

Resilience or Retrenchment? Japanese Security in the Era of Fiscal Austerity

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Abstract

The advanced industrialized world has entered an era of fiscal austerity, with profound implications for international security and the global balance of power. Japan's predicament is particularly dire: public debt has risen to historically unprecedented levels, and defense expenditures have continually declined for a decade. Nonetheless, we show that Japan is primarily unique for being early – other developed democracies will soon face comparable, long-term fiscal pressures due to three principal factors: financial crises, demographics, and elevated levels of pre-existing debt. As an early mover, how has the Japanese defense establishment responded to fiscal austerity? Consistent with existing accounts of Japan's reemergence as a more muscular military power, we find that defense spending is characterized by relative resilience, receiving increasingly high priority within the domestic budgetary process. Japanese defense policymakers have also taken advantage of austerity to rationalize the allocation of funding among its services and priorities. However, fiscal austerity is increasingly limiting Japan's options. The recent buildup of military hardware is attributable to various life extension measures and expenditure shifts from procurement to equipment maintenance, calling into question the quality and long-term viability of Japanese military forces. As these measures run their course over the coming decade, Japan faces the prospect of a sharp reduction in its military capabilities.

The global financial crisis of 2008 took a heavy toll on government finances worldwide, particularly in developed countries such as the United States, Japan, and members of the European Union. The combination of declining tax revenues and countercyclical stimulus measures has pushed public deficits to levels generally unprecedented in peacetime. Furthermore, these short-term deficits are compounding long-term fiscal deterioration associated with pension obligations and rising health care costs in rapidly aging societies. These factors have given rise to widespread calls for fiscal austerity.² Unlike other contemporary episodes of government retrenchment associated with economic crises, such as the Latin American debt crisis of the 1980s and the East Asian financial crisis of 1997-1998, the countries confronted with austerity today are among the principal great powers in the international system – the United States, Japan, and major Western European states. Consequently, their actions have the potential to fundamentally alter the global balance of power. What are the consequences of fiscal austerity for international security?

In this article, we will first establish that deterioration in public finances is likely to pose a significant long-term problem for major developed democracies in coming years due to three principal factors: 1. Financial crises, which have adverse consequences for economic growth and government finances, are likely to occur with greater frequency and asymmetrically affect advanced democratic states; 2. Demographic shifts, which will lower revenues and necessitate greater expenditures on non-defense priorities such as pensions and health care; 3. Elevated pre-existing levels of debt, which have been historically associated with anemic growth, reduced government revenues, and higher financing costs. The confluence of these factors for so many

² Among many others, see Jean-Claude Trichet (President, European Central Bank), “The Fiscal Imperative,” (OECD Restoring Public Finances, 2010); “Merkel Urges EU to follow German Austerity Lead,” *Reuters*, January 28, 2011; Paul Ryan, “A Roadmap for America’s Future: A Plan to Solve America’s Long-term Economic and Fiscal Crisis,” (Washington, DC., January 2010); “G20: Merkel Insists There are No Divisions with Obama,” *BBC News*, June 26, 2010.

major states is historically unprecedented and will place significant, long-term pressure on the resources governments can devote to national security expenditures.

How will governments manage these problems, and more specifically, what are the implications for international security? We will consider the experience of Japan, which has been, for reasons unrelated to security policy, “ahead of the curve” compared to other developed economies over the past two decades. Specifically, Japan’s economy encountered a prolonged, deflationary financial crisis in the 1990s. The consequent anemic tax revenues and fiscal stimulus measures have exploded Japan’s gross public debt from 50% of GDP in 1990 to 225% of GDP in 2010. In addition, a large postwar baby boom and low contemporary fertility rate have combined to make Japan one of the most rapidly aging societies in the world.

Over the past two decades, Japanese policymakers have struggled to reconcile the political imperative of fielding a more robust, credible military to meet international obligations and rising potential threats in East Asia, while also implementing fiscal austerity to bring public debt under control. As we will illustrate, the fiscal pressure faced by Japanese defense policymakers is not unique – it was, however, early. As such, Japan’s experience is instructive about the dilemmas likely to be faced by other advanced industrialized countries in the coming years. We will show that, based on demographic and fiscal projections, the past twenty years for Japan look strikingly similar to the immediate future faced by other major developed economies.

We then turn to an examination of the politics of Japanese defense expenditures. Japanese security policy in the past few decades has been subject to a vigorous scholarly debate. On one hand, some scholars posit the reemergence of Japan as a more muscular, “normal” military power.³ Other scholars see significant normative, cultural, and ideational constraints

³ Among others, see Richard J. Samuels, *Securing Japan: Tokyo’s Grand Strategy and the Future of East Asia* (Ithaca, NY: Cornell University Press, 2007); Kenneth B. Pyle, *Japan Rising: The Resurgence of*

upon Japanese security policy.⁴ It is not a primary objective of this paper to mediate between these two schools, each of which has considerable merit – Japan’s defense establishment increasingly aspires for normalcy, but important normative constraints certainly remain, particularly in sensitive areas such as offensive and nuclear capabilities.⁵ Consistent with scholars who see a more muscular international security posture in Japan, we will demonstrate that Japan’s defense establishment has fared relatively well in recent years compared to other, traditionally powerful bureaucracies. In addition, the Self Defense Force’s effective response to the Great Tōhoku Earthquake of March 11, 2011 could further strengthen the hand of the Ministry of Defense. However, despite this relative advantage, the imperative for fiscal austerity has placed important limitations on Japanese military capabilities. For example, even after accounting for the enhanced role of the Japanese Coast Guard,⁶ Japanese defense expenditures have consistently fallen for over a decade, and further declines are likely. In short, although

Japan’s Power and Purpose (New York: PublicAffairs, 2007); Christopher W. Hughes, *Japan’s Re-Emergence as a “Normal” Military Power* (New York: Oxford University Press for the International Institute of Strategic Studies, 2004); Michael J. Green, *Japan’s Reluctant Realism: Foreign Policy Challenges in an Era of Uncertain Power* (New York: Palgrave, 2003); Daniel M. Kliman, *Japan’s Security Policy in the Post-9/11 World: Embracing a New Realpolitik* (Westport, Conn.: Praeger, 2006); Saadia M. Pekkanen and Paul Kallender-Umezu, *In Defense of Japan: From the Market to the Military in Space Policy* (Stanford, CA: Stanford University Press, 2010).

⁴ Among others, see Peter J. Katzenstein and Nobuo Okawara, “Japan’s National Security: Structures, Norms, and Policies,” *International Security* Vol. 17, No. 4 (Spring 1993); Thomas U. Berger, “From Sword to Chrysanthemum: Japan’s Culture of Anti-militarism,” *International Security* Vol. 17, No. 4 (Spring 1993), pp. 119-150; Peter J. Katzenstein, *Cultural Norms and National Security: Police and Military in Postwar Japan* (Ithaca, NY: Cornell University Press, 1996); Glenn D. Hook, *Militarization and Demilitarization in Contemporary Japan* (London: Routledge, 1996); Thomas U. Berger, *Cultures of Antimilitarism: National Security in Germany and Japan* (Baltimore, MD: Johns Hopkins University Press, 1998); Peter J. Katzenstein and Nobuo Okawara, “Japan, Asian-Pacific Security, and the Case for Analytical Eclecticism,” *International Security* Vol. 26, No. 3 (Winter 2001/2002), pp. 153-185; Andrew L. Oros, *Normalizing Japan: Politics, Identity, and the Evolution of Security Practice* (Stanford, CA: Stanford University Press, 2008); Yasuhiro Izumikawa, “Explaining Japanese Antimilitarism: Normative and Realist Constraints on Japanese Security Policy,” *International Security*, Vol. 35, no. 2 (Fall 2010), pp. 123-160.

⁵ For a detailed discussion of Japan’s nuclear policies, see Llewelyn Hughes, “Why Japan Will Not Go Nuclear (Yet),” *International Security*, Vol. 31, No. 4 (Spring 2007), pp. 67-96.

⁶ Richard J. Samuels, “‘New Fighting Power!’: Japan’s Growing Maritime Capabilities and East Asian Security,” *International Security*, Vol. 32, No. 3 (Winter 2007/08), pp. 84-112.

Japan's defense establishment has secured important relative gains domestically, its capabilities remain critically constrained by the realities of fiscal austerity.

Japanese policymakers have responded to this predicament in two ways. First, austerity has provided the impetus for important structural transformations that would have otherwise encountered fierce resistance. Budgetary pressures have driven a historically lethargic defense establishment to accelerate its structural and positioning adaptations to the contemporary security environment in Northeast Asia. Across-the-board personnel cost cuts have also provided political cover to justify a shift of resources into other essential areas. Second, Japan's Self-Defense Forces (SDF) have dealt with the obligation to reduce defense spending by allowing military procurement to slow, all the while implementing life extension measures for military hardware already in service. On the surface, this conveys the impression of a Japanese military buildup – an increase in the total number of ships, submarines, and to a lesser extent, aircraft. However, these are stopgap measures within a fiscal context that shows no signs of long-term improvement. With every additional year, obsolescence becomes a real threat to the capacity of the Japanese Self-Defense Forces, and a sharp decline in military hardware appears all but inevitable in the coming decade.

It would be naive to expect Japan's experience to neatly repeat elsewhere. This article identifies a major, common shock that will shape the course of international security for the foreseeable future. However, common exogenous shocks often solicit widely divergent cross-national responses.⁷ Japan's political economy and government decision-making procedures differ from those of the West. Japanese policymakers continue to operate under constraints that other nations' militaries are not subject to, despite considerable changes over the past twenty

⁷ e.g., Peter J. Katzenstein ed., *Between Power and Plenty: Foreign Economic Policies of Advanced Industrialized States* (University of Wisconsin Press, 1978); Peter A. Gourevitch, *Politics in Hard Times: Comparative Responses to International Economic Crises* (Ithaca: Cornell University Press, 1986).

years – Japan is constitutionally prohibited from making use of offensive military force, and the Three Principles on Arms Exports, or “3Ps,” prohibit the Japanese defense industry from selling or sharing of any of the technologies it develops to other sovereign nations. Japan can depend on the U.S. military and nuclear deterrent even as it faces potential reductions in its own military capabilities. On the flipside, the security environment Japan faces, with North Korea and a rising China in close proximity, is arguably more threatening than that confronted by other great powers. It has also been argued that East Asia’s unique set of geographical, historical, and political realities make it challenging to draw direct comparisons between East Asian and Western nations.⁸ We focus on Japan because it is an interesting country in its own right – a major power in an increasingly important and tense region – and because it offers a longer track record by virtue of being early. However, for all of these reasons cited above, we expect considerable variation in how other countries confront the dual challenge of fiscal austerity and national security. Therefore, we will conclude this article with a broader discussion of caveats, the lessons to be drawn from Japan’s experience, and potential directions for future research.

Japan: Canary in the Coal Mine?

Over the past two decades, Japanese public finances have deteriorated dramatically. Between 1990 and 2010, Japan’s gross public debt to GDP ratio increased from about 50% to 225% of GDP. This is the highest among advanced industrialized nations and second only to Zimbabwe. Net debt is somewhat lower at about 120% of GDP due to cross-holding among various Japanese government agencies and foreign exchange assets. However, even by this

⁸ David C. Kang, “Getting Asia Wrong: The Need for New Analytical Frameworks,” *International Security*, Vol. 27, No. 3 (Spring 2003), p. 57.

measure, Japan is forecast to exceed Lebanon in 2011 as the most indebted country in the world.⁹ These budgetary realities have led to frequent calls for austerity and retrenchment, particularly since the early 2000s. Defense spending, which has accounted for between 5% and 7% of total government expenditures since 1990, has inevitably come under intense scrutiny. This has restricted Japan's flexibility as it confronts several geopolitical challenges, principal among them tense relations with North Korea and the long-term rise of China.

In this section, we will consider the causes underlying the deterioration in Japanese public finances. We posit that Japan's experience is an early example of what is likely to become a much broader phenomenon. Many of the factors that impacted Japan from 1990-2010 are now affecting or likely to affect other advanced industrialized democracies such as the United States and major European states. As such, Japan's attempts to manage defense expenditures under conditions of sustained, adverse financial pressures are not only interesting in their own right, but also hold important implications for other major powers in the international system.

Financial Crisis

In the late-1980s, Japan was swept away by financial mania and speculation. Low interest rates and loose regulation fed a massive asset price bubble in stocks and real estate. Excessive leverage and risky investments were cleverly rebranded as *Zaitoku* (financial technology), much like the "complex" financial instruments of the 2000s. At the peak of the bubble, Japan's stock market accounted for about half of global capitalization. Although Japan's land area is only about 4% of the United States, Japan's total real estate value was about four times greater.¹⁰

⁹ International Monetary Fund, "Data and Statistics," 2011.

