasone became the Director-General in 1970, and the two worked very closely in the formulation of the *kokusanka* policy.

Loopholes

Although this account presumes the defense hawks of LDP as all-time powerful figure that had discretion over defense production, in fact they were not. They have remained in the anti-mainstream faction from the economy-first and defense-reluctant mainstream faction, inheriting the Yoshida Doctrine. Furthermore, in practice, while some LDP's defense hands, such as Funada and Genda, controlled the dominated the defense zoku of the PARC during 1960 and early 1970's, they had much less authorities in the more autonomous Investigate Commission on Security of PARC, a new organization that Prime Minister Hayato Ikeda instituted in 1961 to limit the the influence of the defense hawks.⁸⁵ Therefore, it is shortsighted to assume that these defense hands had the control of LDP's defense policy, let alone in the allocation of the procurement orders.

This approach also overvalues the political power of the defense contractors. As discussed in the section of the first alternative explanation, DPC's influence to real policy making has been quite limited; while DPC successfully worked intimately LDP when the politicians' interests coincide with those of the politicians, DPC never really altered or

⁸⁵ Green, 1992, 15.

drove the policy debate among the larger PARC circle.

Perhaps the most counterintuitive of all evidences are that the some constituencies of the factory bases have in fact been strong supporters of opposition parties. For example, the second district of Hyogo prefecture, in which MHI's main shipbuilding base is located, is know for being one of the very few areas that has never elected an LDP member in the Lower House Elections since electoral reform in 1994. Similarly, the electoral history of Nagoya area which host MHI's main jetfighter producers and KHI's submarines factory in Kobe indicates that defense and politics linkages have been rather fragile. Although there are associations of subcontractors of Mitsubishi and Kawasaki in the rural areas, such as Mitsubishi Nagoya Aerospace Companies Cooperatives⁸⁶ and Kawasaki Gifu (Prefecture) Small Business Association⁸⁷, the contributions these firms make to the electoral results is hard to quantify, as defense is comprises only a fraction of LDP support base, and its political influence seems at best uneven if not slight.

Therefore, although this logic may be appealing, it is far-fetched to presume firm connections between the defense industrialists and LDP politicians. It overestimates the authority of the anti-mainstream defense advocates in LDP and political voice of the contractors, and there lacks the decisive evidence of causal inference between the financial and electoral support and procurement allocation, rendering the whole argument much less

⁸⁶ Translated by the author from 三菱名航協力会. It is an association of industries in Nagoya, Aichi Prefecture, where the main aircraft factory of Mitsubishi Heavy Industry operates.

⁸⁷ Kubota, 2002, 121.

credible. Furthermore, similar to the first alternative explanation, although this approach can make sense of the patronage of the major firms, it does not explain the allocation of specific systems in the procurement or the split of same contract.

Conclusions

This essay has shed light on Japan's unique procurement system of sumiwake, in which competition is restrained and as a consequence industrial inefficiency has plagued the market, which is what the western military industry has sought to prevent. It has concluded that sumiwake was actually a system that best serves Japan's goals that began to consolidate in the late 1950s to the 1960s, which is to obtain a relatively advanced self-reliance capability and autonomous defense technological base under the constraints of export ban and defense spending and vertically structured industry. The resulting inefficiency was, of course, the price that Japan had to pay, but were a sweet trade deal given the small modest expenditure JDA had to burden and the assurance that technologies of secondary- and tertiary- subcontractors would be preserved.

That Japanese defense industry and procurement policies have been shaped by the optimal choice under given international concerns and domestic constraints illuminate the possibility that they may be subject to changes under the altered conditions. Today, the threat perception is much more robust than the defense industry was given the rise of China and emergence of global non-conventional threats, and export ban of arms and defense

spending capping, the long-time major shackles to the defense industry, have undergone some revision under the current Abe administration. If these key criteria that have continued to inform the rational calculation of Japanese defense production industry continues to sharpen, the day in which sumiwake practice and the industrial inefficiency become the luxury of the past may come in the not-too-distant future.

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