

This article was downloaded by: [Johns Hopkins University]

On: 04 January 2015, At: 19:56

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



The Adelphi Papers

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/tadl19>

Trade, technology and security: Implications for East Asia and the West: Part II

Professor Takashi Inoguchi ^a

^a Institute of Oriental Culture , University of Tokyo

Published online: 02 May 2008.

To cite this article: Professor Takashi Inoguchi (1987) Trade, technology and security: Implications for East Asia and the West: Part II, The Adelphi Papers, 27:218, 39-55, DOI: [10.1080/05679328708448791](https://doi.org/10.1080/05679328708448791)

To link to this article: <http://dx.doi.org/10.1080/05679328708448791>

PLEASE SCROLL DOWN FOR ARTICLE

Taylor & Francis makes every effort to ensure the accuracy of all the information (the "Content") contained in the publications on our platform. However, Taylor & Francis, our agents, and our licensors make no representations or warranties whatsoever as to the accuracy, completeness, or suitability for any purpose of the Content. Any opinions and views expressed in this publication are the opinions and views of the authors, and are not the views of or endorsed by Taylor & Francis. The accuracy of the Content should not be relied upon and should be independently verified with primary sources of information. Taylor and Francis shall not be liable for any losses, actions, claims, proceedings, demands, costs, expenses, damages, and other liabilities whatsoever or howsoever caused arising directly or indirectly in connection with, in relation to or arising out of the use of the Content.

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden. Terms & Conditions of access and use can be found at <http://www.tandfonline.com/page/terms-and-conditions>

Trade, Technology and Security: Implications for East Asia and the West: Part II

PROFESSOR TAKASHI INOBUCHI

Introduction

Perhaps at no other time in history have trade, technology and security been intertwined more closely than they are today. A good illustration of this is provided by a recent Japan-US agreement on semi-conductors.¹ For some considerable time Japan and the US have been competing very hard in this area, and Japan is clearly catching up. Responding to accusations by US semi-conductor producers that Japanese producers were dumping their products on the US market and to the demands for action under Article 301 of the US Trade Act, the US and Japan have recently agreed that the anti-dumping cases against the Japanese semi-conductor producers of the EPROM and 256K DRAM semi-conductors be suspended, provided that:

- 1) the Department of Commerce monitor all the quarterly statistics on Japan's production and sales of EPROM and 256K DRAM, and the Japanese government do the same on six other kinds of semi-conductors, including Japanese exports of semi-conductors to third countries; and
- 2) Japan set up an organization to expand its imports of semi-conductors from the US and other countries.

This is a familiar story of protection and managed trade. The agreement would have been impossible if the Japanese Ministry of International Trade and Industry (MITI) had not used its influence to persuade Japanese producers to comply. The Japanese government wanted the co-operation of the US government on such matters as the stabilization of the yen and protectionist legislation in Congress. The monitoring agreement covers not only Japanese parent companies but their overseas subsidiaries elsewhere in Asia, thus effectively precluding the possibility of shipping from there to the United States. Second, it reflects the race that is going on in one of the most important high-technology industries. The pricing agreement will bring higher profits to Japanese producers for the moment, but it will also sharpen the competitive edge that South Korean producers have in the market for standard mass-produced memories. Third, it is a manifestation of deep US concerns about

national security, since semi-conductors are widely used in high precision, high performance weapons as well as in civilian applications. The US government is worried that, if US domestic producers become steadily less competitive and the US chip market is occupied largely by foreign-based producers, US defence equipment will have no alternative but to rely on them. The decline of the domestic industrial basis for manufacturing weapons is seen as a grave problem for US national security.²

The intimate relationship between trade, technology and security is worth close examination, especially in the context of East Asia, one of the most dynamic regions in the world. Three characteristics of East Asia make this region an excellent case for the study of the interactions between trade, technology and security. First, economic growth in East Asia is typically export-led; without smooth and large-scale trade flows, the East Asian economies cannot continue at their present levels of activity. Second, East Asia is continually seeking new and higher technologies; as a region it cannot compete without them because it is poor in resources. It is indicative of the importance attached to high technologies that the Japanese nickname for semi-conductors is 'the rice of industrial life'. Third, the countries of East Asia are invariably plagued by a deep sense of vulnerability that drives them to seek desperately for security, to the extent of subordinating other national aspirations and priorities to that search.

The purpose of this Paper is twofold: first, to show that trade and technology issues can often give rise to sensitive questions of security; and second, to argue that prudent and balanced management of trade, technology and security is increasingly necessary in this region, which is so full of energy and dynamism yet marred by a significant degree of uncertainty and unpredictability. The rest of the Paper will deal with some of these issues under the following headings: protectionism in manufacturing sectors; the decline in the prices of primary commodities; the pressure towards liberalization; the increasing costliness of technological innovation; and security-inspired technological protectionism. The primary concern is with Japan and to a lesser extent, the two Pacific Newly Industrializing Countries (NIC), South Korea and Taiwan, but also with China, the ASEAN countries and Australasia whenever it seems appropriate. This focus is justified because these three countries constitute a core component of the Western security system in East Asia and because they are the most dynamic countries in the region in terms of trade and technology.