¹⁰ Makoto Itoh, "Japan's Continuing Financial Difficulties and Confused Economic Policies," in Craig Freeman et al eds., *Economic Reform in Japan: Can the Japanese Change?* (Australia: Macquarie

When the bubble burst and asset prices collapsed in the early 1990s, the result was a financial crisis and prolonged economic stagnation that has come to be known as the “lost decade.” Repeated attempts to boost the economy through expansionary fiscal policy may have directly contributed upwards of 25% of GDP to public debt.¹¹ An additional net cost of about 5% of GDP was incurred in financial sector bailout efforts.¹² Most importantly, the anemic recovery sapped tax revenues – revenues peaked at 60 trillion yen in 1990, and have since then averaged about 48 trillion yen for the past twenty years.¹³

Although Japan’s crisis stands out in some respects,¹⁴ it is common for public finances to deteriorate sharply following a financial crisis. For example, Reinhart and Rogoff find that real debt increased by 86% on average following crisis episodes in the post-World War II period.¹⁵ This general pattern has also held for countries affected by the US subprime crisis of 2008 – for example, US federal debt held by the public was projected to roughly double between 2007 and 2012.¹⁶

There are reasons to believe that financial crises will become an increasingly common occurrence in coming years, particularly among advanced industrialized democracies. The incidence of crises is closely correlated with cross-border capital flows – historically, peaks in

University Centre for Japanese Economic Studies). For an excellent overview of the bubble, see William Grimes, *Unmaking the Japanese Miracle: Macroeconomic Politics, 1985-2000* (Ithaca: Cornell University Press, 2001).

¹¹ Ito, 2009.

¹² Takeo Hoshi and Anil K. Kashyap, “Will the U.S. Bank Recapitalization Succeed? Eight Lessons from Japan,” NBER Working Paper No. 14401 (2008).

¹³ Ministry of Finance Japan, “General Account Tax Revenues over Time,” available at http://www.mof.go.jp/tax_policy/summary/condition/010.htm, accessed April 2011.

¹⁴ Phillip Y. Lipsy and Hirofumi Takinami, “First-Mover Disadvantage: The Politics of Financial Crisis Response in Japan and the United States,” Paper Presented at the Annual Meeting of the Asian Studies Association, April 3, 2011.

¹⁵ Carmen M. Reinhart, and Kenneth S. Rogoff, “Is the 2007 U.S. Subprime Crisis So Different? An International Historical Comparison,” *American Economic Review*, Vol. 98, No.2 (May 2008), pp. 339-44.

¹⁶ United States Congressional Budget Office, *The Budget and Economic Outlook: Fiscal Years 2010 to 2020* (Washington D.C: GPO, 2010).

crisis incidence have occurred during episodes of global economic integration, such as the early 20th century and the current period.¹⁷ Liberalized, relatively unregulated economies are more likely to experience crises.¹⁸ In addition, although crises are about as equally likely between developed and emerging economies,¹⁹ there is a strong historical relationship between the incidence of financial crisis and democratic regime type – democracies have, controlling for other factors, been about three times more likely to experience a financial crisis than autocracies.²⁰

In combination, these factors suggest that the incidence of financial crises will continue to be a frequent problem in the future, and particularly among financially liberalized, advanced industrialized democracies such as the United States, Japan, and Western European states. Importantly, this is not simply a statement about the aftereffects of the 2008 US subprime crisis. The implication is that there will be more crises akin to those that affected Japan in the 1990s and the US in 2008. If history is any guide, these episodes will continue to exert severe pressure on public finances in these countries.

¹⁷ Carmen M. Reinhart, and Kenneth S. Rogoff, *This Time Is Different: Eight Centuries of Financial Folly* (Princeton: Princeton University Press, 2009).

¹⁸ Among others, see Asli Demirgüç-Kunt, and Enrica Detragiache, “The Determinants of Banking Crises in Developing and Developed Countries,” *Staff Papers – International Monetary Fund*, Vol. 45, No.1 (March 1998), pp. 81-109; Graciela L. Kaminsky, and Carmen M. Reinhart, “The Twin Crises: The Causes of Banking and Balance-of-Payments Problems,” *American Economic Review*, Vol. 89, No. 3 (June 1999), pp. 473-500. For a discussion of financial deregulation and its relationship to the Japanese crisis, see Takeo Hoshi, and Anil Kashyap, *Corporate Finance and Governance in Japan: The Road to the Future* (Cambridge, MA: MIT Press, 2001); Jennifer Amyx, *Japan's Financial Crisis: Institutional Rigidity and Reluctant Change* (Princeton: Princeton University Press, 2006).

¹⁹ Reinhart and Rogoff, 2009, Chapter 10.

²⁰ Phillip Y. Lipsy, “Financial Crisis and Democracy,” 2011. Paper Presented at the Annual Meeting of the American Political Science Association.

Demographics

A more long-term problem for Japan's public finances is the rapid aging of its population. Japan is going through one of the most rapid demographic transitions in world due to a particularly large baby boom in the immediate post-World War II period followed by a steep decline in births.²¹ This demographic profile served Japan well during the postwar reconstruction period by limiting the size of the dependent population – both young and old. This “demographic dividend” contributed positively to Japanese economic growth between 1950 and 1980, but has subsequently worked in reverse, reducing the economic growth rate by perhaps 13 percent between 1980 and 2005.²²

One widely accepted measure of demographic pressures is the dependency ratio, which takes the ratio of the dependent population outside of the work force (0-14 and 65+) and divides by the working age population (15-64). This measure is a good proxy for potential demographic pressures on government budgets – the working age population is responsible for the bulk of government tax revenues, while the dependent population generally requires net government outlays on programs such as education, health, and pensions. High dependency ratios imply a smaller working age population to support a large dependent population, and hence greater fiscal difficulties for governments.

Japan's working age population peaked in 1996, while the share of those aged 65+ has continued to rise. This has pushed Japan's dependency ratio up to about 57%, a level

²¹ See among others, Takatoshi Ito and Andrew Rose, *The Economic Consequences of Demographic Change in East Asia* (Chicago: University of Chicago Press, 2008); Naohiro Ogawa, Makoto Kondo, and Rikiya Matsukura, “Japan's Transition from the Demographic Bonus to the Demographic Onus,” *Asian Population Studies* Vol. 1, No. 2 (2005), pp. 207-226.

²² Andrew Mason, “Demographic Dividends: The Past, the Present, and the Future,” in Mitoshi Yamaguchi (ed.), *Population Change, Labor Markets and Sustainable Growth: Towards a New Economic Paradigm* (Emerald Group Publishing Limited, 2007), pp. 75-98.

considerably higher than other advanced industrialized states. The dependency ratio implies that there are currently less than two workers supporting each dependent member of society, and by 2050, projections indicate there will only be roughly one worker per dependent. This demographic transition puts enormous strains on Japan's public finances, simultaneously reducing taxes collectible from the working age population and increasing public pension and health outlays.

Although Japan's population aging stands apart for being particularly early and rapid, other countries face comparable demographic shifts. Figure 1 plots current and projected dependency ratios for developed countries that are also significant military powers.²³ To illustrate our point, we have time-shifted countries other than Japan by the number of years indicated to match Japan's dependency ratio in 2010. For example, the data for Italy has been pulled forward by eight years, so that information for 2018 is depicted as 2010 on the chart. The chart illustrates that Japan's demographic transition is mainly unique for being relatively early. In the future, all of the countries depicted will reach a dependency ratio comparable to Japan today. The demographic transitions of Germany and Korea, although taking place at a later date, are projected to be more rapid than that faced by Japan, while those for France, the United

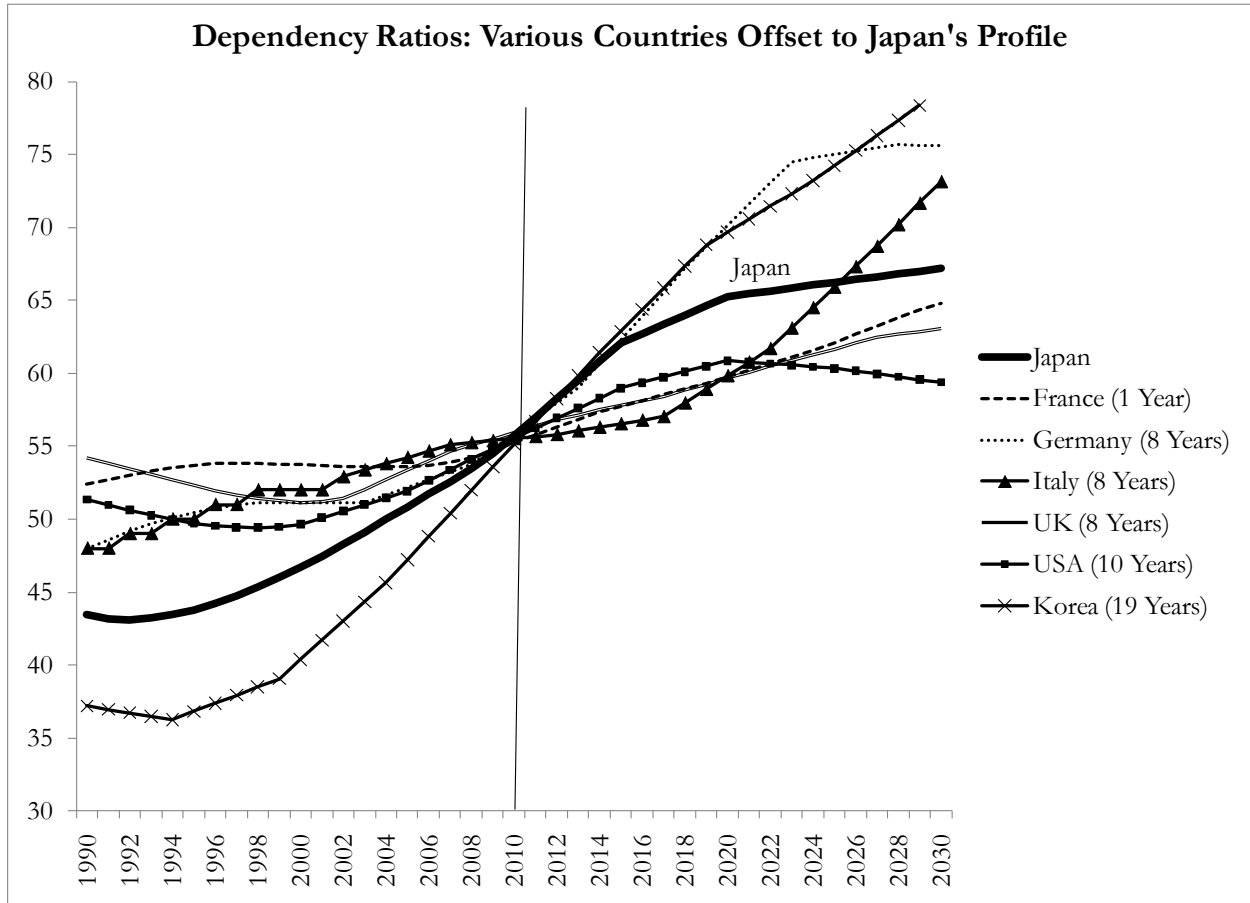
²³ We ranked countries according to the Composite Index of National Capability (CINC) measure available from the National Material Capabilities (v3.02) dataset and included advanced industrialized democracies that ranked highly in the most recent available year (2007). This is a crude measure of military capability, but the countries listed are plausible for the purposes of this paper. The next advanced industrialized democracies on the list are Spain (19th) and Canada (21st), which rank considerably lower than Italy (11th), which is the last country included in our list. Countries ranking higher than Italy that were excluded for being developing countries or non-democracies are: China, India, Russia, and Brazil. Of the developing countries ranking highly, India and Brazil are unlikely to face demographic deterioration for the foreseeable future, while China and Russia are forecasted to experience deterioration comparable to Japan, but with about a 30 year delay. Spain and Canada are subject demographic pressures comparable to the countries included. (National Material Capabilities (v3.02), originally developed in J. David Singer, Stuart Bremer, and John Stuckey. "Capability Distribution, Uncertainty, and Major Power War, 1820-1965," in Bruce Russett (ed) *Peace, War, and Numbers* (Beverly Hills: Sage, 1972), pp. 19-48.)

Kingdom, and the United States are projected to be somewhat milder. The United States is comparatively better situated according to this measure due to immigration and higher birth rates.

The demographic pressures being confronted by Japan today will be largely replicated across other major economies in the coming decades. Pension and health spending for elderly members of society are notoriously difficult to reduce, particularly in democracies where electoral turnout tends to be higher for this demographic group cross-nationally.²⁴ As such, the share of government revenues available for other purposes, including national defense, will be placed under sustained, long-term pressure.

²⁴ For a good summary, see Achim Goerres, "Why are Older People More Likely to Vote? The Impact of Ageing on Electoral Turnout in Europe," *The British Journal of Politics & International Relations*, Vol. 9, No. 1, pp. 90-121.

Figure 1



Note: The dependency ratio is calculated by expressing the dependent population (ages 0-14 and 65+) as a percentage of the working age population (15-64). The ratio proxies for the potential fiscal consequences of demographic shifts – a higher ratio implies more dependent citizens per revenue-generating worker. The data for each country has been pulled forward by the number of years indicated to match the dependency ratio for Japan in 2010. For example, Italy's data for 2008 is plotted as 2000 on the chart (an 8 year time shift). Source: World Bank.

Public Debt

As a consequence of the factors outlined above, Japan's public debt has been accumulating at an alarming rate. The Bank for International Settlements (BIS) predicts that, if left unaddressed, Japan's debt to GDP ratio could exceed 600% by 2040.²⁵ Even in the optimistic forecast scenario, in which the primary balance is assumed to improve by 1% of GDP per year for five years and age-related spending is frozen at current levels, Japan's debt to GDP would exceed 400% by 2040.²⁶ This is a remarkably high amount that would be unprecedented for any major economy in modern history. As a reference, Great Britain's public debt during the Napoleonic Wars and World War II peaked at around 250% of GDP.

