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INTRODUCTION*

by

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Chapter 1

INTRODUCTION

Robert M. Stern

The decade of the 1980s has been marked by unprecedented imbalances between the United States and the other major industrialized countries. The source of the imbalances seems to stem primarily from the U.S. macroeconomic policy mix that was implemented by the Reagan Administration beginning in 1981 and involving highly expansionary fiscal policies together with relatively tight monetary policies. This combination of policies served to increase U.S. real interest rates relative to those abroad and at the same time to increase U.S. aggregate expenditure. The fiscal stimulus was provided by substantial reductions in personal and corporate income taxes, and given that it proved difficult to effect major reductions in government expenditures, it is not surprising that sizable budget deficits emerged.

In a closed economy, the effects of these policies would have been to crowd out private spending, and, if the fiscal expansion were to be financed in a noninflationary manner, domestic savings would need to have risen to accommodate the increased budget deficit. In an open economy with internationally mobile capital, however, the policies may induce a capital inflow from abroad, so that foreign savings could in effect serve to finance some part of the government budget deficit. In these circumstances, the inflow of capital would create an excess demand for the country's currency and, under floating exchange rates, the currency would appreciate. The counterpart of the capital inflow and currency appreciation would be a deficit on current account as imports of goods and services increased and exports declined. The foregoing scenario seems broadly descriptive of what

occurred in the U.S. economy between 1981 and 1985. In particular, the expansionary fiscal policy appears to have crowded out the foreign sector since expenditure and output increased substantially elsewhere in the economy and, in the aggregate, the economy moved towards essentially full employment following the 1981-82 recession.

Japan's experience is the mirror image of what took place in the United States. That is, beginning in the early 1980s, in the wake especially of the financial liberalization that was occurring in Japan, there was a sizable capital outflow as Japanese savings were increasingly directed to investment in various kinds of official and private assets in U.S. financial markets. The Japanese current account in turn moved into surplus to accommodate the capital outflow, and a very sizable proportion of the current account surplus had its counterpart in the U.S. current account deficit already mentioned.

As a result of the difficulties that U.S. import-competing and export firms were experiencing because of the dollar appreciation, considerable pressure was brought to bear on the Congress to take measures designed to improve the situation of different industries. It was inevitable in the circumstances that Japan was subjected to sharp criticism because of the substantial trade surpluses that it was experiencing vis-a-vis the United States. The Japanese were also criticized at times for saving too much. What is especially interesting is that there was little recognition and acknowledgement in all of this of the impacts that U.S. macroeconomic policies were having domestically and abroad. A continuing air of tension and crisis has thus marked U.S.-Japanese economic relations during the 1980s.

When one considers U.S.-Canadian relations, there has been a remarkable calm in comparison to U.S. relations with Japan. This is the case even though Canada is the single largest trading partner of the United States and accounts for a substantial proportion of U.S. foreign direct investments. Further, even though Canada was experiencing a sizable trade surplus vis-a-vis the United States, it was not singled out for criticism in the same way as Japan. It is of interest to note that Canada's macroeconomic

situation has paralleled that in the United States, with sizable government budget deficits both in absolute terms and as a percent of gross national product. In the United States, as was noted above, foreign savings were instrumental in helping to finance the U.S. budget deficit. In Canada, in contrast, domestic savings have increased substantially enough to finance the budget deficit. Thus, deficits and foreign capital inflows are not inevitable, so that the U.S. experience appears to be rather unique.

While the United States accounts for a predominant share of Canada's exports and imports, Japan is an important trading partner for Canada as well. The Japanese market provides a major outlet for Canadian exports of agricultural foodstuffs and raw materials. Since Japanese import restrictions are severe for a number of primary products, Canada and the United States have a common interest in inducing the Japanese to reduce or remove these restrictions. Canada is a significant importer of a variety of manufactured goods, including vehicles, from Japan. Canada may therefore experience some of the same competitive pressures from Japanese imports as the United States. In the automobile industry in particular, Canada has followed the U.S. lead in negotiating a voluntary export restraint (VER) agreement limiting imports of automobiles from Japan.

In the winter of 1985, the appreciation of the U.S. dollar reached its peak and since then the dollar has depreciated substantially especially against the Japanese yen and the German mark and to a lesser extent against other major currencies. The reasons for the onset of dollar depreciation are not entirely clear. But it appears that the combined effects of the passing of the Gramm-Rudman-Hollings deficit reduction legislation and an easing of U.S. monetary policy may have altered expectations about future interest rates and the exchange rate and thus reversed the appreciation that had occurred in the previous five years.

Under ordinary circumstances, it would be expected that dollar depreciation would bring about a reduction in the U.S. trade and current deficit. While this has in fact occurred, many observers have been surprised with how long it has taken for the external

deficit to decline. Here again the explanations are by no means clear. It may be the case that the macroeconomic forces behind the budget and current account deficits are still sufficiently strong so that any sizable reduction in the current account deficit will be constrained. Also, it appears that the U.S. economy has continued to expand significantly in 1986–87 relative to its major trading partners so that imports have not declined as much as might have been expected. Finally, some foreign exporters may have opted to absorb a substantial proportion of the exchange rate changes by reducing their profit margins in an effort to retain their market shares in the United States while other foreign exporters in countries with currencies pegged to the U.S. dollar have been able to increase their exports to the United States.

