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POLICY STAFF PAPER

NO. 93/16

JAPAN TRADING CORP.:

GETTING THE FUNDAMENTALS RIGHT

by

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(December 1993)

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Executive Summary

From the early 1960s, the Western policy community has been confounded by two questions concerning Japan. First, what accounts for the economic success of Japan? Second, how to deal with Japan's trade success? The Western response to Japan's re-emergence on the international scene has hit one snag after another. Informal trade restraints and bilateral "fixes" have largely by-passed the real problems.

There should be no mystery behind Japan's economic growth. Japan got most of its economic fundamentals right over an extended period of time. By seeking out examples of Japan's alleged trade and economic "deviousness" and cultural impediments, the West's response to Japanese trade success has been fundamentally flawed. Consequently, Japan-U.S. trade frictions have grown and economic nationalists in both countries have fed on them. This Paper argues that, rather than demonizing the Japanese, policy makers need to recognize Japanese strengths more honestly, target specific trading and investment distorting practices (which do exist), and accept that Western regimes also retain important protectionist features that, grosso modo, can and do distort trade and international investment flows. Further negotiations to liberalize these barriers are still required.

This Paper builds on a recently released companion document "And the Devil Take the Hindmost: The Emergence of Strategic Trade Policy" (No. 93/14). The objectives of the present Paper are to (a) discuss the nature of Japan-U.S. trade frictions and the measures adopted to resolve them; (b) review economic arguments that explain post-War growth in Japan; (c) discuss why bashing Japan with trade management measures will most likely not work; and (d) draw lessons from Japan's economic success and from the purported U.S. economic decline (which fuels Japan-U.S. trade frictions).

This Paper finds that there are sharp institutional differences between Japanese and U.S. markets. This is borne out in everything from the distribution system to the network system among companies to the financial role of banks. Some of Japan's markets appear to be characterized by cartel type arrangements between firms that may make it difficult for outsiders, including foreigners, to break in. However, there are real efficiency advantages to the Japanese style of business, arising from the virtues of long-term relationships, a flexible labour market and flexible manufacturing or corporate process "reengineering".

As a small island lacking natural resources, Japanese society has focused on manufacturing as the backbone of its economy. To import raw materials, it had to be export-oriented. To transform raw materials, it needed capital stock and technical know-how. The capital stock it accumulated has been financed by its high propensity to save. Technology it actively sought and often imported from the West. To produce new knowledge, it invested

heavily in the technical education of its current and future labour force. To adapt to changing comparative advantage in global markets, it has a flexible labour market where wages and employment respond quickly. To top it all, it has responsibly managed its fiscal and monetary policies. Japan has turned in one of the lowest rates of inflation, unemployment, growth in public expenditures and national debt in the world over the last couple of decades. Japan has been an economic success because it got most of its economic fundamentals right. This is the real heart of the matter. Its lessons need more forthright recognition by Japan's trading partners.

Why is Japan not more "open" to foreigners? Japan is a capital-surplus economy that has, to a large extent, reacted as any profit maximizing economy would. The success of Japanese products was met with VERs and other trade restraints in the West. As a result, consumers in the West paid higher prices for certain Japanese exports, while, ironically, Japan got long term access to super-normal profits or rents. To divide up these rents in Japan, the banks, politicians, bureaucracy, industry and workers informally set up a mutually beneficial alliance. Outsiders, without the same degree of capital liquidity, faced by high sunk costs of investment in the expensive Japanese market, and stymied by Japanese intercorporate links (including linked sources of financing and much of the distribution system), have not generally been successful in establishing a corporate presence in Japan.

Japan bashing by the U.S. and others on a sector-by-sector basis might get a few chosen large corporations in the West to partake of these rents, but it does not create many jobs in the U.S. or Canada, nor open Japan to significant increases in foreign investment. So-called results-oriented trade management is more likely to lead to a market with more, rather than less, Japanese government and corporate control. This Paper suggests that our response to the Japanese challenge requires a more honest evaluation of how Japan's trading partners might emulate certain Japanese practices: solid, consistent monetary and fiscal management, the concerted effort to build an environment conducive to innovation, and the possible benefits of encouraging greater inter-corporate alliances (including with the financial sector) while ensuring competition between and within such alliances. The *keiretsu* system's merits, and they clearly exist, should be reviewed closely, while continuing the process of liberalizing trade and investment distorting practices on both sides of the Pacific through broadly based negotiations.

Moreover, Japan itself is changing. The Japanese economy has undergone a major adjustment in response to the strengthening of the yen since the mid 1980s. Exchange rates do affect Japanese buying patterns in a predictable way. Japanese imports of consumer goods are on the rise. Financial markets are becoming less distinctive. Given the major shifts in Japanese behaviour over the past few years, a case for an entirely new approach that emphasizes pre-established targets rather than internationally arrived at rules cannot be sustained.

Résumé

Dès le début des années 1960, les responsables des politiques occidentaux étaient déjà déconcertés par deux questions sur le Japon. Premièrement, comment expliquer son succès économique? Deuxièmement, comment réagir à sa réussite commerciale? La réaction de l'Ouest à la ré-émergence du Japon sur la scène internationale a buté sur plus d'un obstacle. Les restrictions commerciales officieuses et les mesures bilatérales ponctuelles sont essentiellement passées à côté des vrais problèmes.

Il ne devrait pas y avoir de mystère derrière la croissance économique du Japon, qui a acquis la plupart des principes économiques fondamentaux sur une longue période de temps. En cherchant des exemples de l'apparente «sournoiserie» et des soi-disant obstacles culturels du Japon en matière économique et commerciale, l'approche de l'Ouest a été fondamentalement faussée. Les frictions commerciales entre le Japon et les États-Unis se sont donc multipliées, nourrissant les nationalismes économiques des deux pays. Selon l'auteur du document, les décideurs devraient, au lieu de diaboliser les Japonais, reconnaître plus honnêtement leurs atouts, viser certaines pratiques de distorsion du commerce et des investissements (elles existent) et admettre que les régimes occidentaux conservent eux aussi certaines caractéristiques protectionnistes importantes qui, *grosso modo*, peuvent perturber - et en fait - perturbent les échanges commerciaux et les flux d'investissements internationaux. D'autres négociations s'imposent pour réduire ces barrières.

L'auteur s'inspire d'un document d'accompagnement récemment publié, intitulé Sauve qui peut ou l'émergence d'une politique commerciale stratégique (N° 93/14). Le présent exposé a pour objectifs a) de traiter la nature des frictions commerciales américano-japonaises et les mesures adoptées pour les apaiser, b) de passer en revue les arguments économiques expliquant la croissance du Japon de l'après-guerre, c) d'expliquer pourquoi l'imposition de mesures de gestion commerciale a très peu de chances de donner des résultats et d) de tirer les leçons du succès économique japonais et du prétendu déclin des États-Unis (qui alimente les frictions bilatérales).

L'auteur constate de nettes différences institutionnelles entre les marchés japonais et américain, différences que l'on retrouve partout, du système de distribution et de réseau entre compagnies au rôle financier des banques. Certains marchés japonais s'apparentent à des cartels de sociétés qu'il est difficile de pénétrer, y compris par des étrangers. Cependant le style commercial japonais présente, au plan de l'efficacité, de réels avantages que procurent des liens de longue date, ainsi que la souplesse de la main-d'œuvre et des procédés utilisés dans les usines et les entreprises.

Insulaire et manquant de ressources naturelles, la société japonaise a fait de la fabrication le pivot de son économie. Pour importer les matières brutes dont elle avait besoin, il lui a fallu se tourner vers l'exportation. Pour transformer ces matières brutes, elle avait besoin de capitaux et de savoir-faire technique. Sa vive propension à l'épargne lui a permis d'accumuler les capitaux. Avidée de technologie, elle l'a souvent importée de l'Ouest. Pour mettre à jour ses connaissances, elle a investi intensivement dans l'éducation technique de sa main-d'œuvre actuelle et de la relève. Pour s'adapter à l'évolution des avantages comparatifs sur les marchés mondiaux, elle dispose d'un main-d'œuvre souple, qui sait réagir rapidement aux conditions salariales et d'emploi. En plus de tout cela, elle a administré avec sagesse ses politiques budgétaires et monétaires. Au cours des deux dernières décennies, le Japon s'est transformé en l'un des pays où les niveaux d'inflation, de chômage, d'accroissement des dépenses publiques et de la dette nationale sont les plus bas du monde. En un mot, c'est la maîtrise des principes fondamentaux de l'économie qui explique sa réussite et ses partenaires commerciaux devraient admettre plus facilement qu'ils pourraient en tirer des leçons.

Pourquoi le Japon n'est-il pas plus «ouvert» aux étrangers? Économie aux capitaux excédentaires, le Japon a réagi dans une large mesure comme le ferait toute économie qui maximise ses profits. La popularité de ses produits a provoqué à l'Ouest des limitations volontaires des exportations (LVE) et autres restrictions commerciales. En conséquence, les consommateurs occidentaux ont payé plus cher certains produits japonais alors que, ironiquement, le Japon s'est assuré à long terme des profits et rentes extraordinaires. Pour répartir ces rentes, banques, politiciens, bureaucrates, industriels et salariés ont formé officieusement une alliance profitable à tous. Une entreprise étrangère ne disposant pas des mêmes liquidités et devant faire face aux frais fixes élevés d'investissement sur le coûteux marché japonais tout en étant écartée des alliances que les sociétés japonaises nouent entre elles (y compris des sources de financement apparentées et de la majeure partie du système de distribution) n'arrive généralement pas à s'implanter au Japon.

Les représailles ponctuelles des États-Unis ou d'autres pays peuvent permettre à quelques grandes sociétés occidentales triées sur le volet d'avoir leur part de rentes, mais cela ne crée pas beaucoup d'emploi aux États-Unis ou Canada, et n'ouvre pas de façon significative le marché japonais à l'investissement étranger. Ce qu'on a appelé la gestion commerciale axée sur des résultats a des chances d'entraîner un resserrement, plutôt qu'un relâchement, du contrôle du gouvernement et de l'industrie du Japon. Selon l'auteur du document, le défi japonais nécessite une évaluation plus honnête des moyens qui s'offrent aux partenaires commerciaux de ce pays d'émuler certaines pratiques : une gestion monétaire et budgétaire vigoureuse et constante, des efforts concertés pour créer un environnement propice à l'innovation et les avantages possibles que l'on peut tirer en encourageant les alliances entre sociétés (y compris avec le secteur financier) tout en assurant la concurrence entre ces alliances et au sein de ces alliances. Les

mérites du système *keiretsu*, qui sont réels, devraient être examinés de près, tout en poursuivant, par de vastes négociations, le processus consistant à réduire, des deux côtés du Pacifique, les pratiques de distorsion des échanges et de l'investissement.

Enfin, le Japon lui-même change. Son économie a été soumise à un ajustement capital après le renforcement du yen depuis le milieu des années 1980. Les taux de change affectent de façon prévisible les tendances d'achat des Japonais. Les importations de biens de consommation sont à la hausse. Les marchés financiers deviennent moins distinctifs. Étant donné les grands changements survenus dans les comportements japonais au cours des dernières années, on ne peut soutenir une approche entièrement nouvelle qui mettrait l'accent sur des objectifs prédéterminés plutôt que sur des règles convenues au niveau international.

1. INTRODUCTION

1.1 Japan-U.S. Trade Conflict

Japan incurs the wrath of its trade partners, the U.S. and the European Union (EU) in particular, because it continues to run large current account surpluses. The macroeconomic explanation of this issue is well known: the export-import imbalance is the mirror image of the savings-investment balance. Over a business cycle, domestic savings and investment may not keep up with each other so that a trade account gap opens up. If the problem is to fix the U.S. balance of payments position, a focus on Japan-U.S. trade frictions will not solve it. That an adjustment in exchange rates eventually can correct imbalances in trade and is the appropriate cure is not disputed by knowledgeable analysts.¹

Nonetheless, a chorus of observers purport to have identified something quintessentially Japanese about the nature of the problem. The Japan Inc. problem, these policy analysts argue, consists of three microeconomic issues. First, government protection in Japan is able to make winners. Second, the Japanese market is closed to foreigners. Third, the Japanese have not actively enforced their antitrust regulations. In this view, the Japanese system is essentially oligopolistic, deriving economic rent from foreigners and domestic consumers. "Japan bashing" has become shorthand for U.S. criticism of Japanese trading practices and its economic organization more broadly.

This Paper asks two questions in the light of the extraordinary growth in Japan and its subsequent trade frictions with the U.S.. First, what can we learn from Japan's economic success? Second, how should trade policy in advanced countries respond to countries who successfully catch up?

● Bashing Japan Inc.

Post War American economic and military might has been seen to be based on the preeminence of the U.S. in science, high technology industries, management and administration. On account of high total factor productivity², the U.S. not only commanded comparative but also

¹ Laura D'Andrea Tyson, *Who's Bashing Whom? Trade Conflict in High-Technology Industries*, Institute for International Economics, Washington, D.C., 1992, p.14. Ms. Tyson is currently Chairperson of the Council of Economic Advisors in the Clinton Administration.

² Total factor productivity (TPF) measures output produced by given amounts of labour and capital together; that is, total output (Q) divided by employment of capital (K) and labour (L), or formally, $TPF = Q/(K \cdot L)$. TPF roughly measures technological progress.

absolute advantage in world markets. The U.S. leadership in technology and productivity meant that the U.S. also led the world in per capita income and prosperity. This fact has been a matter of national pride in the U.S.. Moreover, this technological leadership was taken for granted by most people in the U.S.

Japan, the EU and the newly industrializing countries (NICs) emulated the U.S.. Most of them have been catching up to U.S. productivity and per capita income levels. These latecomers have benefitted from access to U.S. technology and the U.S. market. Hence, the popular perception in the U.S. that the nation has been hoisted on its own petards. The erosion of U.S. domination in a few manufacturing industries has led to the fear of a large scale deindustrialization and the loss of well-paying jobs. Most of these jobs are thought to be lost to Japan.

● Economic Nationalism

Japan bashing is more than an economic problem, however. The overall objective is to restore U.S. leadership of world commerce. This is in essence economic nationalism. The economic nationalists in the U.S. want their government to do two things.

First, the U.S. must implement an industrial policy. Economic nationalists claim that strategic trade and industrial policies in Japan and Europe have been largely successful. U.S. corporations cannot take on these competitors without U.S. government money and protection. The end of the Cold War, it is feared, brings with it a reduction in U.S. defence spending. Many U.S. corporations, who depend for their R&D financing on this money, are hurting. Their R&D has important spillovers in the rest of the U.S. economy. Consequently, in this view, many successful U.S. industries will now lose out in competitive world markets. The U.S. government should actively implement an industrial policy to make up for the loss of U.S. defence contracts and in response to the "predatory" behaviour of Japan and others. Otherwise, high technology industries and well-paying jobs will go offshore.

Second, the U.S. government must open up markets in high income countries, Japan in particular. While Japanese firms enjoy relatively unhindered access to the U.S. market (the "strategic" theorists admit to few domestic protectionist exceptions), the government in Japan, in this view, is reluctant to address many deeply imbedded "structural" barriers to "fair" trade into Japan. Despite the absence of legal barriers to trade, collusive behaviour among firms and a highly cartelized distribution system in Japan effectively shut out many foreign products, even when imports would be cheaper and/or of higher quality than the Japanese version. Foreign direct investment is similarly choked off by local business and government collusion. The barriers to establishing local subsidiaries inhibit follow-on intra-firm and other exports to Japan. U.S. corporations are denied entry into the lucrative Japanese market.

This system (seen as more or less conspiratorial by the "strategic" proponents) tends particularly to close ranks when a key new technology is at stake, assuring Japanese firms a chance to capture new markets even when foreign firms have an initial lead. Consequently, the U.S. government (the same view is often heard in the European Union) must level the playing field. The Japanese must be made to play fair. Japan should be forced, through bilateral or unilateral actions, to open its market to U.S. corporations on a sector by sector basis.