Protectionism in manufacturing sectors

East Asia has its own rather heavy form of protectionism. A late-comer to industrialization normally has a wide array of regulations and protectionist policies designed to encourage indigenous industrialization. In order to obtain foreign currency reserves for the import of capital goods and technologies, agriculture (rice production) was

heavily taxed in earlier periods,³ but agriculture, especially rice and silk (which was one of the main primary export commodities) lost its competitive position as industrialization proceeded. This fact, together with high population density and poor natural resource endowment, has encouraged export-led industrialization that uses other markets of the world to the fullest extent to promote its own industrialization.

In those manufacturing sectors where the East Asian late-comers enjoy a competitive position – such as textiles, steel, chemicals and certain electronic products – they are very aggressive in penetrating the markets of less competitive countries. In those sectors where the late-comers do not have a competitive edge, including electronics, telecommunications, software and weapons, they try assiduously to protect their domestic market first. East Asia has enjoyed access to the huge US market for its exports for many years, but the US has been showing a steady decline in competitiveness in certain manufacturing sectors such as steel, chemicals, automobiles, textiles, machinery, and electric and electronic appliances. Protectionist measures are taken intermittently to provide emergency relief and time for adjustment. In 1984 US imports covered by special protection had a value of \$US 68 billion, or 21% of total imports.⁴ What matters is that many of the goods and services covered by US special protection are from East Asia. In more than half of the 31 cases examined in the volume by Hufbauer *et al.* on the topic, the suppliers affected by special protection were primarily East Asian. Such cases were textiles and apparel (three cases), specialty steels, ball bearings, colour television receivers, CB (citizens' band) radios, bolts, nuts and large iron and steel screws, automobiles (three cases), heavyweight motorcycles, ceramic articles, book manufacturing, rubber footwear and canned tuna.

The intensification of trade disputes between East Asia and the US is not always politically explosive, let alone security-related. In most cases, it simply means that East Asia has become much more competitive in certain sectors while the US has become less so. However, it has longer-term security implications that cannot easily be dismissed. Since East Asia is dependent on trade flows to an unusual degree, what may be taken as 'improper' handling of East Asian countries by the US can provoke nationalistic reactions from them. It is reasonable to conclude that the recent flare-ups of Korean anti-Americanism took place against this background.⁵ Though primarily directed against the South Korean government, the radical actions of students and workers seem increasingly to take on an anti-American character as well. Occupying US banks and cultural centres in Korea and committing suicide by self-immolation as a protest to the US and Korean governments are manifestations of the intensely political emotions of the Korean radicals. Nevertheless, the radicals aside, many Koreans seem to believe at the bottom of their hearts that South Korea, a front-line state which is shouldering heavy

military burdens for the United States and the West in general, should be more or less exempt from US pressure over the regulation of exports of textiles and apparel, which is but a trifle compared with national security. This perception of the relationship that stresses its 'give-and-take' character could change the nature of alliance, with the erosion of what Koreans seem to believe is the 'take' side, namely the belief that the US should take a lenient and generous position on Korea's management of its economy and trade.

The US way of dealing with trade issues certainly seems to irritate some Koreans. On the one hand, the US encourages East Asians, as well as others, to become fully-fledged members of the free trade system, and requests (or even pushes) Korea to liberalize trade, to deregulate financial institutions and to raise the value of the won against the dollar so that Korea's trade surplus with the US will decrease. Yet this same US virtually imposes on Korea – at least Koreans seem to feel that way – its protectionist measures in textiles and other products without the courtesy of 'proper' consultations with the governments of countries known for the value which they place on face-saving measures and rituals.⁶ Similar considerations apply to other East Asian countries but South Korea represents the most acute case, the one where trade and security are linked most closely, if not quite directly. Since trade is a linchpin for the survival and prosperity of the East Asian countries, it can be argued that the aggravation of trade disputes, left to themselves, could encourage these countries to reconsider their security arrangements seriously over the longer term.⁷ This is an important point that should be stressed because the economic, technological and military capabilities of these countries are steadily increasing.

From the other side of the Pacific, what Americans see as the intransigence of these countries tends to reduce the willingness of the US to be ready to intervene effectively for their defence. Though public opinion about such willingness has been more or less stable for some years,⁸ it is hardly necessary to state that in the longer term American public sentiment can be very volatile about its Asia policy. In other words, trade disputes have the potential to weaken the security ties across the Pacific substantially if they are not properly handled.

Decline of primary commodity prices

A recent study shows that throughout the world the amount of primary product required for a given unit of economic output has been shrinking by 1.25% a year since 1900.⁹ Since the production of primary commodities has been increasing very rapidly as a result of the heavy use of chemical fertilisers, extensive mechanization and other advances in agriculture and mining, prices have been basically on the decline over a long period. In the mid-1980s, the prices of raw materials recorded their lowest levels since World War II in relation to the prices of manufactured goods and services, and according to

Peter Drucker this trend is not likely to be arrested for some time to come.¹⁰ If that is the case, it is a grave matter for commodity-exporting countries. Half the exports of the Philippines, for example, are primary commodities.¹¹ It is thus no wonder that the Philippines, so heavily dependent on primary commodities for foreign exchange, has registered large current-account deficits, a problem further compounded by the borrowings from abroad for its industrialization efforts and the very high interest rates ruling during the first half of the 1980s in the US and other countries. Needless to say, there are many more factors in the economic stagnation of the Philippines than the collapse of commodity prices, but there is no doubt that this is one of the main causes. As in the Korean case, the decline in the prices of raw materials is not directly related to security, but exports of raw materials do carry great weight in the Philippine economy and provide a large amount of government revenue which can be used for achieving stability and fostering a sense of national purpose. Economic stagnation and political instability are almost inevitable when industrialization programmes do not progress faster and export earnings decline because of the collapse of primary commodities prices. Insurgency and instability obviously matter anyway, but the threat they pose to the two large and well-equipped US military bases in the Philippines concerns the security of the West in general.¹²

