



Cyber Security Export Market: Japan

2014

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EXECUTIVE SUMMARY

- » Japan's defense budget of \$58 billion in 2013 has been one of the smallest in the last several years¹ but yet the 'fifth largest in the world and second largest in Asia'².
- » There are two main security issues currently facing Japan – its maritime and cyber borders with China and North Korea. Since the Second World War, Japan has been dependent on the United States for its defense capabilities.
- » Japan's need for cyber security expertise remains high. There are myriad opportunities for Virginia-based companies to export their cyber security related products and services to the Japanese market
- » The government's revised Cybersecurity Strategy outlined its goals which include increased coordination among its agencies to reduce malware infections by 2015 and to double the size of its national information security market by 2020
- » The new government set firmly in place in 2013 has heralded new economic plans. Abe plans to spend \$122 billion on infrastructure as part of a stimulus package. Infrastructure spending brings with it the demand for security products and services to protect it.
- » Japan's market for security products and services broadly defined, is worth \$6.3 billion, and is expected to grow at 3 percent a year in the immediate future³. Some of the cyber security market segments with growth opportunities include cloud technologies and other internet-protocol systems related services.
- » Japan is a party to the [World Trade Organization's Information Technology Agreement](#) based on which duties are eliminated for information technology products included in the agreement. This participation can be beneficial for some US exporters.
- » Japan is a niche market for cyber security. It requires specialized skills such as innovative products or services which are low cost or environment friendly⁴. A focus on the customer and after sales services is also important in Japan for both government as well as commercial contracts.

¹ (Japan Defense and Security Report, Business Monitor International (BMI), Q3, 2013)

² (Doing Business in Japan, US Commercial Service, 2013)

³ (US ITA guide to security exports, 2013)

⁴ (ITA Guide to Security Export, 2013)

CYBER SECURITY IN JAPAN

JAPAN'S CYBER SECURITY STRATEGY

There are various branches of government in Japan that are responsible for implementing the nation's National Cyber Security Strategy (NCSS). The four agencies including the [National Police Agency](#), the [Ministry of Internal Affairs and Communications](#), the [Ministry of Economy, Trade and Industry](#) and the [Ministry of Defense](#) are represented on the Information Security Policy Council and work along with the National Information Security Center and various committees to manage the cyber defense systems in Japan⁵. While the Ministry of Defense is the sole customer for non-cyber defense contracts, the government's cyber security efforts include the other agencies also.

Japan revised its Cybersecurity Strategy in 2013. Its previous strategy revolved around preventing cyber espionage. Since the attacks on Mitsubishi Heavy Industries and other organizations in 2011 and 2012, Japan started serious efforts to defend against cyberattacks as part of its national security program. The revised Cybersecurity Strategy outlined its goals that include increased coordination among its government agencies to reduce malware infections by 2015 and to double the size of its national information security market by 2020⁶. The National Cyber Security Strategy released by the Ministry of Defense on July 26, 2013 clearly stated that Japan intends to collaborate with the US and the private sector. It also planned to implement policies to make the necessary security goods and services available for security purposes. As this strategy goes into effect over the next couple of years, it creates opportunities for US exporters to contribute to the government initiatives.

CYBER ATTACKS

The turning point for Japan on the issue of cyber security came around 2010-2011 when the websites of the National Police Agency were hacked. Japan suspected the Chinese of perpetrating the attacks. Private companies in Japan also encountered cyberattacks in the same period. The government started focusing on cyber security more seriously with the establishment of cyber-terrorism unit by the Ministry of Defense. The unit started with 100 cyber experts. It appears as though the attackers targeted Japan's infrastructure comprising mainly of control systems used in power plants or manufacturing industry that were unprepared for the attacks⁷.

At the end of 2013, the threats to Japan's cyber space remained elevated due to its proximity and history with China and North Korea. Since Japan acquired the Senkaku islands last year amid strong Chinese opposition, it is believed that cyber-attacks originating in China have increased significantly⁸. Japan has responded to this tension with China by asking its Ministry of Finance to approve an increase of \$2 billion in defense spending.

DEMAND FOR CYBER EXPERTISE IN JAPAN

According to British officials, Japan has advanced infrastructure but with very limited cyber security capabilities⁹.