Unfortunately, the Japan bashers and the proponents of strategic trade and industrial policies have walked right into the trap of U.S. economic nationalism. For countries such as Canada, who look forward to the continuation of good trade relations with the U.S., this is not a desirable development. The real economic problems in the U.S. cannot be addressed by bashing Japan or the EU or others. Nor are they resolved by implementing nationalistic strategic trade and industrial policies. In a companion study, it is argued that strategic trade and industrial policies have had very little success in practice.³

● Productivity Catch Up: The Real Issue

The real issue is the fact that people in the U.S. still have not come to terms with the fundamental economic changes that have taken place, not only for the U.S., but in the entire trading system during the last two decades. The phenomenon of catch-up by other countries has pushed the process of international specialization deeper at an accelerating pace since World War II. The world economy is now characterized by growing international specialization and product differentiation. Companies from different nations are the productivity leaders in different industries. Total factor productivity levels across industrialized countries have been converging (see section 4.1 below).

The economic nationalists in the U.S. have not come to terms with the fact that U.S. preeminence in so many manufacturing industries of the world economy was historically unique. Even when the U.K. enjoyed overall productivity leadership in the late 19th century, it was not uniformly dominant in all industries. At that time, the U.S. had major strengths in machine tools; light machinery, such as cameras and typewriters; a broad range of electrical equipment; and industrial machinery, such as boilers and printing presses. Germany was the pioneer in many chemical products.⁴ The U.S. dominance in the early post War period reflected the wartime destruction of capital stock in Europe and Japan, as well as the development of major new technologies in the U.S.. Today's situation is characteristic of more normal times, with

³ I. Prakash Sharma and Keith H. Christie, "And the Devil Take the Hindmost: The Emergence of Strategic Trade Policy", Policy Staff Paper no. 93/14, Foreign Affairs and International Trade Canada, December 1993.

⁴ Nathan Rosenberg, "Technological Change in the Machine Tool Industry, 1840-1910", *Journal of Economic History*, (23) 1963: 414-43.

international competition and an international division of labour. The fact is that the U.S. economy has not entered a period of secular decline, but rather has taken a position of first among equals. No nationalistic economic policy of picking at countries or of picking "winners" will alter that. Moreover, comparatively weak macroeconomic management in the U.S. (especially mediocre fiscal management) has also taken its toll.

1.2 The Lesson From Japan's Economic Success: Getting the Fundamentals Right

Japan's economic success has several important lessons. Foremost is that to achieve (microeconomic) trade success, it is imperative to have good macroeconomic policies in place that provide overall economic stability. Policymakers should expect to reap the long term benefits of liberal trade only if they manage international macroeconomic policies well.⁵ Between 1960 and 1990, public spending in Japan was modest and Japan managed its monetary and fiscal policies well. Japan has turned in one of the lowest rates of inflation, unemployment, growth in public expenditures and national debt in the world over the last several decades. Its domestic savings rate has been consistently among the OECD leaders. The U.S. (and Canada) have been less successful.

Japan has been successful in developing a well skilled labour force that is capable of creating and absorbing new know-how and technology. Japan has been successful in absorbing a massive transfer of technology from other countries. It is much more important to exploit a new technology successfully than to be the first one to invent it. In addition, the labour market in Japan is characterized by both flexible wages and employment (see section 3.1 below). Japanese companies have also been successful in developing a new mode of production. The flexible manufacturing or business process "reengineering" combines new technology and "knowledge" workers in new firms built up from scratch, rather than nursing old companies with band-aid type investment in new computers.⁶ The chemistry of a flexible labour market and the

⁵ Jagdish N. Bhagwati, *Protectionism*, Cambridge, MA: MIT Press, 1988, p. 129.

⁶ *Business reengineering*, also called *process redesign*, requires that managers forget everything they know about how their companies operate and reinvent their businesses from scratch. The reward? Leaps in productivity and competitiveness. Why forget the old way? Today, the overall process of producing, managing or delivering a good or service has become increasingly complicated. Today's airlines, steel mills, accounting firms and computer chip makers have all been built around Adam Smith's central idea—the division or specialization of labour and the consequent fragmentation of work on a piecemeal basis. The new computing and information technologies, however, enable one person to do many different jobs at once. Nevertheless, the adoption of new technology in its entirety is a complex process, which encounters resistance from existing managers and employees. The new technology adopted by businesses organized in the old way has drowned them in data, but starved them of information. Information needs to be analyzed efficiently, allowing decisions to be taken more swiftly. For that to happen, you need a flatter, less-hierarchical organization where information flows more freely. The old ways of doing business simply don't work anymore. Even a complete overhaul of existing companies is not of much use.

availability of new know-how and flexible manufacturing, rather than industrial policy, has produced results for Japan and is an example that others can adapt.

The combination of a high saving rates that could be channelled into investment and new technology that could be used by a well-educated labour force made rapid growth in Japanese productivity possible. Japan's trade policy has been outward oriented. Japanese industries produced goods that have been useful to people around the globe, not just in Japan. Economic growth and prosperity is better achieved through trade, rather than indulging in the second or third best economics of nationalistic self-sufficiency.

● What Trade Response to Economies Catching Up?

The best response is not to bash. Economies catching up may still have protectionist trade policies in place either under the guise of the "infant industry" rationale or the politics of special interests. Whatever the form and rationalization of the trade distortions, these issues should be addressed in multilateral institutions such as the GATT or the new World Trade Organization. It is in the national interest of these countries to continue enjoying MFN treatment in the markets of other countries. This Paper argues that it is also in the interest of all countries to settle emerging trade disputes through negotiations on a multilateral basis, rather than taking unilateral or bilateral measures. And in either case, it is critical to differentiate between trade barriers, different (but market-responsive, economically rational) business structures, and macroeconomic causes of varying degrees of success in improving productivity and growth.

The experience of Japan-U.S. trade relations shows that short term trade measures tend to be captured for the long term by special interests. Subsequent attempts to dismantle these trade distortions often run up against well organized lobbies and economic nationalists. The U.S. response to shifts in dynamic comparative advantage vis-à-vis Japan, beginning with textiles in the 1950s, has been to follow up voluntary export restraints (VERs) with voluntary import expansion agreements (VIEs) that can tend to favour U.S. suppliers. The politics of pressure groups in the U.S.'s "sun-set" industries has been able to promote protection in several sectors.

To implement quotas, VERs and VIEs imposed by the U.S. and European authorities, the bureaucrats in MITI and MOF were given the power of dividing up the U.S. market among Japanese companies. If profit making export opportunities were restricted in the TV industry, Japanese companies moved to automobiles and then to VCRs, followed by semiconductors.

The proponents of business reengineering argue that the power of today's technologies can deliver maximum commercial gains if businesses take a clean sheet of paper and begin with new companies. The concept is elaborated further in sections 3.1 and 4.3 below.

Within each export category, when faced with restrictions abroad they moved upscale to the high value added segment of the market—long dominated by the U.S. and European corporations. Huge profits were transferred from the pockets of consumers in the West to the vaults of Japanese companies.

Each round of protective measures, whether bilateral or unilateral, taken to contain Japanese competition merely enlarges rents for Japanese companies and reinforces the incentives to preserve them. These rents are used to make additional investment in new sectors in Japan and in other countries. Thus, each round of protection in the West helps Japanese corporations finance their next foray into high value added industries. Japan's competitiveness in yet another industry touches sentiments in the West and calls for protection reach a crescendo.

The best response to economies which are "catching up" is not found in protection, but in getting our own economic fundamentals right, encouraging the acquisition of skills by a labour force capable of adapting new knowledge, keeping an attractive regime toward investment that brings in R&D and new knowledge, and encouraging private entrepreneurship that devises new ways of catering to the demands of people in the global marketplace.

The rest of this Paper is organized as follows. Chapter 2 describes macro- and micro-economic trade disputes between the U.S. and Japan, and the steps they have taken to address them. In chapter 3, we review the literature that debates the factors explaining Japan's economic growth. Chapter 4 returns to the U.S.-Japan trade conflicts. The Paper argues that these conflicts are overblown. The best response to them is provided by flexible manufacturing and corporate "reengineering". Chapter 4 develops the argument that the political economy of U.S.-Japan trade policy is such that bilateral trade measures will most likely turn out to be of little help in resolving trade disputes. Conclusions and the implications for Canada are found in chapter 5.

2. JAPAN-U.S. TRADE ISSUES

Since 1945, Japan and the U.S. have had a special relationship. The U.S. occupation of Japan set off the relationship in which Japan would become the Switzerland of the Pacific and the U.S. its protector and major export market. Both parties had a strong interest in Japan's prosperity and political stability. U.S. and Canadian intervention was the key factor behind Japan's entry into the GATT in 1955 and for its reentry into the world trading system.⁷ However, the economic events of the 1980s have increasingly strained this relationship.

⁷ Frank Langdon, *The Politics of Canadian-Japanese Economic Relations 1952-1983*, Vancouver: University of British Columbia Press, 1983.

Much public discussion and tension in the U.S. centres on the continuing U.S. trade deficit with Japan.⁸ It is argued that the Japanese market, while formally open, is effectively closed to foreign merchants. In this chapter, we review the macro-and micro-economic nature of U.S.-Japan trade conflicts and the policy initiatives both countries have attempted to resolve these issues. The U.S.-Japan economic agenda has been pursued through initiatives that have ranged across multilateral, bilateral and unilateral approaches to macroeconomic, structural and sector-specific issues.

2.1 The Macroeconomic Issues

The trade balance is the difference between what a country produces and what it consumes. When a country consumes more than it produces, the excess consumption must be imported. What is not consumed domestically out of current income can be saved and used either for domestic investment or exported abroad. This is summarized by the following equation:

$$\text{Private investment} + \text{fiscal deficit} = \text{domestic saving} + \text{imports.}$$

A country that invests more than it saves must import savings and goods from abroad to make up the shortfall. Given private investment and saving, any increase in the fiscal deficit would have to be offset by an increase in imports for the equation to hold. The twin deficits, fiscal and trade, are interlinked. An increase in the government budget deficit leads to an increase in the trade deficit. Thus, each country's saving-investment balance, together with the real exchange rate, is key to the determination of the aggregate trade surplus or deficit.

The U.S. fiscal deficit has resulted in the U.S. trade deficit. The U. S. can close the trade deficit by reducing the government deficit. This would free up saving for investment and allow the Federal Reserve system to reduce interest rates. Lower interest rates in the U.S. would reduce capital flowing into the U. S. and result in a further depreciation of the U.S. dollar. The lower value of the dollar would make U.S. products internationally more competitive and the resulting growth in exports will gradually wipe out the U.S. trade deficit.

⁸ Their trade links are summarized by the following statistics. Exports to Japan account for 11% of U.S. exports, while exports to the U.S. account for about 30% of Japanese exports. Conversely, the U.S. supplies about 24% of Japanese imports, while Japan supplies less than 19% of U.S. imports. These data cover the 1985 to 1992 period. For statistics pertaining to specific years, see C. Fred Bergsten and Marcus Noland, *Reconcilable Differences? United States-Japan Economic Conflict*, Washington, D.C.: Institute for International Economics, 1993, tables 2.1 and 2.2.

● **Experience of Macroeconomic Policy Initiatives**

There have been three types of responses to the macroeconomic issue.

1. *The management of the exchange rate:* In 1971, as part of the Smithsonian Agreement, the U.S. insisted on a substantial revaluation of the yen. In 1977, the U.S. insisted that Japan stop intervening to avoid yen appreciation. In 1985-87, as a part of the Plaza Agreement, massive yen appreciation was sought by the U.S. In early 1993, the U.S. successfully "talked up" the yen.
2. *Improving international monetary arrangements:* In 1986, the U.S. and Japan agreed to "reference ranges" for the yen-dollar rate. In 1987, the range had to be "rebased", but the stabilization effort did not succeed.
3. *Reduction of the external surplus by Japan's macroeconomic policies:* At the economic Summits in 1978 and 1985, Japan accepted a quantitative target for expanding its domestic demand. The aim was to bring down Japan's trade surplus and help correct the U.S. trade deficit. The countries cut their interest rates together on several occasions in 1986-87. During the Structural Impediments Initiative (SII) talks of 1989-90, Japan agreed to a long-term increase in public works spending. At each occasion, the U.S. also promised to cut its budget deficit and take measures to raise the U.S. saving rate.

Despite these efforts, the U.S.- Japan bilateral trade imbalance, though it narrowed in the late 1980s, has resisted decline. Nor has the U.S. reduced its budget deficit significantly.

2.2 The Microeconomic Issues

Changes in factor endowments, technology, the availability and quality of productive factors along with institutional arrangements all have an impact on the dynamic comparative advantage of the U.S. and Japanese industries. These effects are the subject of microeconomic analysis. The U.S. specializes in natural resource-based products and high technology manufactures, while Japan specializes in a broad range of manufactures, with a growing concentration in high technology.

Both countries' governments intervene in the market in ways that distort trade patterns. Government participation in the market tends to generate rents. Firms and special interest groups pursue these rents. They waste resources in lobbying the bureaucracies to capture rents.

Trade Protection in the U.S.

The post Tokyo Round tariffs in the U.S. average 3.3% in agriculture and 5% for industrial goods. The U.S. maintains formal import quotas on a number of agricultural goods including dairy products, sugar, peanuts and cotton, while several agricultural products enjoy very trade distorting export subsidies under the guise of the Export Enhancement Program. Textiles and apparel are subject to bilateral quotas under the Multi-Fibre Arrangement (MFA). The U.S. has negotiated voluntary export restraints (VERs) on a number of products. The most notable VERs with respect to Japan are in steel, machine tools, colour TVs and automobiles. However, their current impact is not certain. The VERs on colour TVs and steel have been removed, that on machine tools is scheduled to be phased out and that on automobiles is no longer binding.

Moreover, U.S. firms have made extensive use of antidumping and countervailing duty provisions. Between 1979 and 1990, U.S. firms filed a total of 5 countervailing duty and 58 dumping suits against Japanese exporters, 43 (or 69%) of these resulting in restrictions on trade.⁹ The widespread and arguably indiscriminate use of countervailing and anti-dumping suits and duties has a protectionist effect, especially the misuse of the "constructed value" approach to determining the level of alleged dumping.

The U.S. also maintains a variety of sanitary regulations, standards, testing and certification requirements, and other practices that could be classified as nontariff barriers.¹⁰ Moreover, U.S. industrial policy is backed up several trade distorting tax and subsidy practices. U.S. tax policies have in effect subsidized capital investment and production in some U.S. industries. Trade and investment are also distorted by: input subsidies, such as the provision of cheap power or water for irrigation; government R&D expenditures; large-scale government purchases that effectively create a market (for example, avionics or ground tracking stations for satellites); other government procurement practices that tilt purchasing toward U.S. suppliers (for example, the "Buy America Act"); and other government regulations that implicitly reduce the relative costs of U.S. industries.¹¹

The U.S. also pursues policies designed to support its high technology sectors. Such policies have included: special tax credits for R&D expenditures, as well as direct federal government expenditures on R&D, through contractual research; the system of national

⁹ I.M. Destler, *American Trade Politics*, 2nd ed., Washington, D.C.: Institute for International Economics, 1991: Annex C.

¹⁰ GATT, *Trade Policy Review: Japan*, Geneva: GATT, 1990.