The decline of primary commodities trade affects not only the Philippines but also other resource-rich countries of the Asian-Pacific region, such as Malaysia, Indonesia, Australia and New Zealand. The general dissatisfaction of those countries with large industrial economies such as the EC, Japan and the US is clearly on the increase.¹³ First, the industrial economies generally have a very high level of agricultural protection, which effectively prevents exporters of primary commodities from penetrating their markets. Among the East Asian countries, Japan, Korea and Taiwan have the tightest protection of rice prices in the world.¹⁴ Second, a large proportion of agricultural trade now takes place among the industrial countries of the North rather than between them and the commodity-exporting countries of the South. The commodity-exporting countries are harmed by bilateral and multilateral agricultural deals largely engineered by the industrial countries of the North, whether between the US and the EC or between the US and Japan. For example, the bilateral deal for beef between the US and Japan has placed Australia at a disadvantage since lower-priced Australian beef could penetrate the Japanese market much more effectively, if that bilateral regulatory agreement did not exist.¹⁵

The prospect that the focus of the new round of GATT talks will include agriculture along with services, high technology and intellectual property does not excite most commodity-exporting countries, which were disappointed by the outcome of the Tokyo Round in agriculture.¹⁶ There is general dissatisfaction on the part of raw

material exporters with the closed European and Japanese agricultural markets, and with what seems to them to be the US attack on bilateral deals, using the US security leverage, which leaves them in an ever-worsening situation.¹⁷ This widespread dissatisfaction is a powerful argument for devising a mechanism to ease the difficulties of commodity exporters in the region in the enlightened interest of the West.

Pressure towards liberalization

The Western Pacific has become one of the most dynamic regions in the world, and is increasingly linked with the no less dynamic North American region in terms of trade, technology and finance flows.¹⁸ It is no wonder that many people in the Pacific region have come to think that they would derive much benefit from the demolition of the large barriers across borders to trade, technology transfer and finance. Since the US is the most powerful country in the region, its somewhat ambivalent strategy there merits special attention. The US needs access to an increasingly large and dynamic market in the Western Pacific, especially in those fields where the US performs excellently but the regional states may not be so competitive – namely, agriculture, services and high technology. In turn, the regional countries need access to the US market (and that of Japan) for their exports of manufactured products.

Against this background, the US has been following two tracks: multilateralism and bilateralism. The former is exhibited largely through the GATT trade talks and seeks the application of non-discriminatory free-trade principles, whereas the latter is manifested in bilateral negotiations towards free trade. What bothers some people in the Western Pacific is the tendency of the US to deal bilaterally with those regional countries where it can wield special influence in order to obtain concessions because of the security it provides.¹⁹ Since liberalization is spearheaded by the US, a country which was once hegemonic but now somewhat resigned to being *primus inter pares*, though reasserting itself through reshaping international rules,²⁰ countries that feel pushed into liberalization often manifest various forms of nationalistic reaction. The problem is real for those late-comers who have long adhered to traditions – norms, rules and institutions – different from those of the early starters in Western Europe and North America. Japan and the Pacific NIC are such late-comers, broadly conceived. The question is whether these differences are manageable and how far the countries concerned can construct common rules.

One powerful argument for the necessity and desirability of such arrangements when there is severe conflict of interest has been put forward by Robert Keohane in a more general setting. He postulates that the US hegemony is over, and that co-ordination and co-operation with other states have become much more important than before in the maintenance of international rules and institutions

for the provision of what are called 'international public goods' or the international arrangements for peace and prosperity.²¹ Keohane's specific prescription is a 'tit-for-tat' strategy to induce co-operation in a situation resembling the prisoner's dilemma. That is to say, when two actors do not co-operate they produce the worst collective outcome, but the outcome is still the second best for a defector – but the worst for a co-operator – unless both co-operate, when they produce the best outcome. In order not to have the worst collective outcome in repeated rounds of the game, Keohane, following Robert Axelrod,²² suggests that non-co-operation should be punished but co-operation be rewarded. This strategy is presented as that of a *primus inter pares* after hegemony; the US is still the greatest power, the one which takes the initiatives in an effort to exert its influence in reshaping international institutions towards common goals. Whether the 'tit-for-tat' strategy is productive, especially in relation to the nature of strategy and the domestic foundations that can sustain the strategy of (presumably rational) state managers, must be empirically examined.

In the setting of trans-Pacific frictions, what is often observed, at least from the viewpoint of the Pacific NIC and Japan, is that the US frequently resorts to request-cum-pressure, making full use of its security relationship with allies and partners in order to obtain further concessions from them in the forms of trade liberalization and financial deregulation.²³ Its strategy differs from one country to another: the most interesting case is perhaps that of South Korea where the US has accumulated large trade deficits and is now pressing for further and faster liberalization. A slightly different example is Taiwan, which has accumulated a large surplus with the US but has no security tie with it in the form of a security alliance. The US keeps pressing Taiwan for further trade liberalization, but in a somewhat milder fashion than with South Korea, although Taiwan does value the supply of weapons by Washington.