⁵ (Cyber Security in Japan (v.2), Cyber security policy research team, Center for International Public Policy Studies (CIPPS), December 2012)

⁶ (Japan Information Security Policy Council, June 10, 2013)

⁷ (DefenseNews, October 9, 2012. Accessed via <http://www.defensenews.com/article/20121009/C4ISR01/310090010/> on October 13, 2013.)

⁸ (Japan Defense and Security Report, Security Overview, Q1, 2012, p. 72-79)

⁹ (Reuters, October 2, 2013)

As published in The Japan Times on October 27, 2012, “while the government hurries to set up organizations to counter Internet-based attacks, the nation remains vulnerable due to a lack of sufficient numbers of cyber security specialists and effective systems and infrastructure to prevent security breaches. According to a 2012 white paper on information security published by the Information-technology Promotion Agency, Japanese companies need 22,000 more people to work on cyber security. Much worse, of 230,000 cyber security specialists at companies, more than 60 percent of them need additional training to keep up with the ever-evolving range of attacks.” Even Japanese officials recently admitted that they were facing difficulties tackling increasing cyber-attacks¹⁰.

A Forbes article¹¹ echoed this shortage and also claimed that “because cyber threats can affect any aspect of human activities, cyber security efforts also demand anthropological, defense, geopolitics, legal, linguistic, and technical expertise. This wide variety of skill collaboration calls for careful selection of trustworthy partners to work together in the academia, government, and industry — most likely not only within Japan but also outside the country. Japan has no domestic anti-virus software manufacturer known in the international market.” These quotes and other reports convey the same message regarding the depth of demand for cyber security services in Japan.

MARKET SIZE AND GROWTH

DEFENSE TRADE

In the defense sector, Japan imports around \$600 million (2012) worth of defense imports mostly from the United States. For example, Japan imports missile systems from the US and undertakes construction of aircraft under licenses from Boeing and Lockheed Martin, both American firms¹². Defense imports are expected to increase in the coming years.

Very recently, Japan relaxed its defense export ban. Since the time it was introduced in 1967, it banned the exports of offensive-use arms from Japan. The new export rules permit collaborations between Japanese companies and its allies for defense programs. Due to this ban, the Japanese defense industry’s main client has been the government. This has led to so close relationship a between government and the domestic defense or security firms that often, the formal process of bidding for contracts is replaced by informal negotiations¹³. The tendency to select domestic suppliers over foreign ones can in some cases, act as a barrier to trade.

DEFENSE INVESTMENT AND PROGRAMS

Japan faces a defense conundrum. On one hand, its defense budget of \$58 billion in 2013 has been one of the smallest in the last several years¹⁴ but yet the ‘fifth largest in the world and second largest in

¹⁰ (Reuters, Japan-US Security talks likely to highlight Tokyo’s cyber-defense woes, October 2, 2013. Available via <http://www.reuters.com/article/2013/10/02/us-japan-usa-cybersecurity-idUSBRE9910SW20131002>. Accessed on October 4, 2013)

¹¹ (Forbes, ‘Japan’s new cybersecurity strategy – Implications for the alliance?’ by Jonathan Miller, June 13, 2013. Available via <http://www.forbes.com/sites/jonathanmiller/2013/06/13/japans-new-cybersecurity-strategy-implications-for-the-alliance/>. Accessed on October 4, 2013.)

¹² (Japan Defense and Security Report 2013)

¹³ (Ibid)

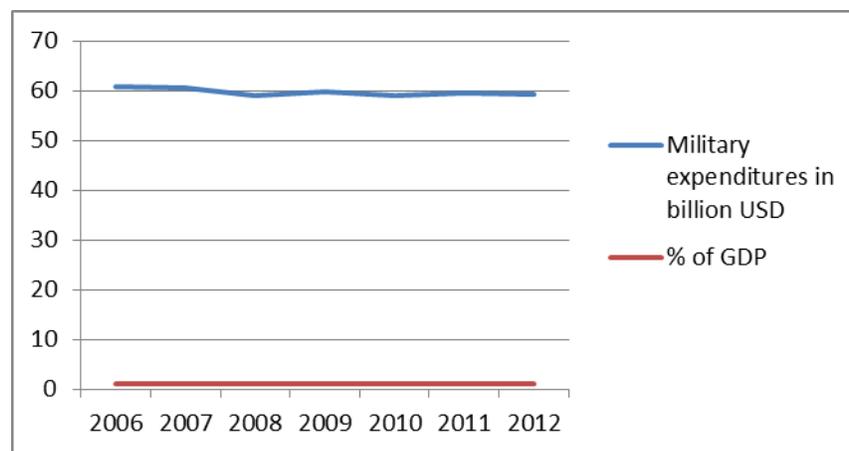
¹⁴ (Japan Defense and Security Report, Business Monitor International (BMI), Q3, 2013)