¹¹ Richard N. Cooper, "Industrial Policy and Trade Distortions", in Dominick Salvatore, ed., *op. cit.*, 1986.

laboratories; and industry-administered, federally funded R&D centres, such as the semiconductor R&D consortium Sematech. Altogether, the federal government accounts for 44% of all R&D expenditures in the U.S., of which 53% is carried out through the Defence Department. In 1988, defence-related work accounted for about 65% of the federal R&D budget.¹² U.S. companies receive considerable subsidies through the Advanced Research Projects Agency (ARPA). For instance, the U.S. has recently embarked on a five-year, US\$1.9 billion program to support supercomputer research and to develop a supercomputer electronic data network. Furthermore, the U.S. government practices a "Buy America" policy in its procurement of supercomputers. Finally, the U.S. government is estimated to have spent US\$120 million in 1990 on high-resolution imaging technologies (related to HDTV).¹³

The pattern of international trade and investment is also distorted by industrial policies and lower labour standards at the state and municipal levels in the U.S.. For instance, to attract foreign-based MNCs to locate manufacturing in individual States, local authorities have offered lucrative tax, infrastructural and loan incentives. The so-called right-to-work states ensure a lower level of organized labour activity in practice. These locational incentives can distort investment decisions to the detriment of countries such as Canada.¹⁴

Nontariff barriers in 1983 reduced total U.S. manufactures imports by \$49.5 billion, or nearly one-quarter of U.S. manufactures imports.¹⁵ More recent direct estimates of how much imports in the U.S. are reduced by these distortionary policies is not available. However, U.S. policies, such as export controls and foreign policy sanctions, are estimated to have *reduced* U.S. exports by \$10 billion to \$30 billion, especially with regard to such manufactures as chemicals, equipment and instruments.¹⁶

¹² Council on Competitiveness, *Gaining New Ground: Technology Priorities for America's Future*, Washington: Council on Competitiveness, 1991.

¹³ Cynthia A. Beltz, *High-Tech Maneuvers*, Washington: American Enterprise Institute, 1991.

¹⁴ On U.S. state-level locational subsidies, see Office of Technology Assessment U.S. Congress, *Multinationals and the National Interest: Playing by Different Rules*, Washington, D.C.: 1993, pp.66-8.

¹⁵ David Treffler, "Trade Liberalization and the Theory of Endogenous Protection: An Econometric Study of U.S. Import Policy", *Journal of Political Economy*, (101) 1993: 138-60.

¹⁶ J. David Richardson, *Sizing Up U.S. Export Disincentives*, Washington: Institute for International Economics, October 1993.

Trade Protection in Japan

In Japan, border measures are largely confined to agriculture, while non-border measures restrict trade in other product areas. As discussed in chapter 3, in the immediate post War period Japan controlled imports to allocate scarce foreign exchange. The government also maintained high tariffs and extensive systems of quotas and import licensing. The government supported producers in preferred sectors, such as steel, with subsidized loans and special tax treatment. Subsequently, there has been a gradual relaxation of border measures related to manufactures. By the mid 1980s, tariff levels in Japan were comparable to those in the U.S. and the EU, and quotas had been largely eliminated. As of 1989, the applied simple average tariff rate for industrial products (excluding petroleum) was 5.3%, and the trade weighted average 1.9%.¹⁷

Nevertheless, it is widely believed that the Japanese market is effectively closed to manufactured imports. Examples of methods to control imports include so-called discriminatory networks of affiliated firms (*keiretsu*)¹⁸; administrative guidance on the part of government officials to intimidate importers; misuse of customs procedures and product standards, testing and certification requirements to discourage imports; incomplete enforcement of patent and trademark rights; government procurement procedures that advantage domestic suppliers; and restrictions on the distribution channels for imported products, to name a few. In 1983 (the only year for which data are available), a simple average of 46.7%, or a trade-weighted average of 61.7%, of U.S. exports to Japan encountered some form of nontariff barrier, some erected disproportionately in sectors of U.S. specialization.^{19 20} However, the significance of these non-traditional barriers in Japan is controversial.

The phenomenon of non-traditional access barriers to new entrants in Japan's markets is an outcome determined by the interplay of socio-political-economic forces over time. Close examination of individual industry case studies indicates that these regulatory barriers tend to emerge in industries where Japanese lobbies are strong. For instance, in primary product sectors, where there are well-established producer lobbies; or in highly concentrated or cartelized

¹⁷ GATT, 1990, *op. cit.*

¹⁸ Discussed in chapter 3.

¹⁹ Edward E. Leamer, "Empirical Studies of Trade Issues: The Structure and Effects of Tariff and Non-Tariff Barriers in 1983", in Ronald Jones and Anne Krueger, eds., *Political Economy of International Trade: Essays in Honour of Robert E. Baldwin*, Cambridge, M.A.: Basil Blackwell.

²⁰ Conversely, a simple average of 9.9%, or a trade-weighted average of 34.9%, of Japanese exports to the U.S. in 1983 encountered nontariff barriers, indicating that Japanese exports also disproportionately face such barriers in the U.S. market.

manufacturing and service sectors, where the small number of producer firms facilitates the organization of industry lobbies. This confluence of public and private barriers inhibits entry by newcomers, whether foreign or domestic.²¹

● **Experience of Microeconomic Policy Initiatives**

Broadly, there have been three types of microeconomic policy initiatives.

1. *Sector-specific initiatives:*

(a) Some sectoral problems have been handled in clusters, such as the market-oriented, sector-specific (MOSS) talks in 1985-86. MOSS covered telecommunications and other electronics products, forest products, medical equipment and pharmaceuticals.

(b) Most others have been handled individually. For instance, the U.S. has sought both restraints on Japanese sales in the U.S. market (in automobiles, machine tools and steel in the 1980s) and better access to the Japanese markets for a very wide range of products (recently including semiconductors and auto parts).

(c) Still other initiatives have been pursued under explicit or implicit U.S. threats of market closure if Japan failed to cooperate. For example, the so-called super 301 provision of U.S. trade law obliges the U.S. administration to designate "priority foreign countries" whose trading practices it finds to be "unfair" and to set a deadline for remedial action, under threat of retaliation. In 1987, the U.S. retaliated against Japanese noncompliance with the 1986 Semiconductor Trade Agreement (STA).

2. *Structural issues:* During the SII talks of 1989-90, a wide array of structural issues were addressed. For example, the U.S. agreed to improve its education system and to seek to lengthen the time horizon of its private investors. Japan agreed to strengthen its antitrust enforcement to limit *keiretsu* collusion and to amend its Large Scale Retail Store Law to open its distribution system to more efficient volume merchants (such as Toys 'R' Us).

3. *Voluntary import expansion (VIEs) or temporary quantitative indicators (TQIs) schemes:* Under VIEs, Japan has committed itself to import specific quantities of semiconductors and the relevant Japanese industries have set targets for their imports of auto parts and of automobiles themselves. As a result of past negotiations, a significant portion of trade

²¹ C. Fred Bergsten and Marcus Noland, *Reconcilable Differences? United States-Japan Economic Conflict*, Washington, D.C.: Institute for International Economics, 1993, chapter 4.

between the U.S. and Japan is already managed with the use of quantitative indicators, which were supposed to be temporary.

The U.S. has deployed an extensive array of techniques for managing the trade relationship with Japan across several issue areas. Initiatives, such as MOSS, SII, and others that produced VERs and VIEs, have been on a bilateral basis. Others, such as the antidumping cases, have been unilateral measures toward Japan. Some officials in the Clinton administration emphasize the "results oriented", managed-trade bilateral approach with Japan. Only a few macroeconomic initiatives have been pursued multilaterally or at the G-7 level.

In practical terms, these initiatives have, by and large, not delivered the desired outcomes. The U.S.-Japan trade imbalance is still high. Apparently the STA is the only initiative that is somewhat credited with raising the share of U.S. semiconductors in the Japanese market. This arguable apparent success has spurred U.S. interest in a similar approach in other sectors, such as computers and supercomputers, construction contracting and telecommunications equipment. Another feature of recent U.S.-Japan trade deals that could significantly complicate domestic U.S. trade politics is that the targetting, such as in the STA and auto parts purchases, has been specified in terms of corporate identities, not the location of production. For example, a Texas Instrument semiconductor produced in Kyushu counts as American, while a Hitachi chip produced in California counts as Japanese. This immensely trade distorting trend (which can sideswipe Canadian producers, even those with production facilities in the U.S.) is possibly going to be extended to the quota on Japanese automobiles, if the output of Japanese plants in the U.S. is counted as Japanese sales in the U.S. (i.e., as "imports"). These developments are attempts at recycling mercantilism in the new bottle of economic nationalism.

This Paper argues that negotiations to address access problems in Japan should take account of business practices in at least three areas: (a) government procurement, (b) competition or anti-trust policies, and (c) standards setting and enforcement. We might also add certain issues related to company law (e.g., rules on take-overs).

The famous *keiretsu* firm-network system by itself can be fairly competitive. However, there are situations, such as in financial services, where these practices have resulted in effective market collusion. In other situations, such as the distribution system in Japan, these practices have led to some market foreclosure by incumbent companies in Japan. Authorities in Japan have set product and process standards that can effectively limit market access to new entrants. Government procurement practices, as in other countries, are anti-competitive and trade-distorting. Further research is required to compile a detailed list of the practices that result in market distortions in Japan. But equally if not more important from a Canadian perspective, we should not allow this focus on Japan to deflect our attention from the overriding importance of Canadian access to the U.S., and the trade and investment distorting practices that continue to exist in that market.

3. A LOOK AT THE RISING SUN: HOW DISTINCT?

The policy community has offered a number of critiques of the Japanese political system, the Japanese economy and Japan's relationship with the world. Political analysts such as Johnson, Prestowitz, Fallows and van Woferen present a picture of Japan as a neomercantilist society.²² Prestowitz and van Woferen depict Japanese society as totally oriented toward production, the source of its national strength. Fallows attributes an altogether different value system to Japan. They conclude that the U.S. has to find some new and different way to deal with Japanese trade. Economic analysts such as Lawrence and Balassa and Noland have pointed to the continuing low level of manufactured imports or intra-industry trade with Japan.²³ Foreign access to the Japanese market is believed to be tightly controlled.

The major impediments to the Japanese market, it is argued, are rooted in the unique character of Japanese business organizations and their distinctive relationships with one another and with the Japanese government. The important issues for policy analysis are: What factors account for the Japanese success? What can other countries learn from the Japanese experience? How might the Japanese market be made more accessible to international trade? Answers to these issues are inconclusive and extremely controversial. Also, the debate on strategic trade and industrial policies is directly related to these issues.²⁴

What accounts for the fact that, since the second half of the 19th century, Japan's productivity growth and structural transformation have outstripped every other major industrialized country? This impressive achievement is not the product of a small and recently developed cluster of distinctive economic institutions. It more likely rests on 150 years of growth and structural change that has taken place since the opening of Japan to international trade in the 19th century. Japan's economic performance has been far too successful for far too long under far too many different contexts for its growth to be attributable to any one particular

²² James Fallows, "Containing Japan", *Atlantic*, May 1989: 40-54, and "Looking At The Sun", *Atlantic*, November 1993: 69-100; Chalmers Johnson, *MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-75*, Stanford, Calif.: Stanford University Press, 1982; Clyde V. Prestowitz, Jr., *Trading Places: How We Allowed Japan To Take the Lead*, New York: Basic Books, 1988; Karel van Woferen, *The Enigma of Japanese Power*, New York: Knopf, 1989, and "The Japan Problem Revisited", *Foreign Affairs*, 69(4) 1990: 42-55.

²³ Robert Z. Lawrence, "How Open is Japan?", in Paul Krugman, ed., *Trade with Japan, Has the Door Opened Wider?*, Chicago: University of Chicago Press, 1991: 9-37, and "Japan's Different Trade Regime: An Analysis with Particular Reference to *Keiretsu*", *Journal of Economic Perspectives*, 7(3) Summer 1993: 3-19; Bela Balassa and Marcus Noland, *Japan in the World Economy*, Washington, D.C.: Institute for International Economics, 1988.

²⁴ A companion study explores more fully the debate over strategic trade and industrial policies, see I. Prakash Sharma and Keith H. Christie, Policy Staff Paper no. 93/14, December 1993.

configuration of its economic institutions. Japan's geography differs greatly from the world's other major industrialized economies. Throughout the past century, Japan's uniquely poor endowment of natural resources has been combined with the high quality of its labour force and with unusually thrifty households. These are features which lend distinctiveness to Japan.

The objective of this chapter is two-fold. First, it summarizes where the debate stands on the explanations of Japanese economic growth. Second, it outlines the debate on the extent to which foreign access to the Japanese market remains tightly controlled. To begin with, we describe some of the unique features of Japan's economy. Subsequently, we review the debate on factors that account for spectacular economic growth in Japan. Japan is different. But, it is argued, Japan is as peculiar an economy as any other. The Japanese government has intervened, like governments elsewhere, with some success and failure. Markets in Japan are as concentrated as in many other industrialized countries. Nonetheless, consumers in Japan respond to changes in income and prices as consumers everywhere else do.

3.1 The Distinctive Aspects of Industrial Structure in Japan

One striking aspect of the Japanese economy is its dependence on small firms, which is one component of its competitive market system. In the late 1980s, there were over four million single proprietorships. The self-employed and their unpaid family workers account for nearly a third of the labour force, compared with less than 10% in the U.S. and Britain. Within manufacturing, nearly half of the labour force works in enterprises with fewer than 50 workers. The proportion is similar in Italy, but much smaller in the U.S. (roughly 15%). These small firms are a mixture of the successful and the unsuccessful, the growing and the shrinking. As in other industrialized countries, Japan has large and small corporations. In 1988, some two million corporations employed more than 30 million workers, or nearly half of the total labour force of 60.1 million people.²⁵

● The Network System: *The Keiretsu*

The large Japanese corporations are often connected to a network of smaller suppliers through the *keiretsu* structure. Consider the well-known comparison between Toyota and General Motors. In the 1980s, GM produced roughly half the sales value of its cars; the rest was produced by its suppliers. Toyota produces just a quarter of its sales value. Toyota depends twice as much as its nearest American counterpart on a huge network of suppliers and sub-contractors. In the early 1980s, there were 43,308 of them. Of these, 168 were "first

²⁵ Federal Research Division, Library of Congress, *Japan: A Country Study*, Washington, D.C., 1992, pp. 211-12.

-level" sub-contractors ("close" and frequent suppliers); 5,437 were "second-level"; and 41,703 were "third-level" ("distant" and periodic suppliers).²⁶

Inter-firm networks of this and other sorts are not the exception in Japan, but the norm. The traditional *keiretsu* was organized around Japan's big trading companies. Mitsui and Mitsubishi are examples.²⁷ A vertical *keiretsu* is a customer-supplier arrangement, which includes just-in-time inventory practices and "design-in" R&D collaboration. Another type of financial alliance is the *keiretsu* centred on a main bank. For instance, the Mitsui *keiretsu* consists of 24 major companies: Mitsui Bank (the group's main bank), Mitsui Trust (also a bank), Mitsui Life (insurance), Taisho F&M (insurance), Mitsui Bussan (a trading company), Mitsukoshi (a retailer), Mitsui Construction, Sanki Engineering, Mitsui Real Estate, Toray (textiles), Mitsui Toatsu (chemicals), Mitsui Petroleum, Mitsui Mining, Hokkaido Coal, Onoda Cement, Oji Paper, Japan Steel Works, Mitsui M&M (nonferrous metals), Toyota Motors, Mitsui Shipbuilding, Toshiba (electronics), Mitsui OSK (shipping), Mitsui Warehouse and Nippon flour.²⁸

Industrial sector share-ownership in Japan (as in Germany) is characterized by a larger participation by banks and other financial institutions than in North America or the U.K.. The network is cemented by cross-shareholdings. Cross-shareholding accounts for more than half of all the shares of these firms. Typically, the main bank finances around one-fifth of all borrowing by non-financial companies with which the bank is associated. Cross-shareholdings have resulted in a close bank—customer relationship, though not necessarily the out-right control of industrial firms by banks. The financial relationships do not determine who does what. It is not true in general that the bigger the share held by Toyota, the more Toyota buys. The financial institutions in Japan are, in turn, management controlled. The managers avoid interfering in other companies as long as they take commercially sound decisions. Consequently, the Japanese industry manager is not constrained by a bottom line vision that extends only to the next quarterly report. He lays more stress on the long term commercial viability of the company. He realizes that the accumulation of human resources and their full utilization are the keys to the success of the firm. The whole incentive system and the system of allocating a company's employees are geared to this end. Through the close relationship with

²⁶ James P. Womack, Daniel T. Jones and Daniel Roos, *The Machine That Changed the World*, New York: Harper, 1990; and M.J. Smitka, *Competitive Ties: Subcontracting in the Japanese Automotive Industry*, New York: Columbia University Press, 1991.