Of the three countries concerned, it is on Japan that the US perhaps exerts the strongest pressure for further trade liberalization. This seems to be based on the (largely justifiable) view that Japan should play a far larger role than it does at present in reshaping international rules and bearing the burdens of international management in co-operation with the US and other major countries.²⁴ Especially alarming to Japan's trade partners is its large current account surplus with them, including the US, the Pacific NIC and the members of ASEAN. For these countries, Japan represents the biggest problem among their trade issues. Their demands are basically threefold. First, that access to the Japanese market must be significantly increased. For that to happen, the various forms of regulation and protection applied by Japan in such matters as standards, distribution, employment and subsidies must be drastically reduced. Second, that the Japanese economy must be reframed to encourage

much higher levels of consumption; this should include tax reforms and moderation of the over-dominant bureaucracy. Third, that Japan should be more generous in its international contributions in such matters as security and technology transfer. Though Japan is participating more widely in what is sometimes called 'the provision of international public goods', (for example, Official Development Assistance (ODA) and contributions to international organizations), it is a little harder to do this in the fields of security and technology. First, the pacifist-isolationist impulse has been a strong disincentive to wider government involvement in international security arrangements: military technological co-operation is restricted to Japan's ally, the United States. Second, being a more advanced late-comer, Japan has until recently been much more hesitant and less generous than the US about transferring technology to developing countries.

What bothers many Japanese is how the request-cum-pressure from the Americans is exerted. It is clear that many of the US demands are neither concerted nor co-ordinated within the United States. Rather, they are simply a manifestation of the pluralistic demands of the American political process. But from the Japanese viewpoint the US demands often give the impression that the US wants to transform Japan by twisting its arm. Since history has made it quite clear that Japan is more than capable of adapting to a new politico-economic environment, it is perhaps unnecessary to stress that its flexibility would largely cancel out any potentially destabilizing effects of such pressures on the local economy. The point here, however, is the impact over the longer term of these interactions of pressure and response, demand and acquiescence, as reported in the Japanese press, on the psychological attitude of the Japanese.²⁵ Confronted with the always irresistible forces of what the Japanese call 'internationalization', many of them seem to be reverting to the values of traditional morality, the work ethic and nationalism,²⁶ which may cause them to react unexpectedly to the three basic demands from abroad listed above.

What is more likely to become a perennial problem as Japan moves up the ladder of nations in economic, technological and military capabilities is that two opposing forces will emerge in Japanese society: internationalism and isolationism. The higher the perceived short-term costs of co-operating and co-ordinating policies with the rest of the world, the more powerful the impulse to 'go it alone'. Depending on this balance, the directions that Japan might take could vary significantly. This is why political upheavals, small or large, in countries adjoining the US are watched carefully in Japan. For instance, the US demand that Mexico scrap its nationalized industries, which form a linchpin of Mexico's ruling party, led to the resignation of its Finance Minister. In Canada, the Prime Minister's party has difficulty in pushing the 'go along with the US' policy in trade too far and too fast. South Korea's problems have already been

discussed. For obvious reasons, these are developments that Japan cannot afford to overlook.

The increasing costliness of technological innovation

Technological innovation is always expensive for a forerunner. The costliness and uncertainties of technological advancement, coupled with the pervasiveness of technology in modern life, have made technology policy an area of very high priority for any government.²⁷ Furthermore, the fact that the US has been widely acknowledged as a leader in many high-technology areas places the rest of the world in the difficult position of looking up to and following the US, while at the same time exploring areas where it can achieve something itself, albeit with high costs and uncertainties.

Japan has become more keenly aware of this difficulty as it has reached technological frontiers in a number of areas. The percentage of total revenue spent on research and development (R&D) has risen steadily in many Japanese firms. The problem is that the US, which used to be very generous to followers like Japan in disseminating technological information, has become much less so because it realizes that it is being overtaken by some of these followers. Especially in the high-technology areas, the US seems determined to retain its superiority.²⁸ Two main arguments seem to be salient in US demands on Japan.²⁹ One concerns reciprocity; the other security. The reciprocity argument is that, despite recent Japanese technological achievements, Japan is niggardly about disseminating its own technological information to other countries, and that without reciprocity the US should deny Japan liberal access to American technology. The security argument is that Japan and some other countries are somewhat lax about making available some of the security-sensitive technologies to socialist countries, and so these technologies should not be given to Japan. The US also seems to feel that Japan is not as forthcoming as it would like in making Japanese technological information available to the US; thus the US Congress has recently passed a law intended to facilitate the translation of Japanese technological information into English.³⁰ There is a strong feeling in the US that, if the US is denied access to Japanese technological information, American universities and research institutions can legitimately stop the provision of such information to Japan. The reciprocity argument, of course, is often camouflaged by the security argument. In particular, the Act of 1985, which regulates exports of high-technology products and licences even to members of CoCom, effectively prohibits the dissemination of technologies even when they have been developed in US universities and research institutions under commissions from Japanese firms. The Act has recently been further revised to tighten the regulation, on the grounds that the Soviet Union obtains technological information from some Western countries.