Asia¹⁵. The reduced spending is a result of Japan's recent economic woes. On the other hand, the increasing threat of cyber-attacks, mainly from China and North Korea, and its relative lack of cyber preparedness have enhanced Japan's susceptibility to such attacks. Cyber security initiatives will form a significant part of the new defense budget and expenditures as Japan moves toward a more proactive and assertive defense stance. In June 2013, Japan's government took it one step further when a top government advisory panel chaired by the Prime Minister, Shinzo Abe, recommended along with some other measures, that Japan set up the equivalent of the US's National Security Agency¹⁶.

DEFENSE SPENDING

Japan's defense spending on average has been 1 percent of its gross domestic product (GDP over \$5 trillion). Until 2011, only Japanese or American firms were permitted to be defense suppliers, terms which were clearly in favor of US-based companies. Since 2011, the rules have been modified due to which competition will increase in the future. The Ministry of Defense is the major customer. Government procurements have traditionally comprised around 20 percent of the defense budget (roughly around \$10 billion). Japan spends around 4 percent on defense research and development (R&D) (as a percentage of government's R&D budget) as compared with the US which spends 51.6 percent¹⁷.

Figure 1: Japan military expenditures 2006-2012



Source: SIPRI military expenditures database.

MARKET SEGMENTS AND OPPORTUNITIES

Japan's market for security products and services broadly defined, is worth \$6.3 billion, and is expected to grow at 3 percent a year in the immediate future¹⁸. Some of the cyber security market segments with growth opportunities include cloud technologies and other internet-protocol systems related services. The Japanese Ministry of Internal Affairs and Communications contends that the cloud services market, which was worth around \$4.5 billion in 2010, will grow to almost \$28 billion by 2015. There is demand for

¹⁵ (Doing Business in Japan, US Commercial Service, 2013)

¹⁶ (Cyber security 2013, National Information Security Center (NISC), Japan)

¹⁷ (Japan Defense and Security Report 2013)

¹⁸ (US ITA guide to security exports, 2013)

homeland security and anti-terrorism products from the US¹⁹. Japan recently switched to digital technology in broadcasting and other areas. This change enhances the need for internet-protocol based cyber security in these areas and creates many business opportunities.

MARKET ACCESS

TRADE AND PROCUREMENT AGREEMENTS

Japan and the US do not have a free trade agreement in place. Japan, the US and other Asia-Pacific countries are currently negotiating their participation and terms into the Trans-Pacific Partnership (TPP). If the TPP were to go into effect, it would function similar to a free trade agreement and make trade with Japan more efficient for US-based companies.

Japan is a party to the [World Trade Organization's Government Procurement Agreement \(GPA\)](#). Signatories to the GPA agree to be transparent and non-discriminatory in their procurement processes. Japan signed the agreement that became effective in 1996²⁰. This implies that companies from the US have open access to public sector contracts in majority of the cases although not all for national security related reasons. The Agreement also includes services procurement as well as procurement by regional, local, and quasi-governmental organizations among others.

- » The [American Chamber of Commerce in Japan](#) is a useful resource for additional support on market access.
- » Those interested in setting up offices in Japan should peruse the programs of the [Ministry of Economy, Trade and Industry](#) (METI) and the [Japan External Trade Organization](#) for incentives and benefits provided by the government.

Japan is also a party to the [World Trade Organization's Information Technology Agreement](#) based on which duties are eliminated for information technology products included in the agreement. This participation can be beneficial for some US exporters.