As distressing as these numbers are, Japan again stands out primarily for being early. Figure 2 depicts current data and baseline projections for public gross debt. Again, for illustrative purposes, countries other than Japan have been offset by the number of years indicated. As the BIS does not provide a debt forecast for South Korea, it is excluded from the chart. The figure illustrates that the United States and major economies in Europe are following closely behind Japan in the accumulation of public debt. The lag is primarily attributable to an earlier financial crisis and demographic transition in Japan. Although coming later, the trajectories of France and Germany overlap heavily with that of Japan and are indistinguishable on the chart. The United States, although it faces a milder demographic transition, is projected to suffer deep deterioration in public finances due to elevated and rising healthcare costs.

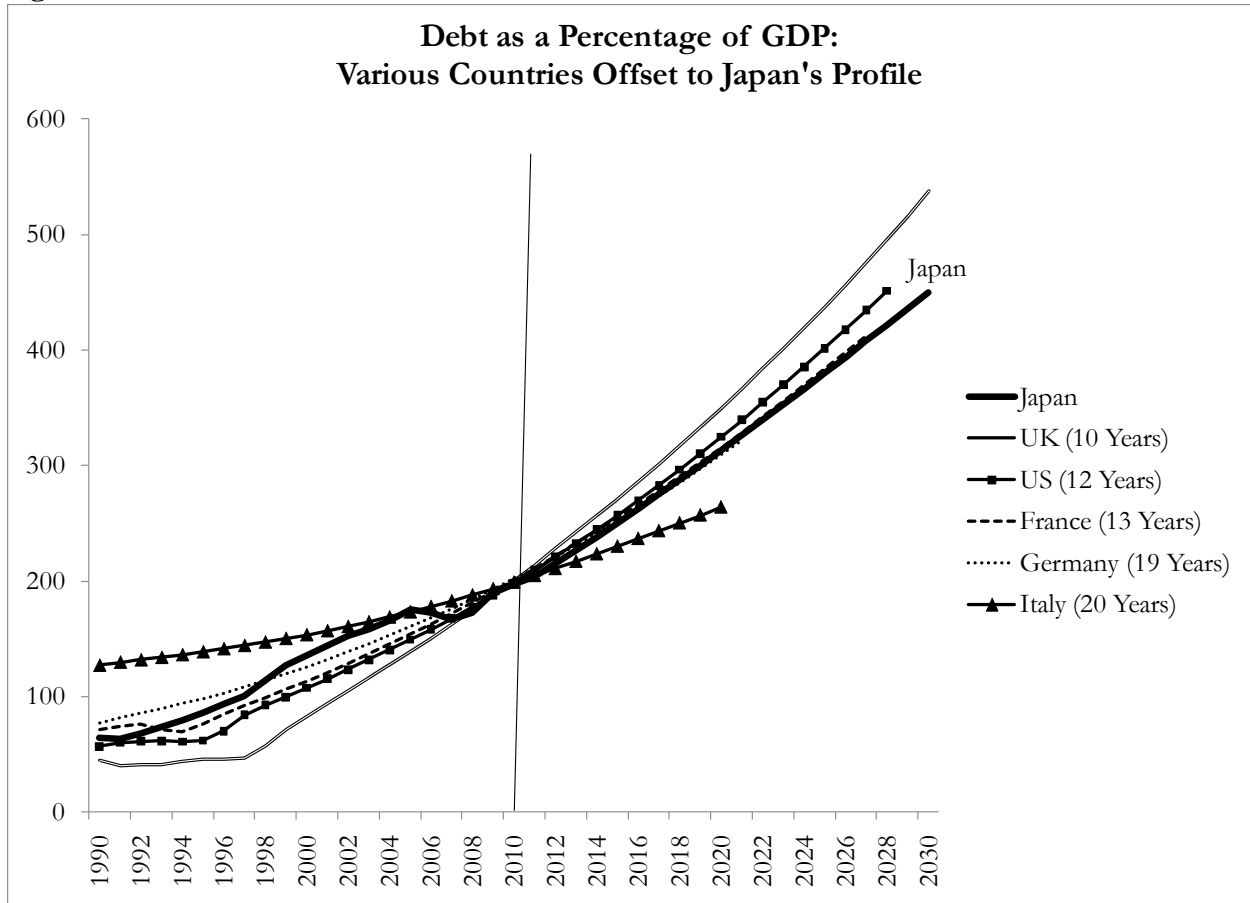
²⁵ S. G. Cecchetti, M. S. Mohanty, and F. Zampolli, "The Future of Public Debt: Prospects and Implications," Bank for International Settlements, Monetary and Economic Department, 2010.

²⁶ *ibid*, 8-10.

This debt accumulation, if left unaddressed, may add an additional source of budgetary pressure for policymakers: debt service. It is worth noting that debt service costs in Japan have not increased markedly over the past twenty years, primarily due to low interest rates. It is an open question whether this feat is repeatable – low nominal rates in Japan have been attributed to factors such as deflation, aggressive monetary policy by the Bank of Japan, and large domestic demand for debt securities driven by high historical savings rates and home bias. Other countries facing large future debt burdens are likely to face sharper increases in debt service costs due to the absence of at least some of these factors. Despite a lower overall debt load, U.S. debt service per GDP is currently higher than that of Japan and projected to remain higher into the future. Under the BIS baseline scenario, U.S. spending on debt service alone is projected to increase from 5% currently to 23% of GDP by 2040, a figure that approximates total current government outlays.

Of course, these projections themselves are unlikely to be realized. Unlike demographic trends, which are relatively impervious to policy intervention and change slowly, the trajectory of public debt can be altered significantly through political action. What these projections underscore is not that debt will accumulate without limit. Rather, governments, particularly those of economically developed, liberal democracies that constitute the core status quo powers of the contemporary international system, in the coming decades will face sustained budgetary pressure, the likes of which have not been encountered in modern times. Defense expenditures, which are a major line item in the budgets of all of these countries, will inevitably come under scrutiny. As an early example, the experience of Japan deserves careful consideration.

Figure 2



Note: The data for each country has been pulled forward by the number of years indicated to match the gross debt-to-GDP ratio for Japan in 2010. For example, Germany's data for 2019 is plotted as 2000 on the chart (a 19 year time shift). The data for France and Germany overlap heavily with that of Japan in the right part of the graph and are virtually indistinguishable. Forecast information is not available for South Korea. Source: Baseline scenario forecasts from Cecchetti et al (Bank for International Settlements), 2010.

Japan's Military Reemergence in the Context of Austerity

Japan's embarkation on the path of fiscal austerity coincides with an important juncture in Japan's security policy. While Japan's military has played a limited role in foreign policy since the end of the Second World War, a number of measures have been implemented that are gradually loosening the constraints on Japan's defense establishment. Beginning with the passage of the International Peace Cooperation Law, or "PKO Law", in May 1992, Japan has participated extensively in UN peacekeeping operations. After 9/11, Japan passed Special Measures Laws to permit logistical support by the SDF for *Operation Enduring Freedom* in Afghanistan through a refueling mission in the Indian Ocean. The SDF also contributed to reconstruction efforts in Samawah, Iraq following the 2003 invasion by the United States. The increasingly global role of the SDF was subsequently enshrined in the 2004 National Defense Program Guidelines (NDPG), which bestowed paramount importance upon anti-terror activities and elevated international peace cooperation as a primary objective of the Self-Defense Forces.²⁷ The Japan Defense Agency, which had traditionally operated under the office of the Prime Minister, was given cabinet-level ministry status in January 2007. Most recently, in 2011, the Maritime Self Defense Force (MSDF) built its first overseas base in Djibouti to support its antipiracy activities in the Gulf of Aden.

Beyond its heightened international activities, the immediate national security challenges faced by Japan are rising. Antagonism between Japan and North Korea has been exacerbated by the revelation of unlawful abductions of Japanese citizens, North Korean missile tests in 1998, and nuclear tests in 2006 and 2009. The Japanese government has responded by investing in ballistic missile defense through the pursuit of sea-based Aegis SM-3 ballistic missile

²⁷ See National Defense Program Guidelines 2004 (*Bōei keikaku no taikō*), Article II, Section 1.

interceptors and land-based Patriot Advanced Capability 3 systems (PAC-3). The rapid expansion of China's military is arguably even more of a long-term challenge to Japan: the Chinese military budget exhibited double-digit growth each year for over 15 years, achieving a 4.5-fold cumulative increase between 1998 and 2008.²⁸ Furthermore, Chinese naval activity in or near Japanese waters is slowly rising: a nuclear submarine entered Japanese waters in 2004; four of its warships transited through the Tsugaru Straits in October 2008 without notifying the GOJ, and another four passed between the islands of Okinawa and Miyakojima in November 2008.²⁹ In May 2010, a Chinese destroyer pursued a Japan Coast Guard (JCG) ship in waters claimed by Japan as part of its exclusive economic zone (EEZ).³⁰ This increased presence of Chinese warships in nearby waters is particularly worrisome to Japan given that it relies on marine transport for nearly all of its trade.

The loosening restrictions on the range of Japanese military operations, combined with the rise of formidable potential threats over the past two decades, have led many scholars to augur a Japanese foreign policy more aligned with traditional neorealist power politics and an increasing role for the Japanese military. The title of Kenneth Pyle's book, *Japan Rising: The Resurgence of Japan's Power and Purpose*, is an illustration of a growing view that, in light of these recent developments, Japan is on the path towards becoming a forceful actor in the international arena for the first time since World War II.³¹ Richard Samuels also sees Japan's grand strategy potentially evolving towards greater autonomy and a willingness to hedge its

²⁸ Lampton, David M. "The Faces of Chinese Power", *Foreign Affairs*, Vol. 86, No.1 (Jan./Feb. 2007), p. 118.

²⁹ Katsumata, Tsunehisa. "Reference Materials: Security Environment Surrounding Japan", Tokyo Electric Power Company, 2009.

³⁰ "Chinese vessel chases Japan Coast Guard ship in Japanese economic zone", *Mainichi Japan*, May 5, 2010.

³¹ Kenneth B. Pyle, *Japan Rising: The Resurgence of Japan's Power and Purpose* (New York: PublicAffairs, 2007). For an earlier account, see Michael J. Green, *Japan's Reluctant Realism: Foreign Policy Challenges in an Era of Uncertain Power* (New York: Palgrave, 2003).

relationships with China and the United States.³² Japan may be retreating away from the Yoshida doctrine that has guided its security strategy for the past sixty years.³³ Perhaps Japan's support and involvement in the "war on terror" demonstrates that it is willing to take on more responsibility in the preservation of its security interests. Christopher Hughes goes so far to say that Japan is re-militarizing, paving the way toward revoking Article 9 of its constitution, enabling it to remove constraints on the use of military force.³⁴

The belief that Japan will shed the antimilitarism that pervaded its foreign policy during most of the Cold War and once again become a military power is certainly not a new one.

Kenneth Waltz once predicted:

Much in Japan's institutions and behavior supports the proposition that it will once again take its place among the great powers. In most of the century since winning its Chinese war in 1894-95, Japan has pressed for preeminence in Asia, if not beyond... In recent years, the desire of Japan's leaders to play a militarily more assertive role has become apparent, a natural response to Japan's enhanced economic standing.³⁵

Waltz predicted that Japan would inevitably become a military power despite constraints that exist on its military capability.³⁶ Waltz went on to forecast that Japan would acquire nuclear weapons to counter the nuclear threats emanating from China, India, Pakistan, and North Korea.³⁷ Although development of nuclear capability remains highly unlikely, the missions of the SDF in the Indian Ocean, Iraq, and Djibouti underscore a greater willingness by Japan to

³² Richard J. Samuels, *Securing Japan: Tokyo's Grand Strategy and the Future of East Asia* (Ithaca, NY: Cornell University Press, 2007), pp. 198-202.

³³ For more information on the Yoshida doctrine, see Samuels 2007, Ch. 1 and 2.

³⁴ Christopher W. Hughes, *Japan's Remilitarisation* (Oxon, UK: Routledge for International Institute for Strategic Studies, 2009).

³⁵ Kenneth N. Waltz, "The Emerging Structure of International Politics," *International Security*, Vol. 18, No. 2 (Fall 1993), pp. 56, 65.

³⁶ Other notable works arguing that Japan is likely to rearm include: Gerald Segal, "The Coming Confrontation between China and Japan," *World Policy Journal*, Vol. 10, No. 2 (Summer 1993), pp. 27-32; Chalmers A. Johnson, "Japan in Search of a 'Normal' Role," *Daedalus*, Vol. 121 (Fall 1992), pp. 1-33; Reinhard Drifte, *Japan's Foreign Policy for the Twenty-First Century: From Economic Superpower to What Power?* (New York: St. Martin's, 1998).