The counter-argument (the liberal one) – that too much regulation of the dissemination of technological information will reduce the pace of US technological advance – is no less strong. The US government's regulation notwithstanding, US universities and research institutions have become increasingly dependent on collaboration with Japanese firms in financing research projects, as the US Federal Budget has become very tight. Against this practice not only security considerations but also concerns about competition are put forward; that is, that US-Japanese research collaboration facilitates the transfer of new technologies into manufacturing for Japanese firms, thus damaging US firms.

Japan's most likely course is to develop its two-track policy. One branch of this is to depart from the system of dependence on US research for technological information and to expand its niches on the technological frontiers autonomously, as far as it can; the other is to strengthen the Japan-US collaborative research system. Japan's choices in this respect will significantly affect the course it will take in terms of reframing its economy and restructuring its national security policy, and this is likely to be of great interest to the Western security system.

Security-inspired technological protectionism

The United States has intermittently manifested its strong protectionist impulse as many of its manufacturing sectors have become decreasingly competitive with Japan and some other countries. Pressure from these countries is such that as many as 200 protectionist bills have been tabled before Congress. In order to adhere to the overall principle of free trade, the President often accommodates some of the protectionist spirit in order to thwart protectionism. He vetoes outright protectionist bills while partially accommodating protectionist sentiments.³¹

One prominent example is the application of clause 232 of the Trade Enhancement Act, which purports to protect domestic industries for reasons of national security. Regulation of technology flows has become less effective since specialists have learned how to convert civil-use technology to military use without much difficulty. Given the inevitable diffusion of technology, the battle to move faster up the ladder of technological innovation is now fought much more fiercely. As domestic protectionist pressure mounts, its application has tended to widen. As far as Japan is concerned, the following five cases provide good illustrations:³²

- 1) In February 1983 Kyoto Ceramics Inc. sold its subsidiary Dixel Inc. to Gould Inc. after it was advised to do so for security reasons;
- 2) In March 1983 President Reagan demanded voluntary export restraints on Japanese manufacturers of machinery until November 1986, when he was to make a decision on the application of clause 232 of the Trade Enhancement Act;

- 3) Mitsubishi Chemicals Inc. sold Optical Information Systems (a manufacturer of semi-conductors and laser instruments) to McDonnell Douglas Inc. at the request of the US Department of Defense (DOD) in December 1983;
- 4) Sumitomo Metallurgical Engineering, when purchasing Chase, Burns Inc., had to return the company's military division to Allegheny International at the 'request' of the Department of Defense in December 1983;
- 5) In September 1984 the Defense Department expressed concern about the purchase by Minnebear Inc. of New Hampshire Ballbearing Inc. and the matter is still in dispute.

There are four arguments relating to security-inspired technological protectionism. The first concerns security. In order to protect security-sensitive information, the argument runs, it is necessary to prevent firms that manufacture security-sensitive products from merging with, or being purchased by, foreign-based firms. If such mergers or purchases were allowed, security-sensitive products and technologies might be transferred to hostile foreign powers. This is actually the spirit of clause 232. The second concerns competition. In the US political system it is difficult to mobilize support without waving the banner of national security. Thus, even when it is simply a matter of reducing industrial and business competition, the national security argument can be used to justify prohibiting foreign firms from purchasing the manufacturers of security-sensitive products. The third is the technology argument. This claims that, even if dissemination of technological information and exports of sensitive products are forbidden, technology is bound to diffuse over the longer term because absolute geographical and communicational isolation does not exist. Even if isolation were possible, someone somewhere would probably come up with an idea leading to a technological break-through. In such a scenario, regulation might not matter too much either way. On balance, therefore, the negative effects of regulation on research achievements perhaps outweigh the positive ones in the longer run. The fourth argument is the liberal one, which goes as follows: under conditions where flows of trade and, by extension, flows of research communications are restricted, the global level of research advancement is likely to fall. Any hindrance to the freedom of research and communication is likely to produce goods that are less than satisfactory, and thus many countries will suffer from protectionism or autarchy in the longer run.

In the United States it is the first two arguments which have been strongly voiced recently, yet the technological imperatives also seem to be pushing in the direction of further collaboration with Japan. Japan therefore pursues, as noted earlier, a two-track policy: the autonomous development of technology side-by-side with close co-operative advancement with the US.

The decision about whether and how to participate in the US SDI research programme illustrates Japan's difficulties.³³ First, the Japanese government has had to take into account Japan's strongly pacifist bent, and the consequent legal and administrative commitments which constrain Japan's military and technological interaction with other countries. The first step towards participation in the programme through a governmental agreement has already been taken; in line with the Japan-US Mutual Defense Assistance Agreement of 1954, the November 1983 Weapons Technology Exchange of Notes on the Provision of Weapons Technology to the US and the December 1985 Exchange of Notes on Details of Implementation of the November 1983 Exchange of Notes were concluded. The Japanese government has disarmed criticism by using the 1954 Agreement with the US, and the two Exchanges-of-Notes have been concluded to adapt the Agreement to this particular case. Furthermore, the 1954 Agreement makes it easy to handle the implementation of the US demand for secrecy on certain matters, since it contains the appropriate clauses. Not surprisingly, it was only after the ruling Liberal Democratic Party's (LDP) resounding electoral victory on 6 July 1986 that the government announced (on 9 September 1986) its decision to participate in the programme through a formal agreement.³⁴

Besides the problem of internal politics, the issue of technological costs and benefits must be considered. Many Japanese firms seem eager to be exposed to, and to benefit from, participation in parts of the SDI research programme, and the trend towards US-Japanese collaboration appears to be further enhanced by Japan's willingness to participate. It is true that there is some apprehension over how to use the resulting technology products, but many firms seem to have calculated that the benefits will be greater than the costs in the longer term. The SDI programme is seen – at least in the longer run – as opening up technological frontiers in many areas which will provide immense opportunities for Japanese industry. Government negotiations are under way about the problem of how to use the resulting technology products. It is yet to be seen, however, how successful the Japanese government will be in not accepting the formula contained in the agreement between the US and West Germany, in which Germany's use of the products is severely circumscribed.