TRADE AND INVESTMENT REGULATION

Being one of the largest exporting nations, trade is a significant contributor to Japan's economy. The nation's participation in the Trans-Pacific Partnership trade talks is an indicator of its efforts to continue to benefit from future trade relationships. China is its largest trade partner followed by the US, which imported \$142 billion and exported \$78.2 billion from and to Japan in 2012²¹. While it appears that the trade-weighted average tariff rate is low at 1.6 percent²², foreigners often find that there are a plethora of administrative procedures that erect non-tariff barriers to imports. Foreign investors have a similar experience in that investment faces few constraints but regulatory procedures and licenses can make it a cumbersome process, especially in case of acquisitions of domestic firms.

It is believed that the economy is starting to look upward from 2013 onward. The Japanese currency, the yen, has lost value (currently approximately \$1= 80 yen) in the last several months making exports from Japan more competitive, at least in the short term. The reverse is true for imports into Japan, a factor that exporters to Japan need to take into consideration. However, this trend is not expected to last once the

¹⁹ (Ibid, page 122)

²⁰ (Cyber security and trade, Allan A Friedman, Brookings Institution, September 2013)

²¹ (International Monetary Fund (IMF) Statistics)

²² (Heritage Foundation)

global demand for Japanese products renews. Despite these trends, US products are competitive in Japan.

- » The US Commercial Service provides detailed information on the trade and investment climate and on [Exporting to Japan](#)
- » The [Country Commercial Guide](#) also offers important information.

IMPORT REQUIREMENTS

Importers bringing goods into Japan require an import permit after declaring and approval of goods from the Director-General of Customs. Licenses and quotas might apply to certain products. Japan is known for having administrative procedures related to packaging, labeling, etc. of imports, which must be followed for successful entry of products into the market. Some shipping companies can provide compliance information. In addition, US export controls might apply to certain defense related exports to Japan.

- » Specific details can be accessed from the [Ministry of Finance's customs website](#).

GOVERNMENT PROCUREMENT

There are three types of government tenders in Japan: 'open' tenders which are open to all qualified suppliers. The 'best' offer wins the contract usually based on price; 'selective' tenders which are open only to selected, qualified bidders; and limited or single tenders in special cases when open tenders are unsuitable or due to specific requirements. Tenders are published in the [government's procurement notice](#) that requires translation for an English speaking audience. The notices are published around 50 days before the deadline for bids. For US firms, it might be beneficial to contact the procuring unit directly before submitting a bid so that the expectations can be clarified in case of questions.

- » The Ministry of Foreign Affairs conducts a government procurement seminar each year for information on procurement initiatives by the central government. Other government agencies also host their own seminars along the same lines.
- » Details on Japan's central government procurement can be found [here](#) and on the Japan External Trade Organization's [procurement site](#).
- » Non-Japanese procurement portals include [TendersInfo](#) and [GlobalTenders](#).

DEFENSE PROCUREMENT

Defense procurement in Japan is handled by defense trading companies and agents. The Equipment Procurement and Construction Office (EPCO), a part of the Ministry of Defense is responsible for acquiring military products and services priced over \$17,000.

- » Companies seeking defense contracts should register and apply with the [EPCO](#).

The Japan Defense and Security Report, 2013 stated that regarding defense procurement "traditionally, Japan has purchased its defence systems through a trading company as opposed to directly from the producer. Moreover, it is thought that more than 70% of defence system orders are obtained through a no-bid system. Given that procurement goes via a middleman, Japan pays up to 10 times as much for its defence system compared with European countries and the US."

Overall, it is difficult for new entrants to break into the broad defense industry in Japan due to the presence of large and established foreign and domestic firms. It is recommended that exporters seek partnerships with established trading or security companies, which are plentiful in Japan. Especially in the case of government, procurement, which is highly competitive, engaging a local distributor who is familiar with the process, is useful in obtaining contracts. The Japanese government is very supportive of joint ventures of Japanese firms with foreign companies, which provides opportunities in the defense sector.

Searches on information security companies in Japan show that several of these are seeking international partners.

SUCCESS FACTORS FOR US EXPORTERS

As opposed to the growing markets for cyber security such as Indonesia and Brazil, Japan is a niche market. It requires specialized skills such as innovative products or services which are low cost or environment friendly²³. A focus on the customer and after sales services is also important in Japan for both government as well as commercial contracts. It is not easy to win defense contracts. However, innovation and technological sophistication are important bases for contract wins. It is possible to adapt and succeed in the Japanese market for US firms which invest in developing a well-defined strategy.