²⁷ Michael Gerlach, "Keiretsu Organization in the Japanese Economy", in Chalmers Johnson, Laura D'Andrea Tyson and John Zysman, eds., *Politics and Productivity*, Cambridge, MA: Ballinger, 1989: 141-76.

²⁸ For a further discussion of the *keiretsu*, see Office of Technology Assessment, *op. cit.*, chapter 4.

the banks, the manager can tap on "patient" long term capital. Consequently, this network arrangement is often credited for the longer term investment horizon of Japanese companies.

Japan's industrial organization is increasingly characterized by the parent-subsidiary structure. This is in contrast to the divisional structure in the West, where expanding firms grow huge and often become large conglomerates. As the firm expands, managerial diseconomies of scale set in and effective coordination and supervision decline. The management becomes bureaucratic in attitude and information does not flow efficiently through layers of hierarchy. In Japan, one answer to these problems has been to create subsidiaries and transfer some activities to them. As the subsidiary expands, it hires its own employees and the subsidiary may even become independent. For instance, Toyota Motor, branched off in 1937 from Toyota Automatic Loom, which now owns a meagre 4.3% of the progeny. Toyota Motor, in turn, owns about 25% of the parent.²⁹ The process of reengineering and flexible manufacturing, whereby altogether new subsidiaries are established, is discussed below.

The parent-subsidiary set-up is immensely flexible and efficient. A subsidiary can be set up to respond to several motivations, such as (a) a desire to employ lower wage workers for jobs requiring less sophisticated skills, (b) to float new product lines, which can be wound up if unsuccessful, (c) to promote diversification that requires little interaction with the main business of the parent and that enhances managers' morale and independence, and (d) to market products and services to specific target customers. The subsidiaries typically begin their lives in the *keiretsu* of the parent company and benefit from the long term relationship with other members. Nonetheless, within a reasonable time, the bottom line has to demonstrate commercial viability of the subsidiary. A price adjustment scheme exists to share risks, to assure returns on innovation and to maintain the competitiveness of the final product. Thus, there is a strong motivation to decrease costs, improve quality, and maintain delivery and service. The overall competitive system facilitates rapid quantity adjustments, punctual delivery and quality control.

● A Flexible Labour Market

The practice of life-time employment is largely confined to the big corporations, such as Mitsubishi Corporation, NEC, Sony or Toyota. Only one-third of all Japanese workers have lifetime jobs. These firms have invested heavily in their workers. Unlike Western firms, they are reluctant to sack them at the first sign of trouble.³⁰ The competition for jobs at these companies is very stiff. This feature of long-term jobs sits alongside a much more flexible

²⁹ Hiroyuki Odagiri, *Growth Through Competition, Competition Through Growth, Strategic Management and the Economy in Japan*, Oxford: Clarendon Press, 1992, pp.144-51.

³⁰ The positive impact on productivity of these Japanese practices is documented in Masahiko Aoki, "Toward an Economic Model of the Japanese Firm", *Journal of Economic Literature*, (28) March 1990: 1-27.

market for labour among the lower level suppliers. This practice calls for flexible wages—which the system has also delivered.

Workers in big firms receive a substantial part of their pay in the form of bonuses and overtime. When demand falls, these elements of pay can be squeezed, so that costs are contained and the policy of avoiding lay-offs does not drive the company under. The networks have also played a complementary role. In a crisis, different parts of the system can absorb workers from other firms in a worse position. This may give the *keiretsu* structure as a whole the best of two systems: flexibility in branches, combined with heavy investment in training at the centre, which would be uneconomic without the assurance of a stable workforce.³¹ This aspect of the labour market appears to have immensely facilitated the efforts of Japanese firms to adapt to changing economic conditions.

● An Assessment of the Network System

The firm is an institution that minimizes the costs of organizing the activity of producing goods and services. Among themselves, workers, managers, shareholders and other economic agents face considerable information and incentive related gaps. The firm is an efficient set-up because it brings all these agents together in a manner that minimizes the resource cost. The *keiretsu* network system, which is found not just in Japan but elsewhere in East Asia and Germany (with bank-led inter-corporate share-holding), is an efficient arrangement. Is it also a competitive system? Within the network, there is, in fact, much scope for rivalry.³²

Toyota's policy is to buy similar parts from more than one supplier, so it is rarely dependent on just one. This practice imposes discipline down the line. At the same time, Toyota's suppliers do not work exclusively for Toyota. They are free to drum up business from other firms. This provides suppliers a further incentive to remain efficient and adaptable. Thus, the Japanese industrial structure rewards flexible production, specialization and the division of labour.

It also appears that Japan's networks are extremely good at bridging the information gaps and incentive asymmetries among various economic agents. They overcome some of the difficulties that non-networked firms face. Broadly, some of what the U.S. does with litigation and the law of contract, Japan may do with trust and long-term relationships that are a hallmark

³¹ *Economist*, "Turning Point: A Survey of the Japanese Economy", March 6, 1993.

³² From the 1950s to the mid 1980s, the motorcycle market in Japan was ferociously competitive between Yamaha and Honda. For an excellent account of the competition in the Japanese market, see James C. Abegglen and George Stalk, Jr., *Kaisha: The Japanese Corporation, How Marketing, Money and Manpower Strategy, Not Management Style, Make the Japanese World Pace-Setters*, New York: Basic Books, 1985, chapter 4.

of the *keiretsu* enterprise system. Though an alliance of big firms is less competitive than big firms in competition, a range of alliances, each including numerous small firms, leaves considerable scope for internal competition.³³ In sectors where Japan's markets are not distorted by trade restrictions, Japan's networks would tolerate, indeed encourage, intense domestic rivalry, and *can be domestically competitive*.

However, network alliances may diminish competition in other ways. Horizontally integrated *keiretsu* may find it easier to gain market power over consumers. Under certain circumstances, vertically integrated *keiretsu* may be able to capture rents from their suppliers. As discussed in chapter 4, the *keiretsu* system can also facilitate collusive business practices when trade distortions generate rents. To preserve those rents, the closing of ranks within networks may make it harder for foreigners to break into Japan's domestic markets.

● Flexible Manufacturing

Japanese companies have developed new, flexible systems of manufacturing that have important advantages over mass production. The techniques of mass production, a 19th century development in the U.S., uses interchangeable standardized parts in a process that rearranges physical objects. However, people excel in their ability to produce ideas, not just the physical assembly of goods. We are incurable experimenters and problem-solvers. Workers engaged in the process of assembly may be best positioned to experiment and ask questions if they are given freedom and the incentives to do so. The essence of flexible production or continuous improvement is a set of arrangements and physical imperatives that pushes everyone in an organization to look for small improvements in how things are done.

The just-in-time inventory system, for example, developed at Toyota was designed not as a means of reducing the interest cost of goods being processed, but rather as a means of operating "without a safety net", so that any weakness in the system is exposed and addressed immediately. The inventory- and goods-handling systems, the red, yellow and green lights at each workstation (red to stop the line, yellow to bring a supervisor) and the employee-suggestion system all provide feedback. They uncover the weakest links in the production chain and show where experiment and improvement would be most valuable. In response to the problems that are discovered, the layout of the assembly line, the allocation of tasks between workers, or the design of the good being manufactured may be changed. Thus, at the same time that the organization is strictly adhering to one overall design for its product and its manufacturing process, it is constantly searching through the countless, slightly different sequences for doing

³³ For the literature related to this view, see Gary R. Saxonhouse, "What Does Japanese Trade Structure Tell Us About Japanese Trade Policy?", *Journal of Economic Perspectives*, 7(3), Summer 1993: 21-43; but for a contrary view, see Robert Z. Lawrence, *op. cit.*, 1993.

things and slightly different specifications for a good. Flexibility means that the organization can switch rapidly from one overall design to another, slightly better one. The success of Japanese corporations demonstrates the benefits of switching from mass production to a more flexible mode of production.

3.2 The Financial Sector in Japan

The shape of Japan's modern financial system, like some other institutions, was established during the American occupation in 1945-50. Banking and stockbrokering were separated, just as they were in the U.S. Glass-Steagall Act of 1933. Furthermore, banking was segmented into a number of safe and profitable niches: long-term credit banks; trust banks; regional retail and corporate banks; and foreign exchange by the Bank of Tokyo.³⁴ The overall aim was to make finance the servant of industry.

In the 1950s and 1960s, Japan ran deficits on its current account and had to import capital. In a world of fixed exchange rates, Japan maintained foreign-exchange controls and regulated capital flows. The Bank of Japan ran its monetary policy principally by allocating the credit to banks. Interest rates on deposits were set by the Ministry of Finance (MOF) and the Bank of Japan. The MOF had tight control over the budget, the allocation of money and interest rates. Consequently, industrial companies were assured of a stable, reliable supply of finance, generally at low cost.

The business of collecting the public's money had been divided between the banks (administered by the MOF) and the post office (administered by the Postal Ministry). The Postal Ministry set its interest rates a bit higher than the banks. Because Japanese tax officials did not have access to post office records, depositors were, in practice, able to earn tax-exempt interest income. As a result, the post office came to have more accounts than the total population in Japan. By 1988, the government became convinced that Japan's savings surplus was causing trade surplus problems and this tax incentive for savings was scrapped.

Foreign commercial banks entered Japan in the 1960s and 1970s. They profited from an exclusive right to make foreign currency loans to Japanese industry. Reforms began in 1970-72, when Japan began to build up a large current account surplus. In 1977, financial institutions were permitted to sell government bonds before they matured and a secondary market in these instruments developed. In 1980, most of the foreign exchange controls were suspended and the

³⁴ Bill Emmott, *The Sun Also Sets: The Limits to Japan's Economic Power*. New York: Random House, 1989. pp. 95.

free flow of capital in and out of Japan began.³⁵ Japan's removal of exchange controls meant that Japanese interest rates could no longer be insulated from international influences. As Japan's capital surplus was rising and cash no longer had to be channelled, the pressure for further financial liberalization was building in Japan. Companies drifted away from the banks and toward the securities markets to tap cheaper finance. The cheapest place to raise money was in the Euromarkets.

When exchange controls were suspended, the Japanese banks swamped the foreign currency loans market. Foreigners wanted new sources of profit. In November 1983, the U.S. Treasury launched an attack against remaining Japanese financial regulations, arguing that the country had to give itself a free and open market in order for the yen to find its true value internationally. This is where changes were deemed necessary in order to rectify the U.S.-Japan trade imbalance—rather than in U.S. economic policy. In May 1984, the "yen-dollar" agreement for financial reform in Japan was reached. This deal was hailed as a breakthrough for the U.S. side in opening up the Japanese market. Foreign banks were permitted to deal in government bonds and to enter the trust-banking business. Foreign banks, skilled at making and trading interest rate swaps abroad, have done well in this market in Tokyo.

Since 1984, Japanese companies have continued to borrow by issuing most of their bonds overseas. Clearly, it was in the Japanese industry's interest to loosen its ties with Japanese banks, and banks had an interest in allowing companies to do so. After all, banks are often important stockholders, so they want companies in their *keiretsu* to be as competitive as possible.³⁶ Japanese institutional money managers have caught on with the practice of investing abroad. They are making efforts to bring in and buy expertise either through competition or tie-ups. In order to gain training and experience, Japanese investment banks overseas have bought into western money houses; for instance, Nippon Life bought into Shearson Lehman in New York. Japan's portfolio investment flow jumped from a negative US\$0.8 billion³⁷ in 1982 to a positive US\$102 billion in 1986; although by 1992 it had declined to about US\$28 billion.

Japan may have a first-rate economy that is the envy of the world, but it has a second-rate financial system. In the second half of the 1980s, Japan was involved in the biggest financial mania of this century, a boom that has now gone spectacularly bust. The speculation was fuelled by cheap and supereasy credit. Japan binged on credit. Land prices were bid up. The solid manufacturing economy was sucked into the whirlpool of speculation. The Nikkei

³⁵ To put that into international perspective, it should be noted that even Britain did not rid itself of exchange controls until 1979.

³⁶ Bill Emmott, 1989, *op. cit.*, pp. 112-14.

³⁷ Net of reinvested earnings. Source: United Nations, *World Economic Survey 1993*, Table A.26.

average of stock prices on the Tokyo Stock Exchange more than tripled from 11,500 in early 1985 to a high of 38,900 four years later. From its peak in 1989, the Nikkei index was back down to 17,000 by 1992.³⁸

The bust has now left in its wake a shrunken stock market, a falling property market, a mountain of bad loans, a slowing economy and a slew of scandals. These developments have revealed that: (a) Japanese financial markets were rigged with the tacit endorsement of bureaucrats; (b) the *keiretsu* system of cross ownership gave a handful of corporations undue influence in the market; (c) businessmen and financiers openly consorted with gangsters; and (d) leading banks tolerated fraud.³⁹ For the first time in years, Japanese industry has to pay more to borrow money than American firms do. This will inevitably hurt Japan's industrial competitiveness. The competence of the bureaucracy, MOF in particular, and of the ruling political order has increasingly been questioned. In the July 1993 elections, the Liberal Democratic Party (LDP), for the first time in post War Japan, lost its majority. Japan faces the prospect of very little real GNP growth for the next two years. In 1992, real GNP growth dropped to 1.6% from 6.2% in 1988, and is forecast to be under 0.5% for 1993.⁴⁰

3.3 Agricultural Protection

Protection began in the 1940s to help ease the difficulties caused by urban migration. During its rule, the LDP got a disproportionate amount of its votes and money from farmers. Agricultural support may be viewed as a part of the social welfare system because many farmers are of pensionable age. Some even return to the farm from industry when they retire. The over 65s form the only age group in which the number of full-time farmers is increasing.

Protection is given partly through direct subsidies, but mainly through import controls, guaranteed prices and government handling of food distribution. Government agencies pay producers between six and ten times the world price for rice and sell it to consumers at between four and eight times the world price.⁴¹ As a result, Japan not only grows its rice expensively in small plots but also produces too much in most years, which the taxpayer has to store. Imports of rice are banned except in emergencies (with imports in 1993 a case in point).

³⁸ Edward J. Lincoln, *Japan's New Global Role*, Washington, D.C.: The Brookings Institute, 1993: 28-9.

³⁹ Christopher Wood, *The Bubble Economy: Japan's Extraordinary Speculative Boom of the '80s and the Dramatic Bust of the '90s*, New York: Atlantic Monthly Press, 1992.

⁴⁰ Economist Intelligence Unit, *Country Report: Japan, 4th Quarter 1993*, London, 1993.

⁴¹ Bill Emmott, 1989, *op. cit.*

Protection also extends to foods that Japan barely produces. Japan imports about 90% of its wheat, but all is bought by a government agency and sold at high prices to support the few domestic producers and to restrict competition between bread and rice. Similar systems apply to beef, sugar and dairy products, none of them traditional Japanese foods. Such is the power of the farm lobby.

3.4 The Low Level of Direct Foreign Investment in Japan⁴²

Another peculiar feature that is often attributed to Japan is its conspicuously low level of direct foreign investment, and of direct U.S. investment in particular. Although this picture of Japan is changing, but it must be analyzed in an historical context. As far back as 1640, in concert with its isolationist policies, the Tokugawa government closed Japan to most trade and investment from abroad. With the arrival of Commodore Perry, some foreign investment was allowed in a few ports. In 1899, the Meiji regime explicitly permitted foreigners to invest in joint ventures and wholly owned subsidiaries in the domestic Japanese market. The first majority U.S.-owned joint venture was established in 1899 between Western Electric and Nippon Electric Company (NEC). Subsequently, other U.S. multinationals took Japanese *zaibatsu* (industrial and trading companies) as partners. Between 1929 and 1936, however, cumulative U.S. FDI in Japan declined by one-quarter, falling to \$47 billion. It declined by another 25% between 1936 and 1941, when cumulative U.S. FDI in Japan was reduced to \$33 billion.⁴³

Immediately after the war, the Allied Occupation hoped to break up the Japanese *zaibatsu*. Many Occupation officials feared that Japanese assets would remain grossly undervalued as a result of the war's destruction and its chaotic aftermath and, therefore, vulnerable to foreign takeover. However, the U.S. "New Dealers" who managed the Allied Occupation in Japan viewed large multinationals with considerable suspicion. In order to prevent these takeovers by foreign multinationals, capital controls became more nearly permanent—with the full approval of Japanese business and government.⁴⁴

Specifically, the Allied Occupation constructed the two grand pillars of Japan's post War regulatory regime: a) the Foreign Exchange Control Law (FECL), promulgated in 1949, and b) the Foreign Investment Law (FIL) of 1950. The FECL granted the Ministry of Finance (MOF) control over nearly all foreign exchange transactions, while the FIL expressly extended MOF's

⁴² I thank, without implicating, John Treleven of Trade Planning and Operations Bureau for discussions and for providing references to the material in this sub-section.