The security issue is seen basically in terms of Japanese co-operation with and contribution to the US-led security of the West. It is true that the Japanese government is no less concerned with the US-Soviet military balance, with the potential instability brought about by enhanced competition in ballistic missile defence (BMD) between the two super-powers, and with the effects that SDI may have on the numbers of ballistic missiles now deployed. But the view seems to be widely held in Japan that the SDI programme will not create any immediate, tangible changes in the defence postures of

the two super-powers or in the military balance. It is ironic that this view, coupled with the government's low-key and cautious attitude to the issue, has stifled any deepening of the discussion on Japan's participation in SDI research. The impact of BMD on Japanese security therefore, has been neither directly addressed nor widely discussed.

Four concerns seem to be common to America's allies. First, that US-Soviet competition over ballistic-missile offence and defence should not be allowed to increase military instability or the likelihood of a world war. Second, that US-Soviet competition should not work in the direction of subordinating considerations of national security to global security solely as perceived by the US government. Third, that US-Soviet competition should not exclude US allies from the benefits of technological diffusion and spill-over. Fourth, that US-Soviet competition should not be allowed to reduce the overall security of the West – including Japan. It seems that Japan and other East Asian countries are apprehensive about the general trend towards steady militarization in the region, but that most of them have not articulated their thoughts on BMD and the offensive stance that it may imply insofar as this affects their own security policies. China may be an exception to this observation. Being a nuclear power, China seems to be the most articulate about the SDI programme and its probable consequences for its own security.³⁵ Not unnaturally, China is alarmed by the prospect of Soviet BMD.

On the more immediate issue of balanced cuts in the Intermediate-range Nuclear Forces (INF) deployed in Europe and Asia by the US and the Soviet Union, both China and Japan are concerned that the US might not push the issue strongly enough with the Soviet Union, despite 'domestic political pressure, Soviet intransigence, and European insistence'.³⁶ Any US failure in this respect is likely to lead China to reconsider its strategy of using the US as a counterweight to the Soviet Union. It is also likely to affect the embryonic large-scale defence co-operation between the US and Japan. Japan has all along been less worried about Soviet INF than China, if only because of the belief that they are primarily targeted against China. Yet, if Japan becomes closely identified with US strategy, especially with its forward defence strategy, and if China distances itself further from the US, the Soviet Union might re-target some of its Asian INF from China to Japan. However, the new Soviet willingness to partake of what may be called Pacific economic dynamism with other Pacific countries, manifested in the Gorbachev speech at Vladivostok on 28 July 1986, might have some moderating effect on its policy towards Japan as well as China. South Korean developments should also be watched carefully in this regard. A recent publication of the 'Minutes of the Closed Hearings of a Subcommittee of the US House of Representatives' has shown that the US Air Force is planning to modernize nuclear munition stores in 26 US bases world-wide – including the US base at Kunsan, South Korea. This has brought a

(somewhat disingenuous) statement from the South Korean government that it had not been informed of the plan. If it were implemented, it is perhaps possible that South Korea might reconsider its security policy.³⁷

With respect to conventional weapons, the pacifist commitment of the Japanese government constrains the development of certain kinds of weapons. 'Offensive' weapons are not manufactured or imported and weapons manufactured by Japan cannot be exported. The government has even tended to discourage Japanese development of weapons. Thus half of the weapons of the Japanese Self-Defense Forces (SDF) are made in or licensed by the US. Yet the impulse towards autonomy in the production of weapons has not been negligible, especially in the production of fighter aircraft. Although the SDF at present has only one kind of indigenously-manufactured fighter, the F-1, the history of the development of the next ground-attack fighter, the FSX, is a manifestation of this impulse.³⁸ The final decision on the FSX appears to be that neither *Tornado* (built by three European countries), nor the F-18 (McDonnell Douglas), nor the F-16 (General Dynamics) satisfies the SDF. The three requirements the SDF sets for the FSX are that: 1) a support fighter should have some air defence capability as well as a capability against ground and maritime targets; 2) it should have two engines – for safety reasons; and 3) it should have a radius of action of 450 nautical miles (nm) when loaded with four air-to-sea missiles. Needless to say, two unstated criteria, national pride and the desire to develop indigenous technology, seem to be of the utmost importance in the decision. Not surprisingly therefore, one hundred FSX fighter aircraft are to be manufactured by Mitsubishi Heavy Industries and other Japanese firms, with the participation of US engine manufacturers. The Japanese two-track policy on technology is evident here also.