Attendance at trade shows in Japan is useful in finding partners. The US International Trade Administration in its guide to security exports notes that on a scale of 1-4 with 4 being the highest possibility of success for US companies for information technology in a country, the ranking for Japan is 3 which indicates that “there are more opportunities than challenges for you in this market”²⁴.

LEGAL ENVIRONMENT

For the most part, Japan has a strong legal system and rule of law. Intellectual property is adequately protected and contracts are suitably honored even if undergoing these procedures is time consuming. The legal system treats domestic and foreign individuals and companies equally.

INTELLECTUAL PROPERTY RIGHTS

Under patent law in Japan, patents are awarded on a first-to-file principle. It is advisable to obtain a patent or trademark in Japan before conducting business. Patent applications are submitted to the Japan Patent Office and applications in English are permitted if those are followed by a Japanese translated application within a few weeks. The US Department of Commerce and Japan’s Ministry of Economy, Trade and Industry [collaborate](#) on issues concerning intellectual property rights and their enforcement, export controls, standards and information technology security.

BUSINESS LAW

There is limited if any tax discrimination against foreigners in Japan. Corporate tax rates are moderate at 25.5 percent but local and other taxes add significantly to the overall tax burden. A treaty in favor of US companies that invest in Japan is the U.S.-Japan Treaty of Friendship, Commerce, and Navigation (1952) which treats US investment as the ‘most favored nation’ or ‘national’²⁵.

EXPORT CONTROLS

A limiting factor for Japan’s online and offline defense forces is Article 9 of its peace Constitution that restricts its ability to use offensive tactics for defense purposes. This limitation has played a role in Japan’s approach to information security. Since Shinzo Abe came into power as Prime Minister through his Liberal Democratic Party in December 2012, he has attempted to abolish Article 9. It is a well-known fact that Japan needs to become more self-sufficient and develop advanced defense capabilities, all of which are dependent on the revision of Article 9.

²³ (ITA Guide to Security Export, 2013)

²⁴ (ITA guide to security exports, 2013, page 11)

²⁵ (US Commercial Service, 2012)

POLITICAL ENVIRONMENT

DEFENSE RELATIONS WITH THE UNITED STATES (US)

A representative democracy with low political risk and low levels of civil unrest, Japan is a politically stable economy²⁶. Premier Shinzo Abe's recent political win brought new hopes to Japan of increased political stability. Japan has maintained a defense alliance with the United States (US) since the end of the Second World War. The country relies on the defense forces of the US for national security. This defense closeness has provided Japan with access to the latest technologies. It also has strong political relations with other countries in the Western hemisphere. Given the continued threat from China with which Japan shares a maritime border, and North Korea, the US-Japan relationship remains significant in spite of the unpopularity of the presence of US forces in Okinawa and elsewhere in Japan.

Japan and the United States are making plans to collaborate on cyber security issues for some months now. The two countries signed an agreement in October 2013 to pursue bilateral discussions on counter-ing cyber-attacks. Prior to this agreement, Japan joined the Convention of Cybercrime in April 2012 to cooperate on critical infrastructure and other cyber security issues.

- » More details on the US-Japan political and defense relationship can be accessed from the following resource: [Congressional Research Service](#) report

INTERNATIONAL DEFENSE RELATIONSHIPS

Recently, Japan has diversified its international defense partners. It has tied up with the United Kingdom (UK) to bring in expertise and defense capabilities. It is also looking to build its defenses with support from India, Australia and other Asian countries. As Abe's political regime brings about the proposed changes in export policies and introduces new cyber related legislation, it will increasingly seek collaboration with countries other than the United States for defense purposes. Companies seeking cyber related business in Japan should be prepared for competition from these aforementioned nations.

SOCIO-CULTURAL ENVIRONMENT

Japanese business culture is characterized by long-term employment, a hierarchical organization structure and consensus based decision-making. In spite of social stability, the social cohesion can at times make foreigners feel discriminated. There is a significant presence of organized crime in drugs, money laundering and gambling. Foreigners are usually not directly and intentionally exposed to such crime²⁷. Due to language and cultural differences, many US-based firms have conducted business in Japan by hiring agents or distributors. In order to mitigate some of the issues created by cultural differences and those posed by institutional factors and informal market procedures, it might be suitable to explore the possibility of finding agents or partners, especially for government contracts. Being a relationship-based culture, face to face introductions can be useful and those too through common contacts. Doing so also establishes some trust for both parties.