³⁷ Kenneth N. Waltz, "Structural Realism after the Cold War", *International Security*, Vol. 25, No. 1 (Summer 2000), p. 34.

deploy its military as an element of foreign policy. Moreover, the past decade saw intensifying discussions aimed at revising Article 9 of the Japanese constitution, particularly during the tenure of Prime Minister Shinzō Abe in 2006-2007.³⁸ While arguments favoring the jettisoning of antimilitarist norms in favor of a more “normal” security policy have seemingly gained ground in recent years, there still exist vigorous debates with respect to whether normative constraints will continue to hold back such developments.³⁹

One way to shed light on the supposed evolution of Japan as a normal military power is to examine spending priorities within the Japanese government. Japan’s defense bureaucracy has traditionally been viewed as weak, particularly in comparison to the Ministry of Finance (MOF), the Ministry of Foreign Affairs (MOFA) and the Ministry of Economy, Trade, and Industry (METI), which are considered elite bureaucracies capable of attracting the best and the brightest university graduates in the nation. The Japanese Ministry of Defense (MOD)⁴⁰ only reached cabinet ministry status on January 10, 2007, before which it was known as the Japan Defense Agency (JDA) and run out of the Prime Minister’s office. When established on July 1, 1954, the JDA was placed under strict civilian control as a means of preempting military officers from garnering undue influence over Japanese foreign policy. Along these lines, Joseph Keddell

³⁸ See for example, Christopher W. Hughes, *Japan’s Remilitarisation* (Oxon, UK: Routledge for International Institute for Strategic Studies, 2009), Chapter 6, for a discussion of the increased debates on both constitutional revision and nuclear capability.

³⁹ For a good literature review of realist and constructivist interpretations of Japanese post-Cold War security policy, see Jennifer M. Lind, “Pacifism or Passing the Buck: Testing Theories of Japanese Security Policy,” *International Security*, Vol. 29, No. 1 (Summer 2004), pp. 101-105. Also see Richard J. Samuels, *Securing Japan: Tokyo’s Grand Strategy and the Future of East Asia* (Ithaca, NY: Cornell University Press, 2007), Chapter 5, for a discussion that focuses on the debate that pits “normal nationalists” against “middle power internationalists” in both the political and scholarly arenas.

⁴⁰ For presentational convenience, “MOD” will be used to refer to the bureaucracy in charge of defense, i.e. the Defense agency prior to 2007 and the Ministry of Defense thereafter.

writes: “the JDA Director was viewed more as the person managing the affairs of the SDF than national security affairs.”⁴¹ Kevin Cooney goes even further:

The JDA is one of the politically weakest agencies in the Japanese bureaucracy because of the sensitivity of military affairs (...) Because of Article Nine and the overall sensitivity in Japan to the overall existence of the SDF, the JDA tends to keep a lower profile when it comes to policy advocacy.⁴²

Given this relative weakness, one might expect defense to have fared relatively poorly in an era of budgetary austerity. Nonetheless, if one examines how the defense budget has evolved as a component of the general account budget, it is noteworthy that the budget for MOD has suffered significantly less from cutbacks in comparison with other, traditionally more powerful, ministries such as MOFA and METI. This trend can be distinguished on two distinct, but related, levels: absolute spending and the outcomes of budgetary negotiations with the Ministry of Finance Budget Bureau.

Figure 3 plots the evolution of budgets by government agency for the past two decades. Among the three ministries plotted, cuts for MOD have been the mildest over the past decade. In comparison with MOD’s budgetary decline of 5.2% over the course of nine fiscal years from 2002 to 2010, MOFA’s budget was cut back by 12.0%. Aside from a one-time increase in 2007 for climate change “counter-measure costs” (*taisakuhi*) associated with implementation of the Kyoto Protocol,⁴³ METI has faced even more severe year-on-year reductions in its budget. Prior

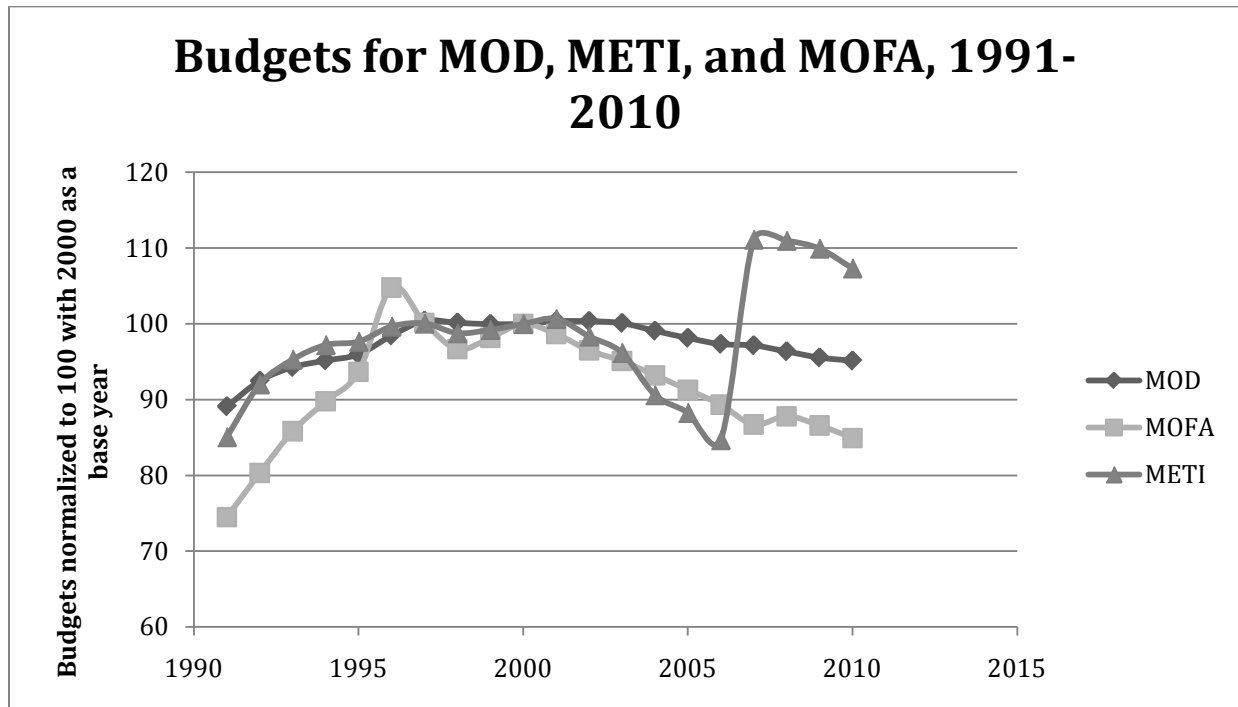
⁴¹ Joseph P. Keddell, *The Politics of Defense in Japan: Managing Internal and External Pressures* (Armonk, NY: M.E. Sharpe, 1993), p. 19.

⁴² Kevin J. Cooney, *Japanese Foreign Policy since 1945* (New York: M.E. Sharpe, 2007), p. 93. This commentator also notes that the JDA can be distinguished for its “lack of fervor”, p. 82.

⁴³ The increase in energy-related expenditures by the METI primarily went towards increased subsidies for fossil fuel purchases by Japan, and heightened support for the development of renewable energy technologies. Similar “green budgets” were implemented across many OECD nations at around the same time.

to the energy-related increase, the METI budget had dropped by 13.9% from 2002-2006, and since 2007, an additional 3.4%.⁴⁴

Figure 3



Sources: MOFA Diplomatic Bluebooks, 1991-2010; Ippan Kaikei Yosan (General Account Budget), various years.

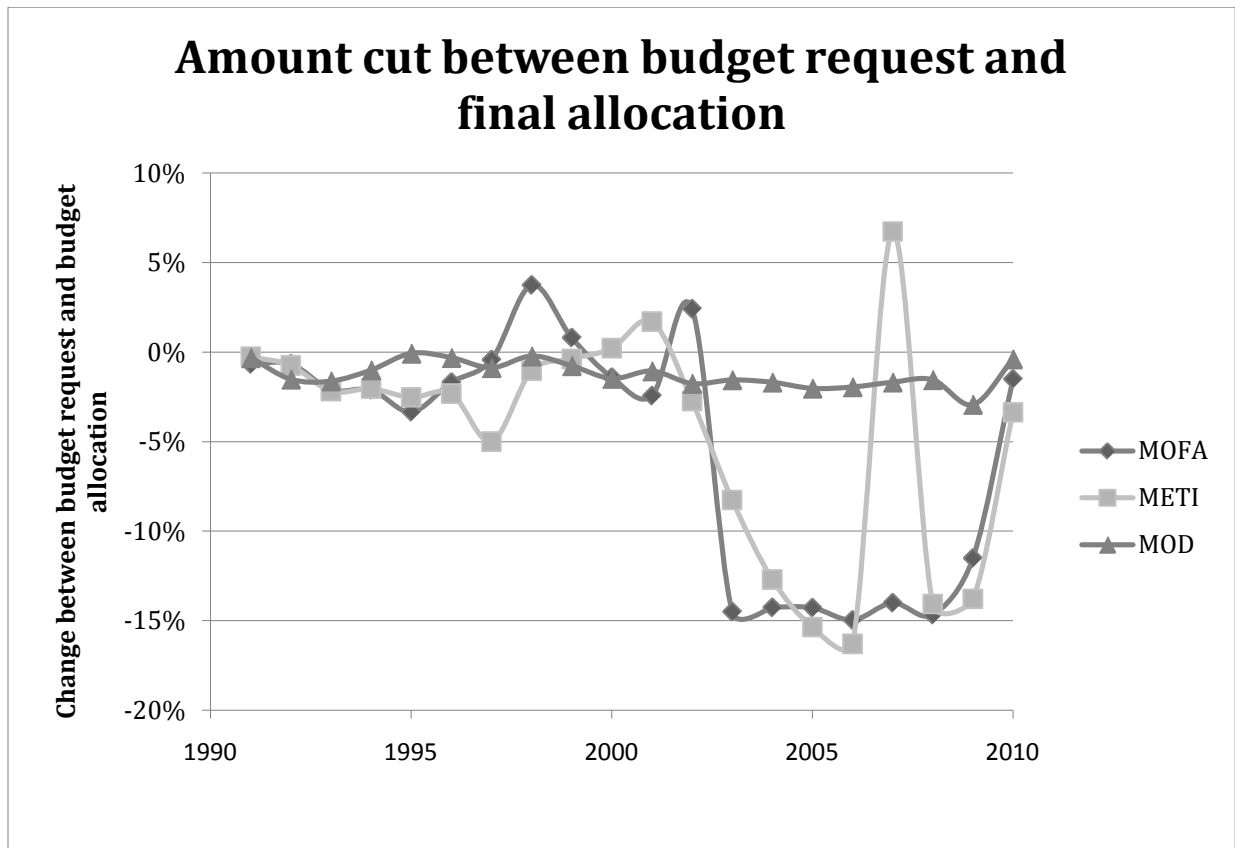
Although the absolute budget numbers are suggestive, a more plausible measure for the bargaining power of various ministries is the outcome of budgetary negotiations with the Ministry of Finance’s Budget Bureau. In the August preceding the target fiscal year, each ministry compiles a budget request (*gaisan yōkyū*) and submits it for consideration to the Budget Bureau. The function of the Budget Bureau is to scrutinize the request item by item, evaluate the

⁴⁴ *Ippan Kaikei Yosan* (General Account Budget), various years.

proposal, and engage in a series of negotiations with each ministry during which it attempts to streamline the budget to avoid unnecessary expenditures.

This process virtually always results in a reduction from the original request, even before fiscal austerity was implemented in earnest in the early 2000s. As Figure 4 demonstrates, from 1991 to 2002, cutbacks were relatively similar across the three ministries and modest in size. Since 2002, cutbacks to all ministries were amplified as the government moved towards austerity. However, the magnitude of cuts from budgetary requests has been far greater for MOFA and METI compared to MOD. Table 1 shows that the average reduction for MOD was 1.72% between 2002 and 2010, while the MOFA final budget was 10.81% lower and the METI budget 8.87% lower than the initial budgetary requests.

Figure 4



Sources: *Ippan Kaikei Gaisanyōkyū Yōbōgakuchō* (Budget requests), 1999-2010 “MITI seeks 150 bil. Yen to enhance small shops”, *Japan Economic Newswire*, August 23, 1990; “MITI seeks 857.2 bil. Yen for fiscal 1992 budget”, *Japan Economic Newswire*, August 29, 1991; “MITI requests 900,621 m. Yen in FY’93 budget”, *Jiji Press*, August 27, 1992; “MITI seeks 917.4 bil. yen in FY ’94 budget”, *Japan Economic Newswire*, August 31, 1993; “MITI to seek 926.2 bil. yen in FY ’95 budget”, *Japan Economic Newswire*, August 26, 1994; “MITI to seek 3.2 bil. yen APEC-related budget in FY ’96”, *Japan Economic Newswire*, August 28, 1995; “MITI to seek 970 b. yen in FY ’97 budget”, *Jiji Press*, August 26, 1996; “MITI seeks 922.8 bil. yen in FY ’98 budget”, *Japan Economic Newswire*, August 26, 1997.