Conclusion

Trade, technology and security are linked in the Pacific region, more so than some would like to think. They will remain linked because of East Asia's perennial sense of vulnerability and economic anxiety. Only if export-led growth, economies increasingly oriented towards high technology, and the restless search for security can be politically reconciled will the region remain stable. It is not clear that they can be reconciled satisfactorily for all parties because, as noted here, the elements of conflict undoubtedly exist and seem likely to remain unresolved. The problem is how to channel the region's undoubted energy in creative directions for the 'general good' of international security.

It could be argued that the East Asian countries, and more broadly the Western Pacific countries, have basically set the direction of their economic development, and that what remains for them is simply to achieve political maturity and the consolidation of democratic politics.³⁹ It is true that political issues have come to loom large in

East Asia, but it would be a mistake to think that the countries in the region have solved their economic problems for all time. Clearly they have not. Prudence and moderation are now needed more than ever, by all the actors across the Pacific, in dealing with these intricate issues.

I have benefited from helpful comments by Peter Drysdale and Nobuyasu Abe on an earlier draft of this Paper. Ellen Frost, Bernard Gordon, Lincoln Gordon, Ernest Guerri, François Heisbourg, Kenneth Hunt, Michael Intriligator, David Kelly, Joseph Nye, Yoshio Okawara, Robert O'Neill, Peter Polomka, James Richardson, William Schneider, John Wilkinson, Charles Wolf Jr, and many others made useful comments towards revision. Janet Healey has helped me to refine the manuscript. However, the responsibility for the views expressed is solely my own. The Paper was completed when I was a senior research fellow of the Australian-Japan Research Centre, Australian National University, July-September 1986.

Notes

¹ *Nihon Keizai Shimbun*, 4 July 1986, 1 and 2 August 1986, *Far Eastern Economic Review*, 17 July 1986, p. 52; *The Economist*, 15-18 July 1986, pp. 53-4. See also special issues on high technology and high-technology trade, respectively, in *The Economist*, 23-29 August 1986, special pages 1-20 and Issues in *Science and Technology*. vol. 2, no. 3 (Spring 1986), pp. 41-80.

² Winston William, 'Japanese Investment: A New Worry', *New York Times*, 6 May 1984, p. F1; *Electronic News*, 18 March 1986, p. 1, cited in Ellen L. Frost, *For Richer, For Poorer: Managing Money, Technology and People in US-Japanese Relations*, pre-publication manuscript for the Council on Foreign Relations, summer 1986. I am grateful to Ellen Frost for making this available.

³ Kym Anderson and Yujiro Hayami, *The Political Economy of Agricultural Protection: East Asia in an International Perspective*, (Sydney: Allen & Unwin, 1986).

⁴ Gary Clyde Hufbauer *et al*, *Trade Practice in the United States: 31 Case Studies*, (Washington, DC: Institute for International Economics, 1986), p. 21. On US competitiveness, see Robert Z. Lawrence, *Can America Compete?* (Washington, DC: The Brookings Institution, 1984).

⁵ *Far Eastern Economic Review*, 10 July 1986, pp. 36-41; *Asahi Shimbun*, 11 June 1986.

⁶ For 'Confucian propriety', see, for example, Lucian W. Pye, *Asian Power and Politics*, (Cambridge, MA.: Harvard University Press, 1985). In this connection, one telling event took place recently in Korea: shortly before the US Secretary of State visited Korea to meet the Korean Foreign Minister in early May 1986, the US Special Security Team brought sniffer dogs into the building in an attempt to detect explosives in the Foreign Minister's office and the VIP lift without the sufficient prior understanding of the Korean government. *Chungan Ilbo*, May 1986, cited in *Yomiuri Shimbun*, 31 May 1986.

⁷ A similar view is found in Peter Polomka, *The Two Koreas: Catalyst for Conflict in East Asia?* Adelphi Paper 208, (London: IISS, 1986), p. 37.

⁸ William Watts, *The United States and Japan: A Troubled Partnership*, (Cambridge, MA: Ballinger, 1984); *The United States and Asia: Changing Attitudes and Politics*, (Cambridge, MA: Lexington Books 1982).

⁹ David Sapsford, *Real Primary Commodities Prices: An Analysis of Long-Run Movements*, IMF Internal Memorandum, 17 May 1986, cited in Peter Drucker, 'The Changed World