⁴³ Dennis J. Encarnation, *Rivals Beyond Trade: America versus Japan in Global Competition*, Ithaca, N.Y.: Cornell University Press, 1992, p. 45.

⁴⁴ *Ibid.*, p. 46.

exchange controls to include foreign enterprises operating in Japan. In addition, the FIL granted the Ministry of International Trade and Industry (MITI) and other government agencies a broad range of loosely defined powers. These agencies screened and regulated proposed investments for their contribution to Japan's industrialization and overall export orientation. Even after Japan's foreign exchange position had strengthened in the mid 1960s, fears of loss of Japanese control over its own economic development remained, significantly influencing the regulatory environment well into the 1970s.⁴⁵

Japan is also singled out for the type of FDI it has allowed in. Typically, U.S. multinationals set up (majority ownership) production plants to sell in the host country and, through majority subsidiaries, in the markets of other countries. In Japan, this has seldom been the case. U.S. corporations have often had to set up minority affiliates. Some large U.S. corporations, such as IBM, were frustrated in setting up production facilities in Japan. The U.S. government tolerated this situation by remaining absent from the scene.

For at least a decade after the Occupation, the U.S. State Department remained preoccupied with the promotion of Japan as democratic bulwark against possible Communist encroachments in the South China Sea and on the Korean peninsula. Therefore, the promotion of U.S. trade and FDI in Japan received scant attention. Those economic initiatives that the U.S. government did take toward Japan aimed at assuring both open overseas markets for Japanese exporters and appropriate conditions for the promotion of economic development and Japanese self-reliance.⁴⁶

In the post War regulatory period in Japan, foreign investment applications never received automatic government approval. MITI and other ministries—operating with the active participation of Japanese *keiretsu* oligopolists—stood at the centre of this regulatory regime. MITI typically insisted that technology licensing be decoupled from foreign equity; or, if the requisite technology could not be secured without equity attached, that minority or, at most, equal-partnership joint ventures be organized, rather than majority foreign-owned subsidiaries. MITI and other government agencies prioritized imports. MITI then imposed quantitative restrictions (quotas) on the least desirable (such as food and raw materials), while it granted automatic approval to only a few of the most desirable imports (targetted products and consumer goods).

⁴⁵ *Ibid.*, pp. 46-7.

⁴⁶ *Ibid.*, p. 56.

The restrictions on FDI, and by implication on foreign manufacturing in Japan, by MITI, prodded by Japanese oligopolists, had a profound impact on intracompany trade and especially on U.S. exports to Japan. The lack of majority manufacturing subsidiaries of U.S. multinationals meant that possible intrafirm exports from the U.S. to Japan did not materialize. The absence of foreign competition, in conjunction with the *keiretsu* network, meant that Japanese firms exercised market power and made monopoly rents in the Japanese market. Any FDI in Japan that got through the MITI regulations met further challenge when the Japanese firms closed ranks within their *keiretsu* to effectively foreclose potential entry.⁴⁷ Consequently, to enter and sustain sales in the Japanese market, the U.S. corporations had to sink in a lot (more than in other countries) of their investment in building a distribution network in Japan.⁴⁸

While the Japanese government denied multinationals access to the local market, many U.S. corporations nonetheless secured entry (under the "yen-based" regime). Between 1956 and 1966, U.S. FDI in Japan grew fivefold, from \$140 million to \$731 million. However, this rapid growth came on top of a very small base: Japan by 1966 accounted for only 2% of the cumulative stock of U.S. FDI in industrialized countries. In 1979, Japan finally moved both to abolish the Foreign Investment Law and to amend the Foreign Exchange Control Law. During the first decade of capital liberalization, ending in 1977, U.S. FDI in Japan grew sixfold, from \$731 million to \$4.6 billion. Between 1982 (at the dollar's zenith for the decade) and 1988 (at the dollar's nadir), the stock of U.S. FDI in Japan doubled, from \$6.6 billion to \$16.9 billion. Also, by 1988 the sales of U.S. multinationals based in Japan matched—and often exceeded—comparable sales in other industrialized countries. Moreover, by 1989 Japan accounted for fully 9% of all U.S. FDI in overseas distribution systems, even though Japan overall hosted barely 5% of total FDI by U.S. multinationals (distribution and production facilities combined).

3.5 Industrial Growth in Japan

Economic growth is a poorly understood phenomenon. Nobody has a convincing explanation of why China, which until 1500 had been the world's richest economy, then faltered. Nor of why, suddenly, in the 1820s the West entered a 170-year period in which real GDP rose by 2.7% a year and real per capita incomes by 1.6% a year, multiplying output seventy-fold and

⁴⁷ It is likely that to close ranks within the *keiretsu*, the member firms increased their cross-shareholdings. The cross-shareholdings, though common in Japanese industry, grew dramatically during the decade preceding capital liberalization. For instance, cross-shareholdings within the Mitsubishi group nearly doubled between 1964 and 1973, from 13% to 24% of the total outstanding equity recorded by Mitsubishi-related companies; and in Mitsui, cross-shareholdings jumped from 9% in 1964 to 15% in 1973. Source: Dennis J. Encarnation, *op. cit.*, 1992, p. 75.

⁴⁸ *Ibid.*, p. 75.

per capita incomes fourteen-fold, when in the four centuries before this era the West managed income growth only one-eighth as fast despite considerable technological advance.⁴⁹ Japan's economic growth is not easily explained. During 1870-1938, Japan's real GDP per capita grew at an annual rate of 1.8%, Canada's at 1.6% and the U.S. at 1.5%. During the 1950-1973 period, the same growth rate shot up to 8.2% for Japan, 3% for Canada and 2.2% for the U.S. However, during the more recent 1973-1987 period, the same rate declined to 2.8% for Japan, with 2.2% for Canada and 1.4% for the U.S.⁵⁰

Japan has gone through two periods of economic modernization. The first began in 1854 and extended through World War II. The second began in 1945 and continued into the early 1990s. Between 1950 and 1990, real incomes per head in Japan rose from US\$1,230 (in 1990 prices) to US\$23,970, a growth rate of 7.7% a year. Over the same period, America managed growth in incomes per head of just 1.9% a year. Why has Japan succeeded? This an extremely controversial question. Economists, sociologists, political scientists, social anthropologists and policy analysts all want their say.

Many of the theories and sub-theories accounting for Japan's success can be organised into three broad categories: (a) neoclassical economics; (b) trade and industrial policies; and (c) culture-based explanations. The fiercest quarrelling, especially among economists, is between defenders of the first two sorts of theory.

● The Neo-Classical Economic Explanation

Mainstream economic theory thinks of growth as a process of efficient capital accumulation. The more capital an economy has, the more output it can produce with a given labour force. One presumption of this theory is that the more resources an economy devotes to building up its capital, the richer it will become. Another is that an economy will "choose" the right things to produce if, by and large, economic decisions are highly decentralized—that is, if markets are allowed to work.

Japan conforms very well to these basic ideas. If a country is to invest heavily, it needs an affordable supply of capital. For many years, Japan has had a capital-cost advantage, which most likely spurred investment. The primary source of this advantage was its high savings rate, which resulted in low real interest rates and cheaper equity capital. Since the 1950s, Japan's

⁴⁹ Angus Maddison, *The World Economy in the 20th Century*, Paris: OECD, 1989.

⁵⁰ Angus Maddison, *OECD*, 1989, *op. cit.*

saving rate has been among the highest in the world. These exceptionally high rates of saving were sustained for many years, and during that time financed exceptionally high rates of investment.

On the macroeconomic side, Japan has maintained cautious monetary and fiscal policies. The conservative Liberal Democratic Party had held power ever since 1955 until 1993. One result of this was, on the usual criteria of taxes and public spending, comparatively small government. Between 1960 and 1990, Japan's public spending averaged 26% of GDP. The corresponding figure for the U.S. was 32%.

Recent advances in mainstream economics point out that, for economic productivity, the quality of labour, i.e., human capital, matters far more than its quantity. Japan has been successful in pouring resources into education. Early education was made public, universal and undifferentiated. At each succeeding step of the academic ladder, the public part of education was shrunk in size and made more elitist—until, at university level, it is tiny. One consequence is a meritocratic selection in which a higher share of children from average income families have access to public university education and the well-off who could not make the grade fend for themselves in the large number of private universities.

Moreover, the efficiency with which physical capital and human capital are combined is crucial for economic growth.⁵¹ The main reason the advanced countries are rich—and why half or more of their economic growth comes from productivity increases—is because they are rich in ideas on how to generate and apply new knowledge. Ideas are not human capital. Ideas are the world's pool of existing knowledge. The great thing about ideas is that, once they exist anywhere, anybody can acquire and use them. And the widest range of contacts with the best foreign sources is the way to generate fast economic growth.⁵² Japan has not been receptive in practice to foreign direct investment, but has been excellent at listening to market signals from Japanese export forays and at buying foreign technology licenses. Japan has had an open mind for technology transfer from overseas, and from the U.S. in particular. A work force rich in human capital was able to duplicate, adapt and modify technological know-how that was imported from Western countries. This made Japanese industry competitive world-wide.

The massive transfer of technology from the U.S. and Western Europe has provided the technological basis for nearly all of Japan's modern industries. Without Western technology, no amount of physical capital, human capital and labour could have moved Japanese companies

⁵¹ As discussed in chapter 4, one measure of this efficiency is total factor productivity (TFP). TFP calculations give a rough idea of how well-tuned an economic engine is.

⁵² For a discussion of the "new growth theory", see Paul M. Romer, "Endogenous Technological Change", *Journal of Political Economy*, 98, 1990: S71-102.

to their present competitive positions so rapidly. It is altogether a different issue that the MITI was standing as a referee to ensure that the price paid in royalties was not too high.⁵³ What matters is that, at the time these voluntary market transactions took place, Western companies found them profitable.

It is true that the cumulative cost of all the technology acquired by Japanese firms from the West, over the 1951-1983 period, was only US\$17 billion, a fraction of the annual U.S. research and development budget.⁵⁴ The income from the sale of technology represented a windfall return on an R&D investment already written off. The results have been disastrous. Technology sold to Japanese companies has come back in improved form to create competitive nightmares. But not all foreign companies fell into the trap. A few farsighted firms, like IBM and Texas Instruments, used their technology as sticks to beat down the barriers to entry into the Japanese *keiretsu* to build wholly-owned operations in Japan.

● The Strategic Trade and Industrial Policy Explanation

Another school of economists and policy analysts emphasize the role of Japanese industrial planning and state intervention. However, the proponents of this view are careful to stress the necessary political preconditions for such an approach to succeed. These require, among other things, that Japan's bureaucracy should be relatively unhampered by the Diet when it comes to certain vital aspects of economic policy. The goals of economic policy should be clear and the instruments should not become politicised. Japan's industrial policy can be analyzed in two distinct phases. From 1950 until the early 1970s, the Japanese economy was run as a 'shortage' economy. Since the mid 1970s, the government's role has been more subtle and ambiguous.⁵⁵

● Early Japanese Industrial Policy

Japan's ingenious bureaucrats in the Ministry of Finance (MOF) and the Ministry of International Trade and Industry (MITI) are credited with skilful guiding of the economy around its difficulties at each stage and for sustaining the ongoing economic miracle. It is argued that officials from MOF and MITI, in close collaboration with business leaders, drew up a series of national plans. During the 1950s and 1960s, the price of foreign currency and the interest rate

⁵³ As argued above, the MITI had to intervene because of fixed exchange rates and capital controls that went along with it.

⁵⁴ James C. Abegglen and George Stalk, Jr., 1985, *op. cit.*

⁵⁵ Kozo Yamamura, "Caveat Emptor: The Industrial Policy in Japan", in Paul R. Krugman, ed., *Strategic Trade Policy and the New International Economics*, MA: MIT Press, 1986: 169-209.

were kept low, so that foreign exchange and credit had to be rationed. Tariffs and import restrictions to protect selected "infant" industries were imposed. Intermediate goods industries such as steel were special favourites. They designed subsidies, tax incentives and regulations; backed them up with overt and covert trade protection; directed credit; and led targeted industries with copious "administrative guidance". On this view, the state was (and, some argue, remains) the force that drives and directs the Japanese economy.

By North American standards, the government hand in the Japanese economy appears to have been heavy in this period. Japanese government policy is not remarkable in what it did, but in what it did not do. Little industrial investment, public or private, was dictated according to a planner's judgement. However, the government's plan—like the many "visions" of industrial Japan put out by MITI—led private investors to rearrange their priorities when they found it commercially profitable to do so. Advice and information about foreign technology, and relentless exhortation to acquire it, probably gave the economy another push in the right direction.

MITI's guidance was sometimes entirely ignored. Some extremely successful Japanese industries—consumer electronics and industrial machines—have either received little guidance, or else at critical junctures have acted against it. For instance, MITI's efforts to reduce the number of companies in the automobile industry have so far gone unheeded.⁵⁶

Among the intelligent policies formulated by the ministries was the support for investment in R&D, both through generous tax breaks and direct support for commercial technologies that the government thought promising. MITI's policies have helped resources released in declining "sun-set" industries to move to productive employment elsewhere in the economy. For example, the Japanese government prompted and provided assistance to the shipbuilding industry to close down capacity.⁵⁷

The crucial question is whether Japan's industrial policy was really the key to the rapid growth during the 1950s and 1960s. Might the economy have grown just as rapidly without the policy? We should be cautious about attributing success mostly to industrial policy.

First, it is possible that the government in Japan made sensible investment decisions, but the market would have made similar decisions if left to itself. Japan's industrial policy was applied in a regulated economy. To make up for distortions caused by rationing foreign exchange, imports and credit, MITI/MOF turned around and allocated resources in a sensible

⁵⁶ James C. Abegglen and George Stalk, Jr., 1985, *op. cit.*, p. 32.

⁵⁷ *Ibid.*, p. 33.

way. In the end, Japan arrived at the outcome that it would have even if the government had stayed out of the picture throughout.

Second, there is the possibility that the dynamism of Japanese industry would have achieved Japan's commercial success without government intervention. Reasons for Japan's success are many: Japan had the highest savings rate in the world, an effective educational system, good labour-management relations and an outward-looking business orientation and corporate management. Some of Japan's most successful industries, notably automobiles and consumer electronics, were not among those that received high government priority.

Trade policy has also been a messy, politically guided mixture. In the 1950s and 1960s, Japan's countless subsidies, tax breaks and regulations affecting the pattern of activity were usually, as in other countries, the outcome of a struggle between competing interest groups. Ministries fought for their clients, politicians for their constituents, business leaders for their industries. As tariff protection came off, Japan's most promising young industries were, on the whole, the first to be exposed to international competition. Its laggards managed to hang on to the tariffs and quotas longer. This pattern hardly supports the popular view that import protection was cleverly manipulated to accelerate structural change in the economy.

● Current Japanese Industrial Policy

The Japanese industrial policy of the 1950s and 1960s remains the picture of Japan that many retain. Foreign exchange and credit rationing, however, are history. Japan's industrial policy since the mid 1970s has aimed at encouraging a new set of industries, the 'knowledge intensive', or high technology, industries. The tools of industrial policy have been a combination of modest subsidies for R&D and encouragement of joint government-industry research projects aimed at developing new technologies. By the 1980s, Japan's trade and industrial policies were probably less interventionist than those in much of Europe.⁵⁸

⁵⁸ One study estimated that the proportion of countries' trade subject to nontariff barriers had risen as follows.