Table 1

Ministry	Average cutback from request (1991-2002)	Average cutback from request (2002-2010)
MOD	-0.84%	-1.72%
MOFA	-0.79%	-10.81%
METI	-1.33%	-8.87%

It is worth noting that defense expenditures are difficult to cut dramatically over a short time period for practical reasons. For one, reduction of personnel expenses are politically difficult. The desire to minimize personnel costs for the Self Defense Forces has resulted in ongoing efforts at MOD to reform the personnel structure.⁴⁵ Nonetheless, as large-scale layoffs or salary reductions for military personnel are likely to meet resistance from the targeted groups within the military, particularly logistics personnel, it is unclear whether such personnel management reform will be successful.⁴⁶ There are also political costs to reducing personnel, which can result in the closing of bases that support local economies. In addition, while a considerable portion of the MOFA budget is allocated to official development assistance (ODA), which is determined year-to-year, the defense budget has a significant level of expenses committed in previous years due to the practice of spreading costs for expensive items over several years rather than paying in one lump sum (*saimu futan koi*).⁴⁷ The extension of payment schedules enables defense planners to reduce the immediate fiscal burden for any particular fiscal year, but since these payment schedules are predetermined for five years, it is practically

⁴⁵ Mid-Term Defense Program 2010 (*Chūki-bō*), Section III, Article 5.

⁴⁶ Personal Interview, Ministry of Defense official, March 9, 2011.

⁴⁷ This practice is described in, among others, Glenn D. Hook, *Militarization and Demilitarization in Contemporary Japan* (New York: Routledge, 1996), p. 57.

very difficult to cut back equipment costs immediately. It is worth emphasizing, however, that the relative differences in cutbacks illustrated above extend well beyond five years.

This data provides some support for existing accounts that emphasize Japan's military resurgence. According to officials involved in negotiations over the defense budget, the Ministry of Finance has exhibited understanding of the necessity to preserve the resources of Japan's defense establishment, allocating resources so that it can effectively adapt to the changing security environment.⁴⁸ Despite severe fiscal pressures, the Japanese government is prioritizing its military in order to adequately counter perceived security threats posed by North Korea and China. Conspicuously, the Ministry of Finance recently approved various procurement projects that were widely expected to be cut, including the construction of a 19,500-ton destroyer in 2009, and the purchase of 68 new tanks in the newest Mid-Term Defense Program for 2011-2015, up from 48 for both the 2001-2005 and 2006-2010 periods.⁴⁹ In the most recent National Defense Program Guidelines, MOD also announced the expansion of its submarine fleet from 16 to 22 to enhance its intelligence, surveillance, and reconnaissance (ISR) capabilities.

MOD's budgetary advantage can also be attributed to Japanese politicians, who have recognized public anxiety over perceived security threats. Former Democratic Party of Japan foreign minister Seiji Maehara, when head of the main opposition party in 2005, claimed:

There is no question that China is growing more powerful - both economically and militarily - at an astronomical rate. China's rapid economic growth and strength has allowed it to maintain a growth rate of more than 10% in military spending for nearly 20 years. Some say that amount is perhaps 2 or even 3 times the Chinese government's official figures. Nonetheless, it continues to strengthen and modernize its military power. This is a very real concern. (...) A Chinese nuclear-powered submarine has even made an incursion into Japan's territorial waters. It is important that we not just wait and see, but take a firm response to these kinds of actions.⁵⁰

⁴⁸ Personal Interview, Ministry of Defense Official, March 2011; Personal Interview, Ministry of Foreign Affairs Official, March 2011.

⁴⁹ *Bōei Hakusho 2009*; Mid-Term Defense Program 2011-2015.

⁵⁰ Seiji Maehara, "The National Image and Foreign Policy Vision Aimed for by the DPJ," Speech given at CSIS, Washington DC, December 8, 2005. [Available at <http://www.dpj.or.jp/english/news/051215/01.html>. Accessed May 2011.]

Moreover, when Taro Aso was foreign minister for the Liberal Democratic Party, he largely agreed: “A country could appear threatening to us, if it is a neighbor, has a billion population, possesses nuclear arsenals with its defense expenditure blooming over two digits over the past seventeen years, and we do not know how the money is spent. I think many people are aware of this.”⁵¹ The influence of politicians over the budgetary process has been enhanced in recent years due to the creation of the Council of Economic and Fiscal Policy (CEFP), which will be discussed in greater detail below.⁵²

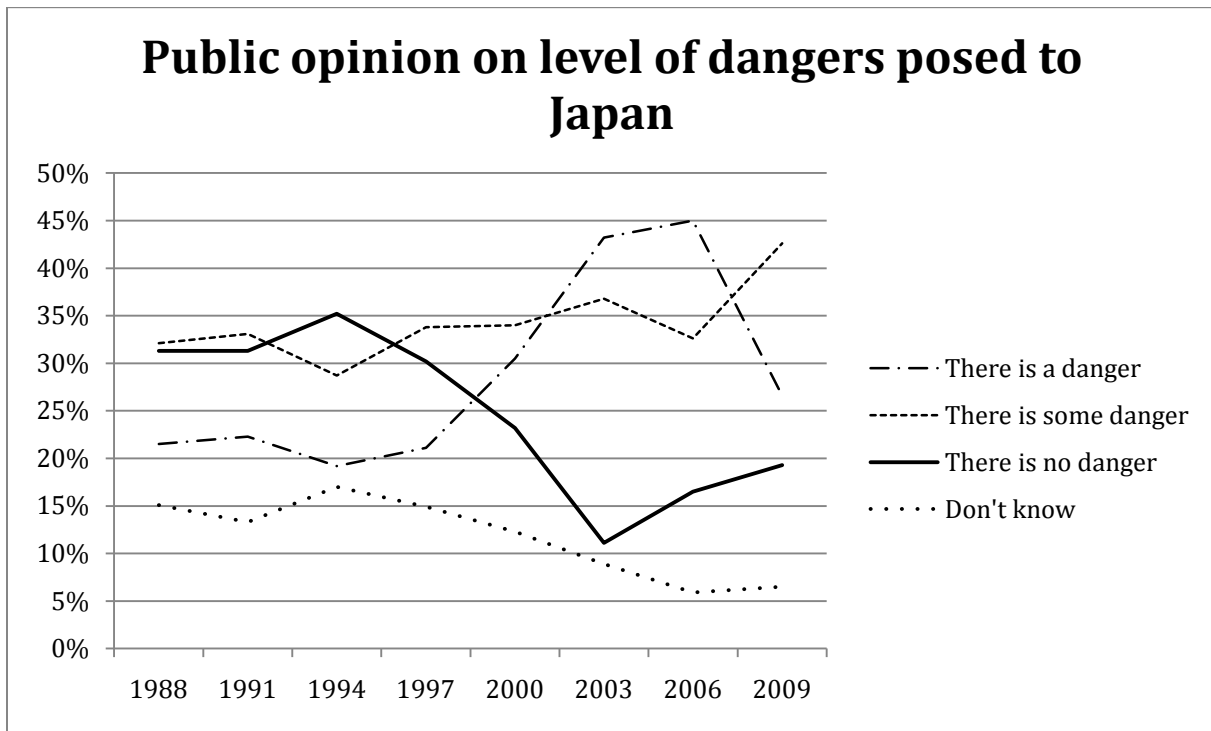
Surveys conducted by the Cabinet Office every three years illustrate that the Japanese public’s perception of external threats has grown significantly between 2000 and 2009. As seen in Figure 5, there has been a sharp increase in the proportion of respondents seeing at least some danger in Japan’s external security environment. Threat perceptions likely deteriorated further in 2010: following the JCG arrest of a Chinese fishing trawler captain in September 2010, two separate polls conducted by the *Sankei Shimbun* and the *Yomiuri Shimbun* showed that over 80% did not trust China, the first one additionally finding that over 70% of Japanese consider China to be a national security threat.⁵³

⁵¹ Cited in Yasuhiro Masuda, “Japanese Assessments of China’s Military Development,” *Asian Perspective*, Vol. 31, No. 3 (2007), p. 186.

⁵² Jennifer A. Amyx, *Japan’s Financial Crisis: Institutional Rigidity and Reluctant Change* (Princeton, NJ: Princeton Univ. Press, 2004), p. 251.

⁵³ See James J. Przystup, “Japan-China Relations: Troubled Waters, Part II,” *Comparative Connections*, Vol. 12, No. 4, January 2011, for an account of the changes in public opinion after the September 2010 Senkaku incident.

Figure 5



Sources: Cabinet Office Surveys on Defense, 1988-2009

The influence of the external threat environment on the final outcome of the defense budget illustrates that Japan's defense budget is subject to two contradictory pressures: the downward pressure emanating from Japan's fiscal predicament and the consequent requirement to curtail the overall budget, and the upward pressure associated with regional threats and greater assertiveness by Japanese leaders. Scholars who predict the reemergence of a Japan as military power have correctly characterized the intention and desires of Japanese policymakers – on a relative basis, the military has increasingly received high priority.

Although much remains to be seen, the Great Tōhoku Earthquake of 2011 may also provide additional advantages to the Japanese defense establishment in budgetary negotiations. In the short-term, the loss of military hardware in the disaster will justify larger funding

allocations for procurement – the flooding of Matsushima airbase led to the loss or impairment of 18 F-2 aircraft, which will need to be replaced.⁵⁴ The MOD is also highlighting the need for greater capabilities as a means to respond to future disasters. In response to the Fukushima Daiichi nuclear crisis, Defense Minister Toshimi Kitazawa has committed to the purchase of unmanned aerial vehicles (UAV) to deal with future contingencies.⁵⁵ Successful efforts at disaster relief, which saw the SDF's largest mobilization of troops since World War II, were very well-perceived, and could enhance the legitimacy and bargaining power of the defense establishment.⁵⁶

Austerity as a Constraint

Although Japan's defense establishment has received priority within the domestic budget allocation process, austerity has still acted as a significant constraint on Japan's military capabilities. Aside from Hashimoto's ill-fated attempt at fiscal retrenchment in 1997, the first successful, sustained cuts to the Japanese general account budget occurred during the prime ministership of Junichirō Koizumi. Koizumi was successful in his efforts to the point that a ¥84.99 trillion budget in 2000 was brought down to ¥79.69 trillion by 2006, a significant

⁵⁴ "Massive Tsunami Submerges Towns, Washes Away Houses, Cars", *Kyodo News*, March 12, 2011.

⁵⁵ "Genpatsu jiko toki, jieitai robo de kokusai shien bōeishō ga koso hyōmei [Defense minister announces plans for SDF robots for international assistance for nuclear accidents]," *Asahi Shimbun*, June 4, 2011.

⁵⁶ A June 2011 Pew Research Center survey, for example, found that 95% of the Japanese public views the SDF response to the earthquake positively. The standing of the US-Japan alliance also appears to have been enhanced following Operation Tomodachi, the first non-exercise joint US-Japan military operation – the same poll finds that 85% of Japanese view the US positively, the highest approval rating in a decade. See "Survey Report: Japan resilient, but see economic challenges ahead," *Pew Research Center*, June 1, 2011. Available at: <http://pewglobal.org/2011/06/01/japanese-resilient-but-see-economic-challenges-ahead/>. [Accessed June 15, 2011.] Also see Kazuyo Kato, "The Response to Japan's March 11 Disaster: When the Going Gets Tough..." *CSIS Japan Chair Platform*, March 25, 2011; Yuki Tatsumi, "The Role of the Japan Self-Defense Forces in the Great Eastern Japan Earthquake," *Stimson Center Spotlight*, March 17, 2011.

achievement considering that social security expenditures, which generally account for about one quarter of the national budget, rose by 22.7%, or ¥3.8 trillion, during that same period.⁵⁷

Koizumi took advantage of administrative reforms that had been enacted earlier by Hashimoto, which enabled the centralization of budgetary powers in the Prime Minister's office through the creation of the Council of Economic and Fiscal Policy (CEFP). As Jennifer Amyx highlights, "the council is intended to be a mechanism for coordination across government agencies, and a means for greater cabinet influence over policies", thereby providing Koizumi and future Japanese leaders with a tool to take a more active role in the various budgetary processes.⁵⁸ Specifically, the most important component of this new institution with respect to the budgetary process was the CEFP's publication in June (prior to the submission of the ministerial budget requests) of the "Basic Policies for Economic and Structural Reform", a document meant to guide Japan's Ministry of Finance in its budget negotiations with each ministry. The CEFP also served as a mechanism for the Cabinet Office to become more directly involved in budgetary negotiations with ministries. This new council thus gave Koizumi greater powers over the budget than any of his predecessors.

Despite a rapid succession of Prime Ministers since Koizumi's departure, and never before seen changes in the political coalitions in charge of the government of Japan, ballooning public debt and projected increases in social security spending have given new leaders little choice but to continue the fiscal austerity measures undertaken by Koizumi. Budgetary cutbacks for all major ministries have continued to be enacted, and, under the DPJ government, the

⁵⁷ Figures extracted from *Nihon no bōei* 2005, p. 373, and *Nihon no bōei* 2009, p. 425, illustrate that Japanese social security expenditures grew from ¥16.8 trillion to ¥20.6 trillion between 2000 and 2006.

⁵⁸ Jennifer A. Amyx, *Japan's Financial Crisis: Institutional Rigidity and Reluctant Change* (Princeton, NJ: Princeton Univ. Press, 2004), p. 251.

creation of budget-cutting panels (*jigyō shiwake*) centralized even more budgetary power in the hands of politicians.