The role of government institutions in Japan has traditionally been strong. It ranks 17th out of 176 countries on Transparency International's Corruption Perceptions Index (2012). While the government is

²⁶ (Business Asia/Economist Intelligence Unit, January 24, 2011)

²⁷ (Business Asia/Economist Intelligence Unit, January 24, 2011)

moderately effective at implementing policy and controlling corruption, some of the insecurity for foreign companies in Japan stems from the close relationships between domestic firms and the government. As a result, foreigners can find themselves struggling to get access to government resources. Another reason why forming partnerships with local, Japanese companies is a suitable method to engage with the government.

THE PRIVATE SECTOR

COMPETITION IN THE PRIVATE SECTOR

The domestic defense industry in Japan is made up of a few large firms. For example, Mitsubishi Heavy Industries commands over 40 percent of the market. Other big players are Boeing (4.5 percent) and EADS (8 percent) which are both foreign companies²⁸. There is intense competition among these competitors for government contracts. The production of defense systems has traditionally been done locally under licenses from US manufacturers. The domestic defense companies have been known to earn a larger percentage of revenue from commercial sales rather than defense possibly because of the arms exports ban. Now that the export ban has been amended, it is believed that there will be increased competition from US companies seeking more business in the Japanese market. Some companies such as Boeing have a head start. In June 2012, Boeing signed a contract with Japanese trading group, Sojitz Corp. Boeing will provide cyber security products and services to protect Japan's commercial and government technology infrastructure²⁹. This was Boeing's first international cyber security contract.³⁰ Other nations such as the United Kingdom have already started engaging with Japanese firms on defense initiatives.

DEMAND FROM THE PRIVATE SECTOR

The hardest hitting cyber-attack in Japan was the one on Mitsubishi Heavy Industries in September 2011. There were attacks on Sony and other companies and agencies in 2011 and 2012, which led to an increased focus on cyber security in Japan. Furthermore, Japan's NCSS takes into consideration the security of the private sector. The private sector is undertaking its own measures to defend its operations against cyber-attacks. According to the Ponemon Institute, organizations in Japan have been spending an average of \$5.1 million for this purpose. PWC's report on cyber security mergers and acquisitions stated that Japan is one of the three top deal markets, a ranking which points to the cyber activity within the private sector. The size of the total market was estimated to be \$60 billion in 2011 and to grow at around 10% each year for the next few years. US exporters should also consider the private sector as a potential client in Japan.

²⁸ (Japan Aerospace and Defense Industry, 2012)

²⁹ (Executive Biz, 'Boeing team targeting Japan cyber market', September 18, 2012).

³⁰ (Boeing Company Press Release. Accessed via <http://boeing.mediaroom.com/index.php?s=20295&item=2287> on October 13, 2013)

Table 1: Japan Cyber Security Market at a Glance

Strengths

- Strong political and defense relationship with the US
- Open and transparent market access
- Member of WTO's Government Procurement Agreement

Weaknesses

- Regulatory burdens
- Major cultural, language differences
- Need for agents or partners

Opportunities

- Niche market with demand for innovative, environmentally friendly products
- Cloud computing, Internet protocol systems, cyber security software
- Private sector opportunities

Threats

- Significant competition from other domestic and foreign companies
- Close relationships between domestic business and government

APPENDIX: USEFUL LINKS

US Export Controls

- » [International Traffic in Arms Regulations \(ITAR\) – U.S. Department of State](#)
- » [Export Administration Regulations \(EAR\) – U.S. Department of Commerce](#)
- » [Exporting from Virginia](#)
- » [Export Licenses](#)

US Laws Governing International Business

- » [US Anti-corruption guide](#)
- » [Corruption Map](#)

US-Japan Political Relationship

- » [US-Japan Political Relations](#)
- » [Congressional Research Service](#)

Country Information

- » [Country Information](#)
- » [Culture](#)

Doing Business in Japan

- » [US Commercial Service](#)
- » [Exporting to Japan](#)
- » [US Embassy in Japan](#)

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