	1966 (%)	1986 (%)
European Community	21	54 (19)
Japan	31	43 (14)
United States	36	45 (12)
All developed countries	25	48 (16)

Source: Sam Laird and Alexander Yeats, "Trends in Nontariff Barriers of Developed Countries, 1966-1986", *Weltwirtschaftliches Archiv*, 126(2), 1990: 299-326.

The non-tariff barriers are defined to include both nontariff measures specifically intended to restrict trade, and various domestic policies (technical or health and safety standards, border tax adjustments, etc.) that incidentally

The industries targeted since 1975 are only a small part of Japan's economy. Neither automobiles nor consumer electronics (TVs, stereos, VCRs and so on) are part of the high technology area that has been the focus of research joint ventures. So the Japanese consumer products that have made Japan's export success so visible do not reflect the new industrial policy. Japan has, however, become a significant producer of some products (e.g., machine tools) in which recent industrial policy has played a key role.

If anything, the industrial policy in Japan could be characterized as pro-business and growth-promoting.⁵⁹ For many years, firms were given incentives to sell abroad; but these tended merely to offset the higher input costs that resulted from the country's import tariffs and quotas. Consequently, the overall effect on Japanese trade performance may very well have been a wash. Moreover, a pro-business bias is likely to be, at least in the short term, anti-consumer. Policies that promote savings also discourage consumption. This explains why some believers in the visible hand are unsure whether to praise Japanese interventionism or deplore it.

The government has often not been able to manage its own business competently. Japan's National Railroad, with its huge debt and losses, is one testimonial to this. The Sales Monopoly Corporation, with its high prices and closed market, especially for tobacco, is another.⁶⁰ Furthermore, if the Japanese bureaucracy is so good at running the economy and so adept at regulation, why did the MOF allow the speculative bubble in late the 1980s to inflate? Surely, it must have seen through its crystal ball how dangerously this would end up! As a result of the recent scandals, the MOF's authority has diminished considerably. After all, the speculative mess occurred on its watch. In conclusion, the ministries have less control over the economy than is ordinarily believed. It is hard to imagine the ministries being able to dream up and execute one successful new plan after another, year after year.

Neither has the government's business planning been distinguished, nor has its technological foresight in "picking winners" been exceptional. Japan's list of technologies to be developed is much the same as that of all other governments—electronics, biotechnology, aerospace and new materials such as fine ceramics. Even in so seemingly obvious an area as robotics, it was only after a decade of robot experience by private companies (with more than one hundred companies already producing robots) that the first government developmental

impose extra costs on foreign suppliers. If only the former restrictions are considered, the figures shown in parentheses for 1986 apply.

⁵⁹ *Economist*, "Turning Point: A Survey of the Japanese Economy", March 6, 1993.

⁶⁰ *James C. Abegglen and George Stalk, Jr., 1985, op. cit., pp. 32.*

program in robotics was implemented.⁶¹ Taken in the aggregate, intervention in Japan, while present, is unlikely to have played the decisive role that is often attributed to it.

Japan's economic performance has outstripped not only the large industrialized countries, but also the rest of Asia. Japan has accomplished faster growth not only in the almost five decades since 1945, but also during the six decades preceding the commencement of Pacific War hostilities in the late 1930s. Note that during that period there was neither picking nor targeting of sectors under a Japanese industrial policy, nor were there super ministries like the MITI and MOF directing Japanese industries onto the road to economic growth. Japan's extraordinary economic performance does not rest on a few distinctive institutional arrangements.⁶²

3.6 Japanese Foreign Direct Investment

Capital movements offset the surpluses or deficits in the current account. A current account surplus, for example, implies that rather than using all the foreign currency earned by selling exports to buy imports, corporations can purchase assets abroad. Japanese outward foreign direct investment (FDI) occurs when a Japanese corporation establishes a subsidiary abroad, or buys ownership or control or participates in the management of an enterprise overseas.⁶³ Japanese capital flows have been affected by government policy. During the 1950s and the first half of the 1960s, when Japan faced chronic current account deficits, concern over maintaining a high credit rating in international capital markets and fear of having to devalue the currency led to tight controls over both the inflow and outflow of capital. As part of these controls, for example, government severely restricted FDI in Japan, but encouraged licensing agreements with foreign firms to obtain access to their technology.

Japan remained a cautious net debtor country until the mid 1960s. By 1967, Japanese investment overseas had begun to exceed foreign investment in Japan. However, the country remained a modest net creditor until the 1980s, when its creditor position expanded considerably. In 1982, Japan's direct foreign investment outflow was just US\$4.1 billion;⁶⁴ in 1987, it was US\$18.4 billion; by 1990, it had jumped to US\$46.3 billion; before falling to about

⁶¹ *Ibid.*

⁶² Gary R. Saxonhouse, "What Does Japanese Trade Structure Tell Us About Japanese Trade Policy?", *Journal of Economic Perspectives*, 7(3), Summer 1993: 21-43.

⁶³ It is not easy to distinguish FDI from portfolio investment (in which the purpose is to earn a return without getting involved in the management or the control of the firm). For this reason, any investment in a foreign corporation in which the fixed ratio of 10% or more of its stock is acquired is often classified as direct investment.

⁶⁴ Net of reinvested earnings. Source: United Nations, *World Economic Survey 1993*, Table A.26.

US\$15 billion in 1992. The accumulated value of Japanese foreign direct investment grew from under US\$3.6 billion in 1970 to US\$36.5 billion⁶⁵ in 1980 and to over US\$353 billion at the end of March 1992, of which investment in the U.S. accounted for 42%.⁶⁶

The location of Japan's direct investment abroad has been shifting. In 1970, 21% of its investment was in Asia and nearly 22% in the U.S. By 1988, the share of investment in Asia had dropped slightly, to under 18%, while that in the U.S. had risen sharply, to nearly 39% of the total. The major drive to invest overseas in the 1960s and 1970s stemmed from the desire to obtain access to raw materials. As Japan became more dependent on imported raw materials, energy and food, direct investment was one way of ensuring supply. Also, rising labour costs during this period led certain labour-intensive industries, especially textiles, to locate abroad.⁶⁷

Investment in other industrial countries, such as the United States, was often motivated by barriers to exports from Japan. The restrictions on automobile exports to the U.S., which went into effect in 1981, became a primary motivation for Japanese automakers to establish assembly plants in the U.S. The same situation had occurred earlier, in the 1970s, for plants manufacturing TVs. Japanese firms exporting from developing countries, moreover, often received preferential tariff treatment in developed countries (under the Generalized System of Preferences). In short, protectionism in developed countries against imports directly from Japan often motivated Japanese foreign direct investment.

After 1985, the rapid rise in the value of the yen seriously undermined the international competitiveness of many products, including sophisticated electronic wares, manufactured in Japan. Japanese manufacturers began actively seeking lower cost production bases. This factor incrementally accelerated Japan's foreign direct investment. The share of output from Japanese factories in the low-wage countries of Asia that was destined for the Japanese market rose from 10% in 1980 to 16% in 1987.⁶⁸

FDI has raised a number of new problems for Japan. Foremost among these is a rapidly growing asymmetry in investment levels. While the cumulative value of outward Japanese FDI grew at a 25% annual rate from 1980 to 1990, inward FDI from abroad grew at 13% (and from

⁶⁵ Federal Research Division, Library of Congress, *Japan: A Country Study*, Washington, D.C., 1992, Table 31.

⁶⁶ Economist Intelligence Unit, *Japan: Country Profile 1992-93*, London, 1992, p. 42.

⁶⁷ For a summary account of Japanese FDI, see Ryutaro Komiya and Ryuhei Wakasugi, "Japan's Foreign Direct Investment", *Annals, AAPSS*, 513, January 1991:48-61.

⁶⁸ Federal Research Division, Library of Congress (1992), 280.

a much lower base). The lack of FDI in Japan by U.S. corporations has taken on a particularly important quarrelsome dimension (also see section 3.4 above).

3.7 Japanese Won't Buy Foreign Goods: A Myth?

Japan is a trading country that is not much dependent on exports. In fact, only the equivalent of 11% of its GDP was exported in 1990, compared with 21% in Italy, 23% in France, 25% in Britain, 25% in Canada, 32% in West Germany and 57% in Holland. Japan's export share is big only compared with the United States' (10%).⁶⁹ Because imports are, grosso modo, the flip side of exports, Japanese imports were 10% of its GDP in 1990 and U.S. imports were 11.3%, in contrast with 21% for Italy, 23% for France, 25% for Canada, 26% for Germany, 27% for Britain, and 52% for Holland.⁷⁰ The point these data suggest is that international trade should be viewed as a two way traffic of imports and exports. A country that imports a smaller share of its GDP also exports a smaller proportion. Japan is no exception.

The rise of Japan has prompted a forceful reaction in the United States, Europe and elsewhere. Japan is, despite all that has been written and said to the contrary, a country that, just like any other, is affected by human nature and market forces. The Japanese are not a breed apart. They respond to affluence by buying expensive things. They respond to financial freedom by seeking out good deals or a quick killing. They respond to better and more secure pensions by saving less of their incomes. They respond to low prices by buying more imports.

● Japanese Imports of Consumer Goods

Even in 1985, when Japan's trade surplus was heading for the sky, Japan bought \$118 billion worth of imports, about the same as Britain did. However, \$36 billion or 30% of that was in manufactured goods. In 1987, Japan imported \$128 billion worth of goods; of which about 45% was manufactures. In 1988, more than half Japan's imports were manufactures (compared to an average of around 70% for the developed countries as a group). From 1986 to 1989, merchandise imports expanded more rapidly than final domestic demand. Fast-growing import items included passenger cars, precious metals, steel, electrical machinery and tobacco products. In the course of this development, Southeast Asia⁷¹ has remained Japan's most important source of imports of merchandise (25% of the total in 1989), followed by the United

⁶⁹ Computed in U.S. dollars at current prices and current purchasing power parities for 1990. Source: Organization for Economic Co-operation and Development, *Historical Statistics: 1960-1990*, Paris, 1992.

⁷⁰ All the data pertain to 1990. Source: *OECD*, 1992, *op.cit.*, Table 6.13, pp. 72.

⁷¹ Although the reader should note that this is in part driven by intra-corporate flows created by Japanese investment in Southeast Asia, as discussed above.

States (23%), and the EU (13.5%).⁷² In 1992, Japan imported Can\$7.5 billion (amounting to 4.6% of all Canadian exports) worth of merchandise from Canada, and exported Can\$10.8 billion worth of goods.⁷³

Japanese tastes and habits have also moved on. Is there really any phobia about foreign goods? Certainly not, if you count goods made in Japan by subsidiaries of foreign firms, as well as imports. Many foreign multinationals sell goods in Japan that they make locally. Examples include Nestle, Unilever, IBM Japan, Coca-Cola, Philips, Procter & Gamble, Texas Instruments, 3M and many more. Every Japanese is eating 40% less rice each year than in the early 1950s. McDonald's is Japan's biggest restaurant chain. In 1987 and 1988, Japan experienced its greatest consumer boom ever, which produced its fastest rate of economic growth for more than a decade.

The consumer market for imports has changed too. For an illustration of the fact that Japanese consumers' response to higher income and lower prices has been as predicted by economic theory, consider Table 1. Growth in the value of imports during the 1984-1992 period is consistent with the characteristics of a growing economy that starts with a low import base. What is most striking in Table 1 are the imports of products that one often takes to be ones where Japan has a comparative advantage. The import growth suggests that comparative advantage is a dynamic phenomenon not only for the U.S. and Canada, but equally for Japan. Japanese FDI, discussed above, has led to Japanese branch plants overseas, which now are exporting products back to Japan. The countries where the Japanese have located their manufacturing, over time enjoy the beneficial spillover effects of Japanese technology and begin exporting these products on account of lower production costs.⁷⁴ The characterization of this product cycle is much the same as it has been in the case of the U.S.-Japan trade.

⁷² GATT, *Trade Policy Review: Japan*. 1990. Geneva: GATT, November 1990.

⁷³ Data are on a customs basis. Source: Statistics Canada, Catalogues 65-202 and 65-006.

⁷⁴ Yung Chul Park and Won-Am Park, "Changing Japanese Trade Patterns and the East Asian NICs", in Paul R. Krugman, ed., *op. cit.*, 1991: 85-115; and Peter A. Petri, "Market Structure, Comparative Advantage, and Japanese Trade Under the Strong Yen", in Paul R. Krugman, ed., *op. cit.*, 1991: 51-82.

Table 1: Japan's Imports (in current year US\$ '000)

	1984	1988	1992	Growth (%): 1984-1992
Calculators	10,032	131,712	112,693	1,023
Colour TVs	3,247	111,881	382,017	11,665
Portable Radios	1,729	21,909	67,756	3,819
VCRs	5,092	68,509	81,597	1,502
Electric Fans	4,105	29,836	23,032	461
Cameras	106,037	175,649	415,079	291
Golf & Tennis Equipment	228,041	662,431	892,752	291

Source: U.N. International Trade Databank.

Japan's distribution system is complicated and is integrated in the *keiretsu* network. There are too many layers of wholesalers and other intermediaries, and too many small retailers. In particular, the share of total retail sales accounted for by supermarkets is restrained by Japan's Large-Scale Retailing Law, which limits the number and size of new stores in order to protect corner shops.⁷⁵ Like farmers, small shops are a well organized and powerful lobby group. Nevertheless, Japanese retailers are beginning to dodge Japan's costly and inefficient distribution system by buying abroad directly. In 1988, imports accounted for about 13% of supermarket sales, up from 8.7% in 1985.

Case Study: Pampers in Japan⁷⁶

Procter & Gamble developed the disposable diaper market from nothing in the early 1980s with its Pampers. Gradually, Procter & Gamble persuaded enough Japanese mothers to use disposables and was at first relaxed when Japanese rivals entered the market because this

⁷⁵ For a discussion of the Japanese distribution system, see Takatoshi Ito and Masayoshi Maruyama, "Is the Japanese Distribution System Really Inefficient?", in Paul R. Krugman, ed., *op. cit.*, 1991: 149-73; and Motoshige Itoh, "The Japanese Distribution System and Access to the Japanese Market", in Paul R. Krugman, ed., *op. cit.*, 1991: 175-89.

⁷⁶ Bill Emmott, *op. cit.*, 1989, pp.67-8.

process promised to popularize disposable diapers even more. The products of all the companies had Western babies pictured on the boxes and names written in English: no foreign phobia in this regard!

But between 1983 and 1986, Procter & Gamble was nearly driven out by its local rivals, notably a small newcomer called Unicharm. At that time, it would have been easy to conclude that consumers were rejecting the foreign product, now that there were made-in-Japan equivalents. This conclusion would also have been wrong. Unicharm's technology was better (that is, the diapers were more absorbent and less leaky), and so was its advertising. Japanese mothers were acting like any foreign mother would: they wanted the best for their babies. Beginning in 1986, Procter & Gamble fought back with new technology and more attractive advertising that was more in tune with the local style rather than the hard-sell American style. Procter & Gamble won the market back, its share rising from around 5% to 30% and beyond.

In summary, industrial policy is not the major reason for Japan's success. Rather, the organization of the Japanese economic system has promoted growth and made its industries internationally competitive. The government probably helped industries in several ways, from a simple application of the infant industry theory in the early years, to the playing of more subtle roles as an information centre, coordinator and signaller. The motivation derived from Japan's economic system was more important than government policies in taking advantage of the emerging opportunities in the global market place. Strategic trade and industrial policies, by themselves, would have never brought Japan the development it has attained in the post War period. What matters is the presence of a competitive and efficient market mechanism. Without such a mechanism no government, however competent and stable, would ever be able to achieve what Japan has achieved.