Despite receiving relative priority, Japan's defense budget has slowly declined under the pressures of austerity. From 2002 to 2010, the defense budget declined cumulatively by 5.2%, while expenditures by Japan's neighbors grew at a swift pace – during the same period, South Korea's defense budget ballooned by 80%, Taiwan's by 27%, and China's by a massive 208%.⁵⁹ As a consequence of Japan's rapidly aging population, entitlement spending has consumed a greater portion of government resources, pushing the defense budget share of total expenditures down from 6.1% in 2002 to 5.1% in 2010.⁶⁰

Despite the Japanese defense establishment's relative advantage in domestic budgetary negotiations, defense spending remains subject to significant and continuing downward pressure. According to a defense official involved in budgetary matters, the MOF's regular demands for budget cutbacks, combined with the difficulty of altering personnel expenditures, has shifted an enormous burden on equipment financing and procurement, which has been curtailed by 16.0% between 2002 and 2010. Personnel expenditures, in comparison, declined by 6.4% during the same period.⁶¹

The most visible consequence of the cutbacks in equipment spending is the number of

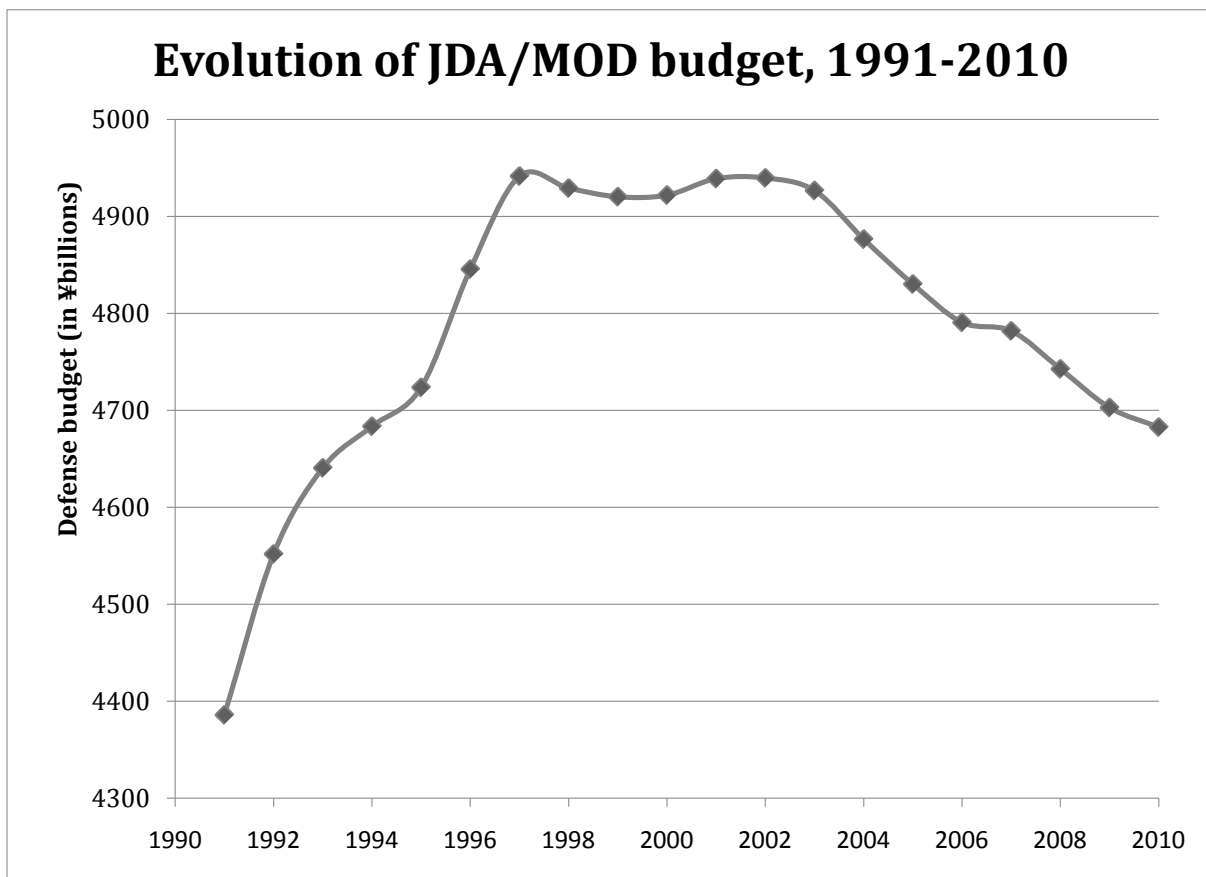
⁵⁹ These figures are calculated from the data at the SIPRI Military Expenditure database, accessible at <http://milexdata.sipri.org/> [Accessed May 2011]. The measures above cite growth if the budgets are measured in local currency. If measured in US dollars, the defense budgets grew as follows: South Korea by 43%, Taiwan by 15%, and China's by 149%. The military expenditures of North Korea are not published by its government.

⁶⁰ Social security expenditures have grown from 17.4% of all government spending in 1991 to 25.8% in 2006 and 29.5% in 2010. The absolute rise in social security spending during the 1991-2010 period was 123.3%.

⁶¹ Ministry of Defense Japan, *Bōei Hakusho* (Defense of Japan White Paper), various years. Research and development funds have been subject to large fluctuations, occasionally rising 30%, as in 2006, and declining 30%, as in 2009 – but these fluctuations are of minor significance as R&D never surpassed 3.6% of the total defense allocation.

aircraft in all three branches of the military. Between 1999 and 2010, the total number of aircraft in the Japanese SDF has declined from 1166 to 1066. Patrol aircraft have gone from 198 to 182, and observation aircraft are down from 198 to 138. The National Defense Program Guidelines have established the maximum threshold of combat aircraft at 260 in 2010, down from 300 in 1996, and one defense official familiar with budgetary negotiations over the ASDF noted that MOF tried to negotiate that number down further to 220 for the 2010 NDPG.⁶²

Figure 6



Sources: Bōei Hakusho, various years

⁶² NDPG 1996 & 2010. Personal interview with MOD official, March 2011.

There are two factors that could potentially mitigate the overall impact of the decline in defense spending. First, the cost of military equipment in Japan is generally significantly higher than it is in other nations, mainly as a result of the unofficial *kokusanka* policy that gives preference to Japanese firms for the provision of equipment to the Japanese Self-Defense Forces.⁶³ Japanese firms are unable to export the equipment they produce abroad as a result of the Three Principles on Arms Exports, or “3Ps”, resulting in high unit costs within Japanese borders. For example, in 2007, the primary Japanese assault rifle, Type-89, cost the government ¥320,000 per unit, while the American equivalent, the M-16, cost ¥70,000 per unit.⁶⁴ Hence, it is possible for the equipment budget to be curtailed by reducing unusually high unit costs. However, even though Japan’s economy has been mired in deflation, unit prices for military equipment have exhibited no clear downward trend. For example, the cost of a SH-60K patrol helicopter for the MSDF was ¥6.03 billion in 2002 and ¥5.97 billion in 2010.⁶⁵ From 2000 to 2011, the cost of a CH-47JA Chinook transport helicopter for the GSDF rose from ¥5.08 billion to approximately ¥6 billion; the unit price for the Type-90 tank, which cost ¥886 million in 2000, was ¥1.03 billion in 2010, though there were significant price fluctuations in between.⁶⁶ Furthermore, the arms export ban has yet to be lifted despite internal bureaucratic debates over whether to do so in 2010 and sustained pressure from the Japanese defense industry. Therefore,

⁶³ See Michael J. Green, *Arming Japan: Defense Production, Alliance Politics, and the Post War Search for Autonomy* (New York: Columbia University Press, 1995), for an in-depth exploration of the impact of *kokusanka* on Japan’s defense production.

⁶⁴ Toshiyuki Shikata, *Omoshiroi Hodo Yoku Wakaru: Jieitai* (Tokyo: Nihon Bungeisha, 2007). See also for many more examples of the disparity in procurement costs between the US and Japan.

⁶⁵ Ministry of Defense, *Nihon no bōei 2002, and Nihon no bōei 2010*.

⁶⁶ “Defense Programs and Budget of Japan: Overview of the FY2011 Budget”, Japan Ministry of Defense, 2011, p. 23. [Available at: http://www.mod.go.jp/e/d_budget/pdf/230401.pdf.]; and “Defense Programs and Budget of Japan: Overview of the FY2010 Budget”, Japan Ministry of Defense, 2010, p. 25. [Available at: http://www.mod.go.jp/e/d_budget/pdf/220416.pdf]. Data also obtained from Ministry of Defense, *Nihon no Bōei 2000*.

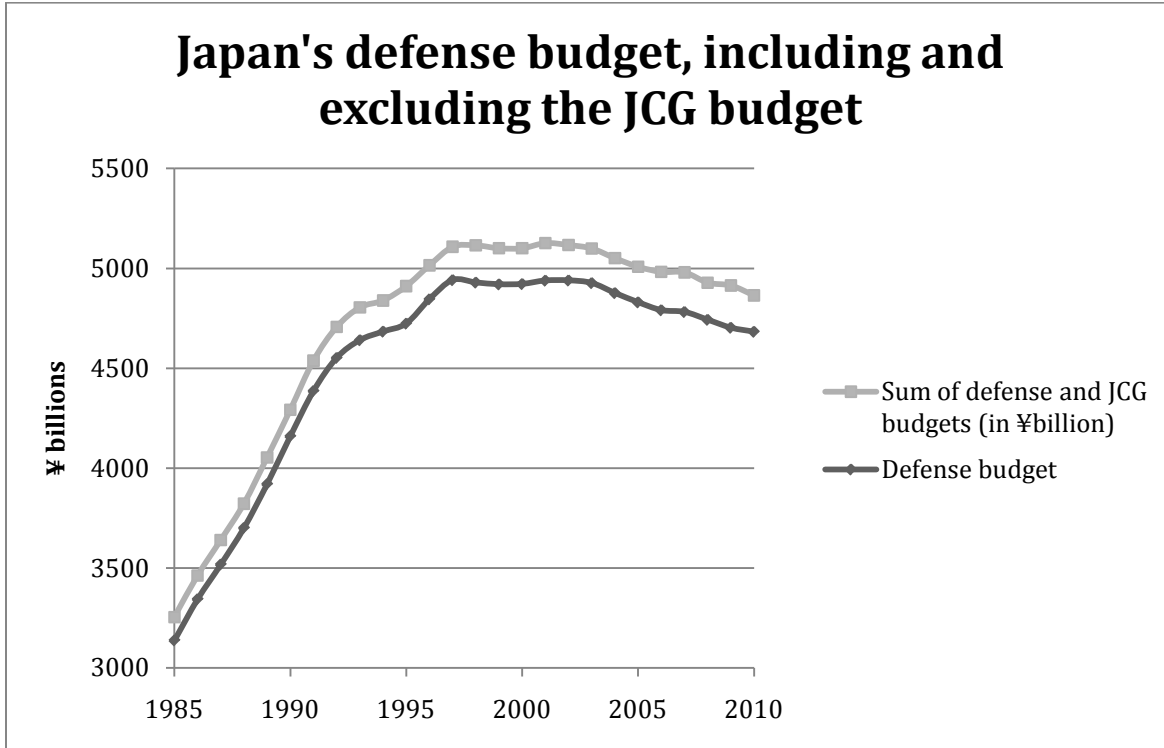
despite room for greater efficiency, the decline in the equipment budget has resulted in a slowing rate of procurement for the SDF.

A second facet of Japanese security policy that may mitigate military expenditure declines is the increased allocation of resources to and expansion in the roles and missions of the Japan Coast Guard (JCG), which is not officially under the umbrella of the SDF. The passage of the Japan Coast Guard Law in 2001, which authorizes under certain circumstances the use of force to prevent breaches of Japanese territorial waters, coupled with the procurement of big-ticket items such as 21 new boats and 7 new jets in 2005, and 2 two long-range Gulfstream jets in 2006, has led Richard J. Samuels to term the JCG a “de facto fourth branch of the SDF.”⁶⁷ Consistent with Samuels’ argument, there has been an overall increase in the JCG budget even during austerity: from ¥177.5 billion in 2002 to ¥182.6 billion in 2010, a 3% increase over the 8 year period.⁶⁸ However, this modest increase amounts to a small fraction of the amount cut from the official Japanese measures of defense expenditures between 2002 and 2010, which totals ¥256.9 billion. This cumulative cutback exceeds the allocation to the entire JCG budget in the highest year (¥211.5 billion in 2009). Hence, as shown in Figure 7, even inclusive of the JCG budget, there is a clear downward trend in Japanese defense expenditures over the past decade. Although the evolution of the JCG as an element of Japanese military capabilities is an important development, it has not compensated for declines in overall military expenditures.

⁶⁷ Richard J. Samuels, “‘New Fighting Power!’: Japan’s Growing Maritime Capabilities and East Asian Security,” *International Security*, Vol. 32, No. 3 (Winter 2007/08), pp. 95, 98-99.

⁶⁸ Ministry of Finance, *Ippan Kaikei Yosan*, various years.

Figure 7



Sources: Christopher W. Hughes, *Japan's Remilitarisation* (New York: Routledge for International Institute for Strategic Studies, 2009); Ministry of Finance Japan, *Ippan Kaikai Yosan* (General Account Budget official document), various years.