- Economy', *Foreign Affairs*, vol. 64, no. 4 (Spring 1986), pp. 768–91
- ¹⁰ *Ibid.*; World Bank, *World Development Report 1986*, Washington, DC: World Bank, 1986.
- ¹¹ World Bank, *World Bank Report 1986*, Washington, D.C.: World Bank, 1986.
- ¹² Research Institute for Peace and Security, *Asian Security 1985*, (Tokyo: RIPS, 1985).
- ¹³ Peter Drysdale, 'Japan's US-Dependence Syndrome as seen from Australia', *Economics Today* (in Japanese), No. 1 (Spring 1986), pp. 96–103; and Drucker, (*op. cit.* in note 9).
- ¹⁴ Anderson and Hayami, (*op. cit.* in note 3).
- ¹⁵ Aurelia George, *The Politics of Australia-Japan Beef Trade: Current Issues*, Paper presented to the Australia, Asia and Agricultural Trade Issues Conference, Sydney, 18 June 1986.
- ¹⁶ Gary Clyde Hufbauer and Jeffrey Schott, *Trading for Growth: The Next Round of Trade Negotiations*, (Cambridge, MA: MIT Press for Institute for International Economics, 1985), pp. 47–53; Drysdale, (*op. cit.* in note 13).
- ¹⁷ 'Farm Trade: Seeds of War', *Far Eastern Economic Review*, 11 September 1986, pp. 138–63.
- ¹⁸ Hugh Patrick, 'The Burgeoning American Stake in the Pacific Region', in James W. Morley, (ed.), *The Pacific Basin: New Challenges for the United States* (New York: Academy of Political Science, 1986), pp. 59–75.
- ¹⁹ See, for example, Drysdale, (*op. cit.* in note 13) although he does not include any discussion of security issues.
- ²⁰ Robert Keohane, *After Hegemony: Cooperation and Discord in the World Political Economy*, (Princeton, NJ: Princeton University Press, 1984). See also Robert O. Keohane and Joseph S. Nye, Jr., 'Two Cheers for Multilateralism', *Foreign Policy*, No. 60 (Fall 1985), pp. 148–67; Andrew Mack, 'The Political Economy of Global Decline: America in the 1980s', *Australian Outlook*, vol. 40, no. 1 (April 1986), pp. 11–20; and Fred Halliday, *The Making of the New Cold War* (London: Verso, 1983).
- ²¹ Keohane, (*op. cit.* in note 20).
- ²² Robert Axelrod, *The Evolution of Cooperation* (New York: Basic Books, 1981). For a fuller examination of Axelrod's theory, see Christopher J. Makins, 'The Super-power's Dilemma: Negotiating in the Nuclear Age' in *Survival* July/August 1985, pp. 169–78.
- ²³ This question is addressed briefly in my *Perspectives toward the Twentieth-First Century with Special Reference to the Western Pacific*, Paper presented at the Annual Meeting of the International Studies Association, Anaheim, California, 26–9 March 1986.
- ²⁴ This and other related issues are more fully discussed in my 'Japan's Images and Options: Not a Challenger, But a Supporter', *Journal of Japanese Studies*, vol. 12, no. 1 (1986), pp. 95–119 and 'Conclusion: Japan Looking Ahead with Caution', in Takashi Inoguchi and Daniel Okimoto, (eds), *The Changing International Context*, vol. 2 of *The Political Economy of Japan*, Yasusuke Murakami and Hugh T. Patrick, (general eds.), (Stanford: Stanford University Press, forthcoming). On US-Japan economic issues, see C. Fred Bergsten and William R. Cline, *The United States Japan Economic Problem*, (Cambridge, MA: MIT Press for Institute for International Economics, 1985); Stephen Cohen, *Uneasy Partnership: Competition and Conflict in US-Japan Trade Disputes*, (Baltimore MD: Johns Hopkins University Press, 1985); Kiyohiko Fukushima, 'Japan's Real Trade Policy', *Foreign Policy*, no. 59 (Summer 1985), pp. 22–39; Bernard Gordon, 'Truth in Trading', *Foreign Policy*, no. 61 (Winter 1985–6), pp. 94–108.
- ²⁵ See Ellen L. Frost, (*op. cit.* in note 2).
- ²⁶ Takashi Inoguchi, 'The Japanese Double Election of July 6, 1986', *Electoral Studies*, (forthcoming).
- ²⁷ Anne G. Keatley, (ed.), *Technological Frontiers and Foreign Relations*, (Washington, DC: National Academy Press, 1985).
- ²⁸ See Daniel Okimoto *et al.*, (eds), *Competitive Edge: The Semiconductor Industry in the US and Japan*, (Stanford: Stanford University Press, 1984); and the two special issues in *The Economist* and *Issues in Science and Technology*, cited in note 1.
- ²⁹ *Nikkei Sangyo Shimbun*, 24, 25, 26 June 1986.

³⁰ *Nihon Keizai Shimbun* (evening edition), 24 June 1986.

³¹ 'Routing Protectionism', *The Economist*, 9–15 August 1986, pp. 15–16.

³² *Mainichi Shimbun*, 24 May 1986.

³³ On the SDI programme and issues related to it, see Office for Technology Assessment, *Strategic Defense Initiatives*, (Princeton NJ: Princeton University Press, 1986) and works listed therein. As for Japanese thinking, see for instance, *Tokyo Shimbun* (evening edition), 13 May 1986, *Nihon Keizai Shimbun*, 18 May 1986, *Asahi Shimbun* (evening edition), 1 May 1986. See also Daniel Sneider, 'Why does Japan avoid discussing its participation in the SDI Program in terms of its own security

issues?' *Asahi Journal* (in Japanese), 25 July 1986, pp. 9–13.

³⁴ See, *The Asian Wall Street Journal*, 10 September 1986.

³⁵ Banning Garrett and Bonnie Glaser, 'Chinese Perspectives on the Strategic Defense Initiatives', *Problems of Communism*, March-April 1986, pp. 28–44.

³⁶ Banning Garrett and Bonnie Glaser, 'Asia's Stake in Moscow's Missiles', *Far Eastern Economic Review*, 24 July 1986, pp. 42–3.

³⁷ *Mainichi Shimbun*, 10 July 1986.

³⁸ *Asahi Shimbun* (evening edition), 6 June 1986.

³⁹ Richard Holbrooke, 'East Asia: The Next Challenge', *Foreign Affairs*, vol. 64, no. 4 (Spring 1986), pp. 732–51.