4. PASSION, REAL ISSUES AND POLICY: JAPAN-U.S. TRADE CONFLICTS

Much of the focus in the U.S. on Japan represents a mixture of fascination and envy. Fascination, because of Japan's remarkable rise from relative backwardness and crushing military defeat to an extraordinary position of financial and increasingly technological leadership. Envy, because this rise stands in sharp contrast to the gradual decline of U.S. preeminence, which has been accompanied by stagnation or even decline in the living standards of a large number of Americans. To a large extent, Japan's success stands out as a nagging reminder and symbol of the shortcomings of the U.S. economy in delivering steadily rising economic prosperity. In the U.S., in the heart of economic nationalists, lies the fear that the U.S. is deindustrializing, that it is losing in the high technology industries, and that its international competitiveness is slipping and well-paid jobs are disappearing.

In this chapter, we explore why the issue of the Japan-U.S. trade imbalance is not merely a macroeconomic adjustment problem but is rooted in international productivity differentials. Economic nationalists point to the decline in U.S. productivity growth during the last two decades, while Japan has managed to come out on top. The lesson economic nationalists draw from Japanese success is the importance of actively using industrial policy to promote national industries. But a recent study indicates that the fears of economic nationalists are not based on facts.

4.1 The Loss of U.S. Competitiveness and Deindustrialization

● Competitiveness and the Trade Balance: From Passion to Real Issues

Competitiveness means that firms produce high quality products and sell them in international markets at low prices. A competitive nation, though hard to define, is one that can succeed in international trade via high technology and productivity, with accompanying high income and wages. *Productivity* is one overall measure of competitiveness. High *total factor productivity* (TFP) comes from the use of a high level of technology and results in high incomes for both capital and labour while the cost of production remains low.⁷⁷ A nation with high labour and total factor productivity is one that can compete internationally, while generating high incomes and a high standard of living.

The large U.S. trade deficit during the 1980s, in the face of large surpluses in Japan and Germany, have been cited in the popular press as evidence of loss of U.S. competitiveness. The argument runs as follows. If a country has competitive firms in many subindustries, then it should have a trade surplus. Conversely, a country with only a few competitive firms would have a trade deficit. The problem with this approach is that trade imbalances tend to be temporary. Certainly, the U.S. deficit has persisted for nearly a decade. But over long periods of time there are solid economic reasons why a nation's trade roughly balances. Having taken on a large amount of international debt in the 1980s, the U.S. will almost certainly shift in the future to a position of trade surplus as it pays interest on that debt and perhaps repays some of it.

Broadly speaking, the U.S. trade position can improve either on the basis of low wages and devalued exchange rates, or as a result of high TFP. In the late 1980s, the U.S. trade position improved because the dollar depreciated, reducing U.S. wages relative to wages in other industrial countries. Consequently, the U.S. can run a trade surplus with lower real wages. Would you take that as a sign of improved U.S. competitiveness? Certainly not. This is not what is meant by competitiveness. This demonstrates that export

⁷⁷ TFP measures the output produced by given amounts of labour and capital together.

success per se or even the overall trade surplus is a misleading measure of national competitiveness. The ability to compete in international trade with high productivity and high incomes is worth aspiring to. Policy makers are perfectly justified in their attempts to accelerate growth in total or aggregate factor productivity and improve competitive standing.

The upshot is that U.S.-Japan trade imbalance, though an issue, is not central to the U.S. fear of loss of competitiveness. The relevant questions here are: how can U.S. industries raise their TFP and sustain it in the long term? But, Japan and the EU bashers point out, the U.S. has lost on the productivity frontier as well. Let us look at the facts.

● **Fear Not Productivity Convergence⁷⁸**

Among advanced countries, since World War II there has been a marked tendency for aggregate productivity levels to converge. By the end of the 1980s, the aggregate productivity levels of the industrial countries were close together, although the U.S. was still on top. This convergence has been occurring for at least a century.⁷⁹ The U.S. had a large labour productivity advantage over all other countries (such as the U.K., France, Italy, Germany and Japan) as the world emerged from the World War that had devastated European and Japanese industry. The U.S. productivity advantage was rooted in two factors: the use of more capital per worker at the industry level and superior technology in virtually every industry. Better U.S. technology was reflected in higher TFP in individual industries, compared to other advanced economies.

Both capital accumulation and technological advance played important roles in labour productivity convergence within industries. Technology catch-up was particularly important between the early 1960s and the early 1970s. Technology convergence (as measured by TFP) was especially strong in industries and countries which lagged far behind the U.S.. The latecomers and backward economies had more to benefit from the innovations and the existing stock of know-how of advanced countries. They grew rapidly as benefits came through importing machinery that embodied the frontier technologies or by borrowing ideas that were not embodied in machinery. The pace of convergence of the other countries' productivity to the U.S. level was rapid during the reconstruction phase from the late 1940s to the end of the 1970s. The pace since then has been less rapid.

⁷⁸ Data in this sub-section are drawn from David Dollar and Edward N. Wolff, *Competitiveness, Convergence and International Specialization*, Cambridge, M.A.: MIT Press, 1993.

⁷⁹Moses Abramovitz, "Catching Up, Forging Ahead, and Falling Behind", *Journal of Economic History*, (46) June 1986: 385-406; and William J. Baumol, "Productivity Growth, Convergence and Welfare: What the Long-Run Data Show", *American Economic Review*, (76) December 1986: 1072-85.

By the mid 1970s, Japan and Germany had achieved roughly 90% of the TFP level of U.S. manufacturing and the dispersion among all OECD countries was minor. After 1973, convergence of labour productivity within industries slowed down considerably (and that of TFP essentially halted). From the mid 1970s onward, as the advantages of backwardness exhausted themselves, convergence in capital intensity (as measured by capital-labour ratios) became the dominant influence on the modest economic growth at the aggregate level. This period was also characterized by higher variation in capital intensity, technology levels and labour productivity at the individual industry level than at the aggregate manufacturing level.

The greater similarity in overall productivity levels across advanced countries than in different industries, indicates that different countries have specialized and have thus emerged as productivity leaders in different industries. The same is true for capital intensity. Countries have, through markets, chosen different industries for their main investment in new technology. This explains the emergence of countries other than the U.S. in leadership roles in both technology and labour productivity frontiers. In different countries, productivity growth has been concentrated in different industries. Japan has done well in iron and steel, France and Italy in textiles, clothing and leather products, and Germany in transport equipment and machinery. Industrial mixes are different, but they cannot be characterized as specializing in high value added versus low value added industries.

International trade appears to play a crucial role in the productivity convergence process. The manufacturing sector, which is the most open in trade and investment, consistently showed, relative to utilities, and community, social and personal services, the least variation in productivity levels among all the sectors of the industrialized economies. Moreover, during the 1960s *unit-cost differences* between countries were dominated by real wage differences, but *by 1982 the difference in TFP levels was the dominant factor.*

It is interesting to note that shifts of employment toward high productivity sectors with high value added per worker, played almost no role in the convergence of aggregate labour productivity among industrialized countries. This finding answers, with a resounding no, the question: Has Japan's aggregate productivity catch-up been achieved by gradually edging the U.S. out of key high value added industries?

Japan caught up with the U.S. because its productivity, relative to U.S. productivity, grew in every industry. The same basic result holds for the other OECD countries. Moreover, the extent of the catch-up varied quite considerably among Japanese industries. In a few sectors, Japanese productivity had surpassed or come very close to the U.S. level by

1986.⁸⁰ For example, in iron and steel (where Canada was the world leader in 1986), Japanese productivity rose from 30% of the U.S. level in 1963 to 105% of U.S. productivity; in glass products, it rose from 38% in 1963 to 99% of the U.S. level in 1986; and in petroleum refining, it went up from 52% in 1963 to 103% relative to the U.S. in 1986. In other sectors, the convergence was not nearly so strong. In machinery, Japan's productivity in 1963 was 27% relative to the U.S., rising to 73% by 1986; in industrial chemicals (where Canada was the leader) Japan's was 24% in 1963 and increased to 84% of the U.S. level in 1986; in transport equipment it was 30% in 1963 and grew to 68% of the corresponding U.S. measure in 1986; and in electrical goods, it was 30% in 1963 and rose only to 63% of the U.S. figure in 1986. The more extreme examples are natural resource related items, such as food and tobacco products. But Japan's relative productivity remained low in other sectors as well, such as clothing, professional goods and pottery.

● **Deindustrialization: The Fiction of U.S. Economic Demise**

Has the U.S. experienced a significant loss of its industrial core in comparison to other advanced countries, notably Japan and Germany? This is the fear raised by the deindustrialization school. The U.S. proportion of total OECD manufacturing output

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Average productivity (%) in 12 industrial countries relative to leader (= 100%)		Japanese productivity (%) relative to U.S. productivity (= 100%)		
		1963	1982	1986
	1986			
Industrial chemicals	51 (Canada)	24	69	84
Other chemicals	44 (U.S.)	28	74	84
Iron and Steel	61 (Canada)	30	124	105
Nonferrous metals	58 (Canada)	31	86	85
Paper products	60 (U.S.)	27	52	60
Metal products, n.e.c.	63 (Canada)	24	61	73
Machinery	59 (U.S.)	27	67	73
Transport equipment	50 (U.S.)	30	65	68
Wood products	58 (Canada)	24	66	65
Electrical goods	61 (U.S.)	30	60	63
Petroleum refining	33 (France)	52	103	103

Source: D. Dollar and E.N. Wolff, 1993, Table3.2.

remained unchanged between 1985 and 1990, at 37%.⁸¹ This indicates that there has been no deindustrialization of the U.S. relative to other OECD countries. Indeed, countries do not forge ahead or catch up by stealing jobs in high value added industries from others, nor do they fall behind by losing jobs in high value added industries. The U.S. has not only remained strong in manufacturing, but has expanded its lead over its close rivals.

The U.S. dominance of world commerce of the 1950s and early 1960s is over, not because the U.S. performed poorly, but because other nations caught up (both in terms of technology and capital investment), as intuitively they should have once the unique immediate post War period had ended. The world economy is now characterized by growing international specialization and differentiation: different nations are the productivity leaders in different industries. Yet, the converse of this is that the U.S. economy has not entered a period of secular decline, but rather has taken a position of first among equals.

4.2 The Non-Issue of U.S.-Japan Rivalry in R&D

The U.S. and Japan both enjoy comparative advantage in R&D intensive industries. Japanese companies have high comparative advantage in office equipment and in telecommunications equipment, but low in aircraft, pharmaceuticals, agricultural chemicals, and steam engines and turbines. U.S. comparative advantage is by far the highest in aircraft, followed by medical equipment, and steam engines and turbines.⁸² There appears to be a complementary pattern of high technology specialization. The U.S. tends to specialize in science-based industries,⁸³ while Japan has the advantage in product-specific and applied, rather than fundamental, research activities.

Cross-investment between the U.S. and Japan in R&D activities has grown considerably in recent years. Total annual R&D undertaken by the U.S. affiliates of Japanese firms rose from US\$300 million in 1987 to approximately US\$750 million in 1989. This

⁸¹ OECD, *Indicators of Industrial Activity*, various issues.

⁸² B. Belassa and M. Noland, *op. cit.*, 1988. This result is also confirmed by Gene M. Grossman, "Explaining Japan's Innovation and Growth: A Model of Quality Competition and Dynamic Comparative Advantage", *Bank of Japan Monetary and Economic Studies*, (8) 1990: 75-100.

⁸³ These industries are characterized by large firms capable of financing the basic research necessary for innovation. Their R&D is also reinforced by the relatively open U.S. university system. In contrast, the private Japanese firms operate in a relatively closed system. This accounts for an asymmetry in the access to R&D in each country by the other.

accounted for 1.1% of total company funded R&D in the U.S. in that year.⁸⁴ In general, the U.S. affiliates of foreign companies are, on average, virtually indistinguishable from the domestic operations of U.S.-owned companies in terms of value added per worker, compensation per worker and R&D per worker.⁸⁵ Moreover, survey evidence suggests that the main Japanese motivations are to develop products for the U.S. market and to tap into the U.S. basic science base.⁸⁶ Also, current bilateral science policies attempt to increase U.S. researchers' access to Japanese corporate laboratories.

Conversely, U.S. firms operating in Japan employ 5,200 scientists and engineers and spend more than US\$500 million annually on R&D operations in Japan. These firms do not appear to have encountered significant barriers to making R&D investments in Japan, and a large majority express the belief that the investments are worthwhile and intend to expand them in the next five years. Survey responses indicate that the main motivations of U.S. firms doing R&D in Japan are to develop new products for Asian markets and to play a more aggressive role in assimilating Japanese manufacturing and product technology, transferring this expertise back the U.S.⁸⁷ In light of these motivations, it is unlikely that R&D activities in Japan substitute for investment that would otherwise have taken place in the U.S..

In sum, high technology activities in Japan and the U.S. tend to be characterized by a complementary pattern of specialization. Therefore, a case for cooperation between the two trading partners rather than bashing the Japanese seems more rational and appropriate.

4.3 The Reemergence of Competitiveness: "Re-Engineering" Flexible Corporations

We now take it for granted that manufactured goods are made from interchangeable parts. But 150 years ago, people reacted with astonishment and disbelief to the suggestion that goods could be made this way. At that time, the craft system required the custom design and engineering work for each good. The skilled fitters gave products their final shape in a time consuming process. Mass production changed the craft mode of production

⁸⁴ Edward M. Graham, "Japanese Control of R&D Activities in the United States: Is This Cause for Concern?", in Thomas S. Arrison et al., eds., *Japan's Growing Technological Capability*, Washington, D.C.: National Academy Press, 1992; 189-206.

⁸⁵ Edward M. Graham and Paul R. Krugman, *Foreign Direct Investment in the United States*, 2nd ed., Washington: Institute for International Economics, 1991.

⁸⁶ Lois S. Peters, "Technology Strategies of Japanese Subsidiaries and Joint Ventures in the United States", in Mordechai E. Kreinin, ed., *International Commercial Policy*, Washington, D.C.: Taylor & Francis, 1993.

⁸⁷ Justin Bloom, "Survey of Direct U.S. Private Capital Investment in Research and Development Facilities in Japan", Washington, D.C.: National Science Foundation, January 1991.

and ensured that each good was produced according to a design that was known to work well.⁸⁸ Large scale competitive producers, such as Ford, GM and Sears, lowered prices as economies of scale decreased costs. The policy analysts still accord a central role to variables such as scale economies in standardized production and the size of corporations. The proponents of strategic trade and industrial policies emphasize the importance of large national corporations to preserve well paying jobs and to capture rents in global markets.

However, today the production of undifferentiated mass manufactured goods is becoming a steadily diminishing proportion of the output in advanced countries. The growth in per capita income in advanced countries since World War II has led to increased demand for quality products and differentiated product varieties. The growth in intra-industry trade across these countries is a manifestation of this trend. The marketplace is changing still. People want products to perform specific functions. If word processing is the only requirement placed on a PC, then the bells and whistles added to a standardized version of the PC are an expensive and complicated burden for the company buying such equipment. Businesses that sell goods and services that meet these specific individual requirements are most likely to remain competitive in global markets. Consequently, corporations—even the most successful and promising among them—must develop new techniques that will allow them to survive in today's increasingly harsh, competitive climate. It means often forgetting how work was done in the age of the mass market. What increasingly matters is how we want to organize work given the demands of today's markets and the power of today's technologies.⁸⁹ And no strategic trade or industrial policy can deliver that kind of "business process reengineering". Japanese companies adopted flexible manufacturing practices, discussed above in section 3.1, not as a component of planning by MITI or MOF, but on the basis of self-defined commercial interests.

Japanese corporations have demonstrated that (a) every worker in an organization, from top to bottom, can become a "knowledge" worker if given the opportunity to do so, and (b) computers and new technology, such as robots, have made many specialized tasks obsolete, enabling one person not only to do the work of many, but to do many different jobs at once. New computing and communications technologies will help firms implement flexible production. But it is the replication of processes and innovation, not computers and machine tools, that are fundamental. There is a widespread frustration among companies that the billions invested in computers during the past decade have failed to produce bigger productivity gains. Business reengineering means starting all over, starting from scratch. To

⁸⁸ Nathan Rosenberg, *The American System of Manufactures*, 1969.