Adapting the Military to Fiscal Austerity

Japan's military establishment has not stood idly by in the face of fiscal austerity. The evolving security environment surrounding Japan led to new security policy priorities in the 2004 NDPG, which downgraded the threat of a territorial invasion of Japan, and later the 2010 NDPG, which emphasized the need for a "dynamic defense force" that would focus on maritime security and the protection of the Japan's EEZ.⁶⁹ As a result, there has been a natural amplification in the role played in the MSDF and ASDF for meeting Japan's national security

⁶⁹ National Defense Program Guidelines 2010, p. 7.

requirements. The role of the GSDF has simultaneously diminished.

Until austerity was implemented in earnest, there had been no meaningful reallocation of resources from the GSDF towards the MSDF and ASDF. The necessity for budgetary cutbacks has stimulated the defense establishment to begin rationalizing resource allocation among the branches of the SDF. Through the National Defense Program Guidelines published in 2004, the number of field artillery equipment and the number of tanks were both reduced from 900 to 600, and most recently, in 2010, to 400 each.⁷⁰ Moreover, while the personnel levels for both the MSDF and ASDF were preserved at the same level in the past 3 editions of the NDPG, the maximum number of active troops allowed in the GSDF has been reduced from 154,000 in 1996 to 147,000 in 2010.⁷¹ The functional importance of the GSDF was downgraded after the fall of the Soviet Union and the near-disappearance of the threat of territorial invasion, yet it took until 2004, in the midst of fiscal austerity, for the defense establishment to engage in a logistical reduction of GSDF equipment. In this area, austerity has acted as an impetus for meaningful, constructive change in Japan's security posture.

Austerity may also help Japanese defense policymakers deal with personnel costs, which have been notoriously difficult to reduce in past years. The Democratic Party of Japan came to office in 2009 advocating for a 20% across-the-board reduction in the salaries of public sector employees. This target was subsequently reduced to 5-10%, with savings slated to go towards reconstruction from the 2011 Great Tōhoku Earthquake. The reductions include the salaries of MOD and SDF employees.⁷² MOD officials note that this may assist them in budgetary

⁷⁰ National Defense Program Guidelines, 1996, 2004, and 2010.

⁷¹ National Defense Program Guidelines, 1996 and 2010. The biggest reduction occurred in 2004, with active GSDF troops brought down to 148,000. These numbers do not include the 6,000 GSDF reserve forces, which consist of only a small percentage of total personnel numbers in the GSDF.

⁷² “国家公務員給与：引き下げ法案を閣議決定 (Salaries of Public Servants: Reduction Approved by Cabinet Decision),” *Mainichi Newspaper Evening Edition*, June 3, 2011.

rationalization – as long as the total MOD budget is reduced less than 10%, the policy will allow for the reallocation of resources from personnel expenditures to much-needed areas such as hardware procurement.

Japan's defense establishment has also coped with austerity by implementing various life extension measures for existing military hardware. One of the most notable announcements found in the NDPG issued in December 2010 was the expansion of the Japanese Maritime Self Defense Force submarine fleet from 16 submarines to 22. While much speculation suggests that Japan took this step in response to the incident in the East China Sea in September 2010, defense officials note that the expansion of the submarine fleet had been decided upon before that incident as a means to expand Japan's intelligence, surveillance, and reconnaissance (ISR) capability.⁷³ While the increase in vessel numbers conveys the impression that Japan is acquiring a larger number of submarines, MOD's strict fiscal limitations have prevented it from taking such steps – the procurement rate of one new submarine per year has remained stable. Instead, all existing submarines in the MSDF fleet are having their commissions extended from 16 to 22 years, resulting in no submarines being decommissioned during the next six years.⁷⁴

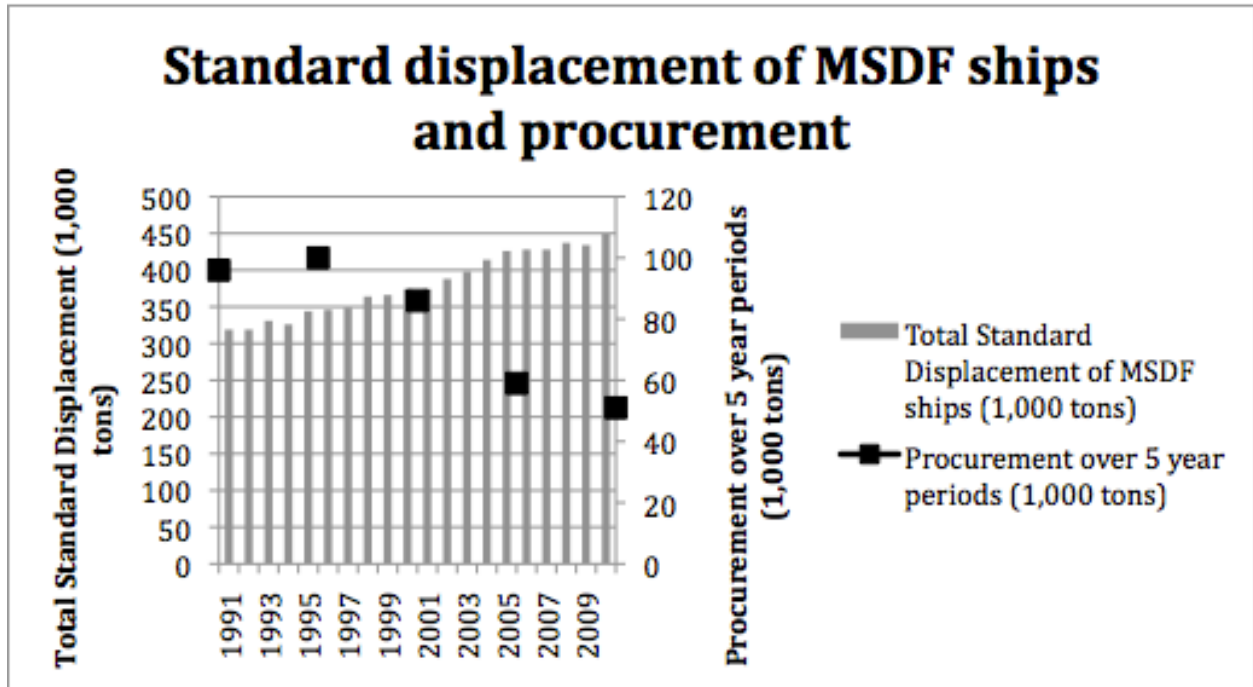
Japan's MSDF as a whole has similarly increased the tonnage of its vessels while reducing tonnage procured: the MTDP from 1996 illustrates that Japan procured 100,000 tons worth of ships in the following five year period, whereas only 51,000 tons worth of ships will be procured in 2011-2015. Still, the tonnage for all MSDF vessels combined expanded from 366,000 in 1999 to 449,000 in 2010, a 23% increase. Japan is retiring its naval vessels at a

⁷³ Personal interviews, Ministry of Defense officials, March 2011.

⁷⁴ In regards to submarines, this extension brings the length of MSDF commissions closer to the level seen in other advanced industrialized states, and thus could arguably be interpreted as a means to reduce inefficiencies in the procurement system. For example, the USA's oldest Ohio Class submarine, the USS Ohio, has been on active service for 30 years, since 1981, though it did undergo a complete overhaul in 2003. The UK's Trafalgar class submarines have also just begun decommissioning in 2009 after being in use since the mid-1980's.

slower rate than it is procuring them, postponing the decommissioning of vessels for a wide array of ships. Life extension mechanisms have been extended to encompass the Asagiri class destroyers, Hatsuyuki class destroyers, and Towada class supply vessels for the MSDF.⁷⁵

Figure 8



Sources: Ministry of Defense Japan, *Boei Hakusho* (Defense White paper), 1991-2010; Ministry of Defense Japan, *Chukibo* (Mid-Term Defense Program), various years.

The procurement rate for aircraft has also declined considerably: the mid-term defense program for 1996-2000 projected 47 fighter jets to be procured, the 2001-2005 plan projected 22, and the most recent MTDP, for 2011-2015, projects that only 12 fighter jets will be built. This has fueled much concern regarding the rapidly aging combat force, in particular the F-4s that have now been in commission for over 30 years. Japan's ASDF has been discussing plans to

⁷⁵ "Defense Programs and Budget of Japan: Overview of the FY2011 Budget", Japan Ministry of Defense, 2011, p. 23. Available at: http://www.mod.go.jp/e/d_budget/pdf/230401.pdf.

purchase new F-X aircraft for nearly a decade, yet funding limitations have prevented the F-X “competition” from taking place until 2011.⁷⁶

Japanese officials in the Air Self Defense Forces (ASDF) have become increasingly concerned with China’s rapid advancements in air power. Indeed, the PRC already possesses more advanced 4.5th generation fighter jets, and has confirmed the development of the 5th generation stealth fighters Chengdu J-20 and Shenyang J-14.⁷⁷ In addition to China’s progress in this realm, “scrambles” by ASDF aircraft to respond to Chinese incursions into Japanese airspace rose from less than 20 in 2004 to 105 in 2005.⁷⁸ Japanese policymakers consequently developed a desire to purchase an advanced stealth fighter, taking an interest in Lockheed Martin’s F-22A Raptor aircraft. Japan’s Defense Minister in 2007, Fumio Kyuma, once asked US Secretary of Defense Robert Gates for top-secret data regarding the technical details of the F-22A.⁷⁹ With Japan’s funding cutbacks for procurement, and the US refusal to export this stealth fighter jet, Japan turned to refurbishing and modernizing its existing F-15 fleet, another stop-gap measure which is meant to extend the life of heavy equipment.⁸⁰ Japan had already embarked on the refurbishment of 12 of these aircraft between 2001 and 2005, and then had planned for 26 between 2006 and 2010, but the latter figure was revised to 48 due to funding cutbacks and the difficulties of procuring new fighter jets.⁸¹ Given that Japan’s fleet of F-15’s is slightly above 200 aircraft, about a third of Japan’s F-15’s will have been refurbished by 2015.

In order to accommodate the life extension of heavy pieces of equipment, the Ministry of

⁷⁶ Stephen Trimble, "Japan launches F-X fighter RFP," *Flight International*, April 14, 2011.

⁷⁷ Sergio Coniglio, “China Develops Stealth Fighter,” *Military Technology*, Vol. 30, No. 2 (Feb., 2006), pp. 44-46; also, William Sweetman, "China’s J-20 Stealth Fighter In Taxi Tests," *Aviation Week*, January 3, 2011.

⁷⁸ *Asagumo News*, April 27, 2006.

⁷⁹ John T. Bennett, “Japan Defense Chief asks for Secret F-22 data,” *Air Force Times*, May 2, 2007.

⁸⁰ Siva Govindasamy, "Mitsubishi to lead F-15 upgrades," *Flight International*, November 26, 2007.

⁸¹ Mid-Term Defense Plan, 2001, and Mid-Term Defense Plan, 2005.

Defense has had no choice but to enlarge its budget for “maintenance” – the only component of defense spending to have risen in the past decade – by 12% since 2002.⁸² Faced with rising threats and fiscal austerity, Japanese defense policymakers have extended the lives of military equipment most vital to Japanese national security, namely submarines and fighter jets, and maintenance costs have increased in tandem. In 2003, the budgetary allocation for maintenance surpassed equipment procurement, and the gap has subsequently widened: in 2010 the maintenance budget was 31.6% larger than that for procurement. In contrast, near the end of the Cold War in 1989, the equipment budget exceeded that for maintenance by 84.9%. This highlights a fundamental change for the SDF over the past twenty years: it has shifted its focus from a build-up of military capability to the preservation of it. As Japan’s military equipment continues to age, maintenance needs will likely rise further: the Center for Naval Analyses has found that for each additional year of age, the probability for unscheduled maintenance of aircraft rises by 0.8% for land-based aircraft, and by 3.5% for carrier-based aircraft.⁸³ Even with increased expenditures on maintenance, aging equipment is likely to lead to problems such as higher incidence of corrosion, fatigue, and obsolete parts.⁸⁴ Maintenance funds have also recently begun falling under the pressures of fiscal austerity, contracting by 1.9% between 2008 and 2010.⁸⁵

The implementation of life extension mechanisms and higher budgetary allocations towards equipment maintenance have allowed Japan’s defense establishment to build up its hardware despite austerity. However, such measures cannot continue indefinitely. Japan faces the

⁸² Ministry of Defense, *Nihon no bōei*, various years.

⁸³ Peter J. Francis, and Jeffrey B. Shaw, *Effect of Aircraft Age on Maintenance Cost* (Alexandria, VA: Center for Naval Analyses, March 2000), p. 17.

⁸⁴ United States Cong. Congressional Budget Office, *The Effects of Aging on the Costs of Operating and Maintaining Military Equipment* (Washington: GPO, 2001), pp. 22.

⁸⁵ Ministry of Defense, *Nihon no bōei*, 2008, 2009 and 2010.

specter of a sharp reduction in military capabilities in the coming decade as equipment procured during the 1970s and 1980s – a “baby boom” for hardware motivated by Soviet expansion – finally reaches obsolescence. According to MOD, of the 106 F-4’s procured from 1971 to 1977, the 70 that remained in 2010 are scheduled for retirement in the next decade.⁸⁶ Moreover, the 14 destroyers procured by the MSDF between 1977 and 1983 – many of which are the Asagiri and Hatsuyuki class destroyers that just had their lives extended – are going to be decommissioned in the next ten years, amounting to a potential reduction of around 30% of Japan’s destroyer fleet.⁸⁷ Because of higher unit costs and declining procurement budgets, Japan acquires hardware today at a much slower rate than was feasible in prior decades – e.g. 1 destroyer and 5 fighter jets per year compared to about 3 destroyers and 18 fighter jets per year in the 1980s. This will make it extremely difficult, if not impossible, for Japan to continue its current course of force expansion despite declining budgets.