⁸⁹ Michael Hammer and James Champy, *Reengineering the Corporation: A Manifesto for Business Revolution*, New York: Harper Collins Publishers, May 1993.

reengineer the corporation, companies may have to experiment with entirely different ways to structure all forms of corporate activity.

The successful entry of some Japanese automakers in the luxury segment of the market attests to the power of business process reengineering. To produce Luxus, Toyota started a brand new company, Honda started Acura and likewise Nissan started Infinity. Entrenched interests among managers and employees of the old company were avoided. This example indicates that firms who excel in flexible manufacturing are more likely to protect and preserve their ability to meet the requirements of their customers in new ways and to sustain competitive advantage. Moreover, the high value added lines of business that generate rents are often found in the specialty niches of the upscale market, which are best supplied by flexible manufacturing technology.

The spread of flexible manufacturing is already taking place through Japanese foreign direct investment in Canada, Southeast Asia, Europe and the U.S.. Germany and Italy have already introduced these more fluid structures of business organizations. The boundaries of the company are hazier, often encompassing close and continuing relationships with suppliers and the community. The most vital sectors of the Italian economy are not large corporations, locked in mutual dependence with state-funded industrial policy, but local networks of small, semi-autonomous firms.⁹⁰

The discussion here brings out the importance of finding out why Japanese companies and their products have been successful in one market or the other. An economic nationalist could make the casual observation that the Japanese have yet again driven the U.S. and European producers out of the high profit segment of the automobile market and that the government must defend the long term national interest. Japanese firms have been successful, however, not because of their government's guidelines. Rather, they quickly adapted to changed realities in a fiercely competitive marketplace and pressed ahead in implementing flexible manufacturing by applying new technology to "knowledge" workers. The point to note is that it is the adoption and application of new knowledge in Japan, rather than the production—most likely in the U.S.— of new knowledge, that has led to a new mode of production and generated comparative advantages for Japan. Quick access to new technology is of utmost importance for an advanced country to sustain competitiveness. IBM and Sears have not faltered because they were in wrong lines of business. Nor can the national bureaucracy lead them to nirvana by picking new sectors for them. Competitive global markets, companies everywhere know, are not for laggards. The best way for the U.S. and European corporations to counter the Japanese challenge is to compete with production and commercial innovations.

⁹⁰ John Kay, *The Foundations of Corporate Success*, London: April, 1993.

4.4 The Political Economy of Japan-U.S. Trade Policy: Ineffective Bilateral Bashing

The experience of Japan-U.S. trade relations shows that trade measures get captured by special interests. Subsequent attempts to dismantle these trade distortions often run up against well organized lobbies and economic nationalists. The U.S. response to shifts in dynamic comparative advantage vis-à-vis Japan, beginning with textiles in 1950s, has been to follow up voluntary export restraints (VERs), by voluntary import expansion (VIEs) and quantitative targets. The politics of pressure groups in the U.S. have been able to get protection in one sector after the other. Japan has captured rents as a result.

For more than 30 years, the Liberal Democratic party (LDP) controlled the Japanese Diet. Within the LDP, there are political factions. Since there was no changeover of political power, there developed an intricate nexus of vested interests, known as *zoku* or "tribes", in dividing up political rents. The LDP looked after each industry, such as manufacturing, agriculture, finance, telecommunications and so on by assigning it a separate policy research division (PRAC). Members of the Diet got to sit on PRAC committees. PRACs, in turn, paralleled each ministry within the Japanese bureaucracy.⁹¹ Thus, the political and bureaucratic set-up renders industry-specific interests more effective than consumer interests.

To implement quotas and VERs imposed by the U.S. authorities, the government in Japan had to intervene in the marketplace. The bureaucrats in MITI/MOF exercised a great deal of power in regulating and allocating scarce resources in the 1950s and 1960s, as has been discussed in chapter 3. To these same ministries now came the job of allocating the U.S. market. Export quotas had to be translated into production quotas for Japanese producers. To maximize profits for the Japanese companies in the U.S. (and European) market, the bureaucrats devised cartel type arrangements that divided up the export market. This cartel solution creates rents for those industries (comprising stockholders, managers and workers). Thus, U.S. trade policy, ironically, has encouraged cartelization in parts of the Japanese economy. On this view, what is commonly perceived as the planning function of MITI/MOF would be a natural feature of the process of reacting to U.S. (and, to a lesser degree, European) trade pressures.

⁹¹ Masahiro Okuno-Fujiwara, "Industrial Policy in Japan: A Political Economy View", in Paul Krugman, ed., *Trade with Japan, Has the Door Opened Wider?*, Chicago: University of Chicago Press, 1991: 271-96. Moreover, interministry disputes sometimes went to the LDP and the *zoku*. The most powerful groups, such as the agriculture *zoku*, the construction *zoku* and the small business *zoku*, are those least interested in trade liberalization. Farmers may be only 6% of the population, but through unequal apportionment of Diet districts, the strength of the farm vote is inflated to 18% of the whole, and it actually elects 25% of the Diet. See Amelia Porges, "U.S.-Japan Trade Negotiations: Paradigms Lost", in Paul Krugman, ed., *op. cit.*, 1991: 305-27.

Sector-by-sector targets can only be enforced if the MITI/MOF are powerful enough to guide Japanese firm behaviour in great detail. The bureaucracy in Japan would be forced to organize and monitor numerous buying cartels.⁹² Firms would be forced to collude on how imported products are to be handled. Japanese firms would enhance their profits by buying cheaper foreign inputs and producing some products abroad, but they could continue to exercise their power over domestic pricing and marketing practices.⁹³

Trade disputes between the U.S. and Japan typically take the form of complaints by U.S. producers that Japanese government policies and private practices exclude them from what are essentially cartelized Japanese markets. These corporations then enlist the U.S. government to assist them in prying open the market. The Japanese response to this foreign pressure is to co-opt the relevant industry to accommodate foreigners. This sets in motion successive demands by U.S. corporations to gain entry in Japan's other sectors. Japanese choose the solution that benefits Japanese producers as well as U.S. producers by forming the de facto government-supported producers' cartel. Thus, more and more U.S. corporations start lobbying to obtain protection.

Some results-oriented approaches might end up increasing the profits of selected U.S. firms in the Japanese market. Once established in Japan, foreign corporations may find it in their interest to bolster rather than remove entry barriers. Japanese consumers would not necessarily enjoy the full benefits of access to cheaper imported products. For instance, the Japanese Fair Trade Commission contended that a joint venture of Apple (U.S.) and Canon unfairly maintained higher prices of Apple computers in the Japanese market by various restrictive trade practices.⁹⁴ Instead of encouraging Japan in the direction of liberal trade, results-oriented policies, such as VIEs or quantitative import targets for specific commodities, have actually led to a market with *more* rather than less government and corporate control.

⁹² For example, to implement the July 1986 Semiconductor Trade Agreement (STA) with the U.S., MITI established a production cartel, issuing quarterly "forecasts" of semiconductor demand and production that carried an implicit administrative imprimatur. In February 1987, MITI began issuing "requests" for production cutbacks. Thus, one effect of the STA, as with the automobile VER, was to increase MITI's control over the Japanese economy. See C.F. Bergsten and M. Noland, *op. cit.*, 1993, p.130.

⁹³ A striking feature of the Japanese market is the unusual degree to which *Japanese* MNCs dominate Japanese imports. In contrast, in U.S. and European exports to each other, the *exporting* country companies dominate the intrafirm sales.

⁹⁴ Robert Z. Lawrence, *op. cit.*, in Paul Krugman, 1991, p.12.

While a results-oriented approach might raise the volume of imports going into Japan, it is not clear that it will provide spillover benefits to the U.S. economy and well paying jobs for U.S. workers. In a world in which multinational corporations dominate trade, there is no such *necessary* linkage. If U.S.-owned firms gain entry in Japan, they may decide to produce more locally or may supply to Japan from their subsidiaries elsewhere. For example, the major U.S. initiative to open the Tokyo market for cellular telephone sales by Motorola will increase the sales of telephones designed and manufactured by Motorola in Malaysia. The proponents of managed trade probably considered this a "successful" trade arrangement. However, increased Motorola sales did nothing to improve the U.S. trade balance with Japan. The devil hidden in these kinds of specifics would disappoint the Japan bashers. Moreover, agreements must be verified and monitored. No country, not even the U.S., is well equipped to deal with a system that requires the detailed micro management of the international economy.

It is tempting for the U.S. to try to solve its trade problems with Japan on a bilateral basis. As the world's largest economy, the U.S. appears in a particularly strong position when it confronts smaller economies one-on-one. Unilateralism or bilateralism allows the U.S. to present its case forcefully. But this approach, as argued above, has many disadvantages. Limiting imports with VERs from Japan translates into a tax on U.S. consumers, and results in rents for Japanese corporations and the cartelization of the Japanese market. VIEs and numerical targets would enable only a chosen few U.S. corporations to dip into the rents of cartelized Japanese markets. It will not make the Japanese market more truly open to foreign competition.

5. CONCLUSIONS

Trade among advanced countries is increasingly concentrated in high technology areas in which R&D is important. Trade frictions between the U.S. and Japan often occur in high technology industries. All OECD countries have the financial and human resources to conduct sophisticated R&D. Consequently, it makes sense that each country should be the home for firms that are leaders in their fields. It is mutually advantageous for all the rich countries that their firms specialize in different sub-industries and product lines, and that there is a large volume of trade among these countries.

● High Tech Trade Conflicts

Governments everywhere recognize that R&D and new knowledge production have important beneficial spillovers. The high technology industries are also characterized by high productivity and high real wages. But large sunk investment in R&D has to be made upfront

to produce state-of-the-art know-how. Ideally, government intervention is justifiable if markets fail to equate roughly private benefits and benefits to society from a project. Nevertheless, whether there exist measurable market failures or not, governments in most countries have taken to subsidizing high technology industries. Each government supports its national corporations with the aim of being the first mover in the global market. The aim is to capture rents in a newly emerging line of business. When so many national governments are targetting the same thing, trade disputes arrive before long. The situation becomes messy as the politics of special interests in each country puts pressure on trade policy. The experience of U.S.-Japan trade conflicts, discussed in this Paper, is a testimony to this outcome.

The U.S.-Japan trade conflict is more than an economic issue. The U.S. trade deficit with Japan, though perceived to be a problem, is not central to the conflict. Japan bashers and economic nationalists in the U.S. believe that the erosion of U.S. domination in a number of industries is due to Japan Inc.'s "cheating". There is the fear of a large scale deindustrialization in the U.S.. The conventional wisdom holds that Japan does not play fair in global markets, that Japan's government has successfully targetted and captured profitable industries that were previously dominated by the U.S., and that Japan has deliberately made its market inaccessible to U.S. corporations. The solution, they argue, is to open up Japan (often bilaterally, in practice) and for the U.S. to pursue an active industrial policy.

This Paper argues that unilateral or bilateral trade measures in this conflict may open up the Japanese market to a few large U.S. corporations, but not to all potential foreign (and Japanese) competitors. Such a limited sharing of the Japanese market between U.S. and Japanese companies will freeze out efficient firms from other countries, such as Canada. The most beneficial policy is a multilateral approach aimed at further liberalizing Japanese market access. The consumers in Japan also stand to gain the most from the multilateral approach. Equally, further market liberalization is needed in the U.S. and Europe.

● **The Lessons From Japan's Economic Growth and The Implications For Canada**

The evidence discussed in this Paper indicates that countries cannot be characterized to be specializing in high value added versus low value added industries. There is a wide range of high productivity activities, and they are dispersed across all the manufacturing and nonmanufacturing (services) industries. In a companion paper, it has been argued that there is no one magic sector or industry that is better than the other and there is no reliable method of picking winners. Countries generally tend to specialize in industries where they achieve economies of scale and flexible manufacturing to cater to demands by people in the global market.

How do advanced economies get to specialize in specific high technology and high value added sectors? Here, the factors discussed in this Paper to account for Japan's economic growth and success are instructive. In the 1970s and 1980s, Japanese companies have been moving away from basic manufacturing and venturing forth in knowledge intensive activities. The three essential ingredients have been large scale investment (financed by a high domestic saving rate), a flexible labour force consisting of "knowledge" workers, and the availability of new know-how that can be put to commercial use.

Note that there are positive complementarities between capital investment and technological progress. That is to say, the demand for investment partly depends on the opportunity for the introduction of new technology. Moreover, there are beneficial spillovers involved in the production of commercially valuable knowledge. The demand for the commercial use of new know-how, in turn, triggers additional investment. Central to this process is the role of new ideas and "knowledge" workers that figure out new designs and new ways of doing things to produce new goods for which customers have a requirement. Investment in computers, machines, tools and the like, though necessary, is not sufficient. A new software is only useful if a knowledge worker can use it to solve problems for a customer. New customer demands require new investment which becomes profitable through the well educated labour force. The result in Japan is not only Lexus, Acura or Infiniti or the home bread baking machine, but also a host of other implements.

The overall policy goal has to be productivity growth in Canada. This Paper finds that the sources of productivity growth for individual countries are innovation, the rapid absorption of foreign technology and investment. Accordingly, Canada must concentrate on three areas: (a) new technology, (b) the availability of an appropriately educated and trained labour force, and (c) new investment in those spheres.

For medium size economies such as Canada, access to R&D and new technology, no matter where it originates, is more important than spending scarce tax-payer money to do industrial targetting to produce it in Canada. For this purpose, it is essential (a) to raise domestic investment and (b) to attract inward foreign investment.

For Canada, the international transmission of technological know-how and spillovers are of vital importance. Technological spillovers can take place even if the locations where an invention occurs, where the new products are manufactured and where the new products are used are separated by thousands of miles.⁹⁵ Geographical proximity between developers of new

⁹⁵ What is the vehicle of technological spillovers—geographical proximity and travel distance (or time) between supplying and using plants? Some have suggested that there are agglomeration effects, with clusters of related industries producing sizable spillovers through geographic proximity. Others have put forward the notion of a "food chain", with technological advance in one industry dependent on its (geographically) close supplier. Yet, in

technology and the eventual users and adopters can be important, but is not essential. Multinational businesses also play a vital role in the spillover process.⁹⁶ Consequently, trade openness, particularly *import* openness, is a major contributor to the growth of country productivity.

Share-ownership in Japan is characterized by a larger participation by banks and other financial institutions than in North America. However, these shareholdings have not resulted in the control of industrial firms by banks. There is a close bank—customer relationship within and outside the *keiretsu* system. Through this relationship with the banks, Japanese managers can tap into "patient" long term capital. Consequently, Japanese companies are not as constrained by a bottom line vision that focuses excessively on boosting the next quarterly earnings. This Paper has argued that the dense network of companies in Japan has ingredients for bringing forth a competitive market outcome, provided the environment in and outside Japan is so structured. In modernizing our competition policy and financial institutions legislation, it is important to take into account the possible benefits of the Japanese network system, including the issue of deeper cross-shareholding.

Another well-known aspect of the Japanese experience has been its macroeconomic stability. Japan has enjoyed a low inflation rate, a low unemployment rate even during periods of recession, a high savings rate, low public debt relative to its GDP and low interest rates. Japan has managed its fiscal and monetary policies well, underpinning high economic growth. Getting macro- and micro-economic fundamentals right is as essential for other countries as it has been for Japan.

this age of electronic mail and fax machines, it is not evident that geography is vital for the transmission of new technology among industries, or that spillovers even depend on *domestic* manufacture. It seems possible for them to occur even if one country manufactures inputs (such as microchips in Japan) and another the corresponding outputs (such as computers or software in Canada).

⁹⁶ Magnus Blomstrom and Edward N. Wolff, "Multinational Corporations and Productivity Convergence in Mexico", NBER Working Paper no. 3141, October 1989.

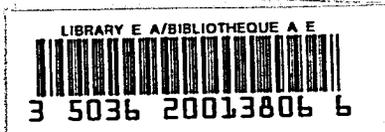
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