Through higher maintenance budgets and life extension mechanisms, Japan has avoided immediate reductions in military hardware. In fact, in terms of submarines and destroyers, Japan has actually built up its military hardware despite sharp reductions in procurement budgets. At present, the defense budget of Japan is still large in relative terms. Even after curtailments, Japan maintains the seventh highest military expenditures in the world, behind the United States, China, France, the United Kingdom, Russia, and Germany.⁸⁸ Furthermore, Japan possesses a competent military force boasting high-quality training for its pilots and midshipmen, superior air command and control systems, outstanding marine patrol aircraft, and a strong naval force.⁸⁹

⁸⁶ Ministry of Defense, “NDPG 2010 – Towards a Dynamic Defense Force,” June 14, 2011.

⁸⁷ *Ibid.*

⁸⁸ Akira Kawasaki, “Japan’s Military Spending at a Crossroads,” *Asian Perspective*, Vol. 33, No. 4 (2009), p. 131.

⁸⁹ Jennifer M. Lind, “Pacifism or Passing the Buck: Testing Theories of Japanese Security Policy,” *International Security*, Vol. 29, No. 1 (Summer 2004), pp. 97-101.

However, Japan's current "military buildup" is wholly dependent on what are essentially short-term coping mechanisms. Aging Japanese military equipment is likely to wreak its effects with each additional life extension measure. In addition, these coping strategies cannot continue indefinitely. Japan faces the prospect of sharp declines in key military hardware in the coming decade. The fiscal predicament is dire, with 48% of Japan's 2010 general account budget funded by government-issued debt.⁹⁰ Despite modest success in the early 2000s, Japanese austerity efforts have yet to stem the tide of rising red ink. The tragic Great Tōhoku earthquake and tsunami of 2011 will lead to a heavier fiscal burden on the Japanese government. This raises the prospect that the stopgap measures being undertaken by the Japanese defense establishment will ultimately confront the hard reality that Japan's fiscal problems are hardly temporary in nature.

Conclusion

The politics of fiscal austerity will critically shape the course of international security in coming years. Japan's predicament over the past twenty years illustrates the pressures likely to be confronted by other great powers, particularly advanced industrialized democracies, in the near future. We will conclude by considering the lessons from Japan's example and broader implications for the study of international security. Although Japan's defense establishment confronted the challenges of fiscal austerity a step ahead of other countries, Japan's response should not be naively extrapolated to other cases. As we discussed earlier, Japan's security context is distinct from that of other countries. As such, we do not expect uniformity in

⁹⁰ Ministry of Finance, "Japanese Public Finance Fact Sheet: FY 2010 Budget (Supplementary Data)," December 24, 2009, p. 2. Accessed in May 2010. Accessible at: <http://www.mof.go.jp/english/budget/budget/fy2010/pamphletjpf2010s.pdf>

outcomes. Within the common constraints posed by fiscal austerity, there is room for variation in response. What aspects of Japan's response are likely to apply to other countries?

A natural extension of this project is a cross-national examination of how countries have responded to the pressures of fiscal austerity. Many countries have implemented defense expenditure reductions in the aftermath of the 2008 subprime crisis. Like Japan, these countries have tended to privilege the defense establishment over other government agencies, but to varying degrees. The United Kingdom's Strategic Defense Review, which plans for 8% in defense budgetary cuts by 2015, is relatively shallow in comparison with the 19% cuts planned for overall spending.⁹¹ France has slashed its defense budget by 3.1% while overall spending diminished 11.7%, and it has planned budgetary increases for defense in 2012 and 2013.⁹² Spain too, in enacting its budget for the fiscal year 2011, cut back 7% of defense spending in comparison with 16% for all ministries combined.⁹³ Germany has in fact increased its military expenditures by 1.4% for 2011 while cutting overall spending by 3.8%, even though the government is hoping for more significant cuts in subsequent years.⁹⁴ The United States has stood apart somewhat – the 2010 budget saw a rise in non-security spending of 10.7% over 2009 (excluding the stimulus measures associated with the American Recovery and Reinvestment Act of 2009), in comparison with a 3.4% rise in defense spending (excluding the separate

⁹¹ "Spending Review 2010: George Osborne wields the axe", *BBC News*, October 20, 2010.

⁹² Ministère de la Défense, "Projet de loi de finances 2011: Budget de la défense", September 29, 2010, p. 17. The percentage decline cited here concerns defense spending excluding pensions. Including pensions, the budgetary decline is only 2.1%. France also is planning increases in defense spending for the years 2012 and 2013. For total spending figures, see Morgane Remy, "Budget 2011: Ce qu'on en sait déjà,"

⁹³ See Victor Mallet, "Spain unveils Austere 2011 budget," *Financial Times*, September 24, 2010, and "Defense Minister says his Ministry's budget for 2011 ensures the safety and operability of the FAES," *La Cerca*, November 16, 2010.

⁹⁴ See Albrecht Muller, "German spending to rise 1.4% in 2011," *Defense News*, September 16, 2010.

discretionary funds for the conduct of the Iraq and Afghanistan wars).⁹⁵ However, the FY 2011 budget, which is more austere, targets a 3.4% increase in defense spending over the previous year combined with a 1.5% decline in non-security-related spending.⁹⁶ The Netherlands, on the other hand, has planned for the cut of 10,000 personnel (around one seventh of its armed forces) and 1 billion euros over the next five years, amounting to close to 12% in defense cuts in comparison with around 8% cuts for all government spending.⁹⁷ Thus, there is interesting cross-national variation in the resilience of defense expenditures that is worthy of comparative study.

Japan's experience indicates that austerity can serve as a wakeup call for defense establishments to reallocate resources more efficiently and reduce waste. On this score, Japan's record is mixed. Austerity served as the catalyst for Japan to adapt its posture to contemporary military realities: reducing the size of the GSDF force, decommissioning tanks and howitzers, and renewing focus on maintaining and developing MSDF and ASDF capability. Until the National Defense Program Guidelines of 2004, which was published amidst austerity, such a shift had lagged even though the threat of a territorial invasion was downgraded much earlier in 1996. Across-the-board personnel cost cuts have also provided some justification to free up resources for much-needed procurement. On the other hand, military procurement remains costly and inefficient despite a compelling case for rationalization. Most SDF bases remain in Hokkaidō in the northeast, even though the NDPG called for a shift of forces towards the southwest of Japan back in 2004. Reform of the non-export principles and *kokusanka* offer the greatest remaining opportunities for Japan to counteract long-term budgetary reductions.

⁹⁵ United States Office of Management and Budget. *The Budget for Fiscal Year 2011* (Washington, DC: GPO, February 1, 2010), p. 176.

⁹⁶ *Ibid.*

⁹⁷ Matt Steinglass, "Dutch tank crews take aim at budget cuts," *The Financial Times*, April 29, 2011.

Japan undoubtedly encountered austerity with greater room for rationalization due to its limited post-War II military engagements and historical reliance on the U.S.-Japan alliance. The scope for efficiency improvements may be smaller in other countries, particularly those with frequently-engaged military forces such as the United States and United Kingdom. However, austerity will likely serve as a catalyst for some measure of reform regardless of context – rationalization is inherently more attractive than sharp reductions in capabilities. U.S. Defense Secretary Robert Gates has sought to utilize calls for spending restraint in the federal budget to prepare the armed forces for the future by attempting “to generate efficiency savings by reducing overhead costs, improving business practices, or culling excess or troubled programs.”⁹⁸ Other nations may similarly benefit from the opportunity presented by fiscal austerity to overcome political opposition and shed unnecessary or nonessential military expenditures.

Japanese equipment procurement budgets have suffered far more than personnel budgets in the context of fiscal austerity. The political and logistical difficulty of cutting back expenditures for military personnel and officers’ salaries is hardly unique to Japan. This means the brunt of austerity will likely fall on procurement budgets in most countries. As illustrated by Japan, the impact of cuts to equipment budgets is unlikely to be reflected immediately in quantitative measures of military capability. There are two main reasons for this. First, the practice of extending payment schedules over prolonged periods is commonplace in military establishments, and budgetary cuts in a given year are unlikely to impact budgetary commitments made in previous years. The practice of deferred payments enables nations to reduce undue pressure on the broader budget and helps to achieve a certain level of consistency. In Taiwan, for example, the Ministry of National Defense has engaged in anticipatory budgeting

⁹⁸ Robert M. Gates, *Statement on Department Budget and Efficiencies*, January 6, 2011. Available at: <http://www.defense.gov/Speeches/Speech.aspx?SpeechID=1527> [Accessed May 2011].

for costs to be covered for individual items over subsequent years.⁹⁹ This practice is also common in the United States, which has a history of spreading out payments for big-ticket military hardware.¹⁰⁰ While procurement projects are occasionally canceled after payments have already been made in previous years, this is uneconomical and infrequent.¹⁰¹

Second, despite cutbacks to procurement budgets, military organizations have the option to enact life extension mechanisms for big-ticket military equipment already in use. Japan has been doing so with its submarines, destroyers, and aircraft, reducing military spending while maintaining or increasing hardware. Nations will in effect be able to preserve the bulk of heavy military equipment for a number of years through such procedures, in spite of austerity. Similar life extension mechanisms were undertaken during other periods of military budget reductions, such as those experienced by the United States in the decade following the Cold War.¹⁰² However, such stop-gap measures can be helpful only over short time horizons. On the other hand, the combined factors outlined at the beginning of this article mean that contemporary pressures for fiscal austerity are highly unlikely to be temporary in nature. The obsolescence of equipment will present an important, but difficult to measure, challenge to military capabilities over the long-term. Equipment malfunctions are likely to rise with increased age – e.g., in 2010, three 45 year old aircraft in a New Zealand disaster relief operation broke down

⁹⁹ W Wen, W.K.Wang, and C.H. Wang, “A knowledge-based intelligent decision support system for national defense budget planning”, *Expert Systems with Applications*, Vol. 28, 2005, p. 57.

¹⁰⁰ See, for example, John P. Crecine, *Defense budgeting: organizational adaptation to external constraints* (Santa Monica: Rand Corporation, 1970).

¹⁰¹ Examples of this include the cancellation of an order of forty-seven AH-64D Apache Longbow helicopters from Fuji Heavy Industries in 2007, and the abandonment of the United Kingdom funding for the Nimrod spy plane in 2010.

¹⁰² United States Congress. U.S. House of Representatives, Subcommittee on Military Procurement, Committee on Armed Services. *Statement of Lane Pierrot on Aging Military Equipment* (Washington: GPO, 24 February, 1999).

simultaneously.¹⁰³ This will ultimately inflate operation and maintenance budgets, counterbalancing the cost savings from lower procurement.¹⁰⁴

This points to an additional implication of this study: conventional measures of military capabilities will become increasingly unreliable in the context of fiscal austerity. Numerical indicators based on military hardware are particularly problematic as countries economize by extending the life of potentially obsolete equipment. Similarly, military expenditures and total personnel, variables included in widely utilized sources such as the National Material Capabilities dataset, will overstate actual capabilities as the quality of military hardware deteriorates and funds are soaked up by maintenance. More generally, measures that are frequently used as proxies for state capabilities – e.g., GDP, total government expenditures, total and urban population – may also prove misleading as populations age and more resources are devoted to non-discretionary social programs. An important development in economic growth accounting over the past two decades is the incorporation of demographic factors, which have been shown to explain a considerable degree of variation in cross-national development patterns.¹⁰⁵ Analogously, proxies for national military capabilities ought to be updated to take into account the effects of demographic transition and other drains on public finances.¹⁰⁶

¹⁰³ Dave Williams, “Aircraft ‘reliable’ despite three breakdowns,” *New Zealand Herald*, July 7, 2010.

¹⁰⁴ United States Congress. U.S. House of Representatives, Subcommittee on Military Procurement, Committee on Armed Services. *Statement of Lane Pierrot on Aging Military Equipment* (Washington: GPO, 24 February, 1999).

¹⁰⁵ e.g., see Andrew Mason, “Demographic Dividends: The Past, the Present, and the Future,” in Mitoshi Yamaguchi (ed.), *Population Change, Labor Markets and Sustainable Growth: Towards a New Economic Paradigm* (Bingley, UK: Emerald Group Publishing Limited, 2007), pp. 75-98; David E. Bloom, David Canning, and Jaypee Sevilla, *The Demographic Dividend: A New Perspective on the Economic Consequences of Population Change* (Santa Monica: RAND, 2003); David E. Bloom and Jeffrey G. Williamson, “Demographic Transitions and Economic Miracles in Emerging Asia,” *The World Bank Economic Review* (Washington, D.C.: 1998).

¹⁰⁶ For some discussion along these lines, see Brian Nichiporuk, *The Security Dynamics of Demographic Factors* (Santa Monica: RAND, 2000) and other work by the same author.