Whatever the explanation may be, the fact that the nominal U.S. external deficit has not been materially reduced has meant that the pressures on the U.S. Congress to implement restrictive trade actions have not abated. Whether this state of affairs will continue is difficult to determine. It may be that the sudden decline in equity prices that occurred in the United States and other financial centers in October 1987 will provide the impetus for more effective measures to be taken to reduce the existing macroeconomic imbalances that exist among the major industrialized countries and that the external imbalances will be correspondingly mitigated. Also, legislative approval of the U.S.-Canadian Free Trade Agreement and progress in the ongoing Uruguay Round of Multilateral Trade Negotiations may serve to diffuse a variety of trade policy irritants between the United States and its two major trading partners. Only time will tell.

Pertinent Insights and Conclusions of the Conference Papers and Comments

The conference papers and comments that comprise the chapters that follow address many of the foregoing issues in depth. Each session in the conference involved authors and discussants from the three countries. While an effort was made to have the authors focus their papers on issues common to the three countries, this was not altogether

feasible. The discussants' comments may thus provide a national perspective that supplements the individual papers.

In anticipation of what is to follow, some readers might find it useful to have an idea of some of the pertinent insights and conclusions that the authors and discussants offer in their respective contributions and that cut across a number of the contributions. These are:

1. While the simple Life Cycle model is useful in understanding savings behavior, it cannot fully explain intercountry variations in private savings rates. It is necessary to take into account such factors as differences in the rates of economic growth, differences in institutions and cultural determinants of behavior, tax incentives, and demographic characteristics in trying to explain why private savings rates are higher in Japan especially and in Canada as compared to the United States.

2. In the coming decades, it is possible that Japan and Canada will continue to expand and to converge on levels of U.S. efficiency and per capita income. The same may be true for the newly industrializing East Asian economies. Private savings rates in Japan may be sustained at relatively high levels, although demographic changes may necessitate higher taxes to support an aging population.

3. The Yen/U.S. dollar exchange rate has been considerably more volatile than the Canada/U.S. dollar rate. The Yen volatility may be explained in part by the deregulation and internationalization of financial markets and the resulting substantial increase in international capital mobility that has occurred in Japan. The comparative stability of the Canadian dollar may reflect the close integration of the Canadian and U.S. economies and the exchange market intervention of the Bank of Canada. In designing an empirical framework to investigate the sources of exchange rate volatility, it is important to take into account the different types of shocks to which the exchange rate is subject, problems of collinearity in the returns on domestic and foreign assets, the stability of the demand for money, central bank intervention in the exchange markets, the effects of

innovations in financial markets, and the consequences of uncertainty in the design and implementation of macroeconomic policies.

4. Divergent fiscal policies have been the major sources of the macroeconomic imbalances between the United States and the other major industrialized countries in the 1980s. The empirical modeling of the determinants of these imbalances, future predictions, and recommendations for policy call for careful consideration of the underlying national policies and institutions, the global linkages, and the relevant parameters describing the behavior of the important transactors and policy making authorities.

5. The increases in Japan's exports of manufactures have been concentrated especially in automobiles, office machinery, telecommunications equipment, and electric machinery. While Japan has been criticized for having relatively small imports of manufactured goods, there is evidence that this is changing dramatically in response especially to the appreciation of the yen. The use of voluntary export restraints by the United States and Canada to limit imports of manufactures from Japan may be undermined by product upgrading, shifts to other sources of supply, and competition from Japanese firms that have expanded production by means of direct investment in importing countries.

6. Japan has very substantial barriers limiting the importation of agricultural foodstuffs and materials. Reductions in these barriers would be beneficial both to the United States and Canada, but attention must be given to policies that would ease the process of adjustment in the agricultural sector in Japan. U.S. domestic agricultural policies may be highly detrimental to Canada and other major agricultural exporters because they may result in lower world prices. U.S. export subsidies may displace competing suppliers, and, furthermore, result in sizable income transfers to importing countries.

7. Industrial policies to aid declining manufacturing industries are often motivated more by political than economic considerations, and the policies differ noticeably

among countries. Trade policies have been the most prevalent form of assistance to industries in the United States and to a lesser extent in Canada, whereas in Japan a wider range of policies has been used in apparent recognition of differences in industry characteristics and adjustment needs. Japan has outperformed both the United States and Canada in terms of productivity improvements in declining sectors, but it is not obvious that Japan's experiences are readily transferable to other countries. In the United States and Canada, it may be necessary to take a much longer view of adjustment problems and policies and to contemplate longer-term policy options that may be more costly than the shorter-term policies currently being used.

8. Existing taxes and proposed tax reforms have a variety of effects on international trade and international investment flows. The most important effects stem from fiscal deficit imbalances and the overall impacts of a nation's tax structure. The effects of indirect taxes and trade taxes are of lesser importance in the aggregate but may have important sectoral impacts.

9. Economic growth and development in the nations comprising the Pacific region have been marked by a dynamism resulting from the outward looking and liberal policies adopted in the major countries there. The continuation of this dynamism will be assisted by intergovernmental cooperation designed to maintain open markets and to expand international financial flows. In view of its very sizable current account surplus, Japan should be encouraged to assume a position of leadership in the region and to promote large scale transfers of capital to developing countries, thus reducing some of its financial flows to the United States.

10. Access to markets in importing countries may be affected by cultural factors that stem from the characteristics of a nation's social network, social custom, and the reputation of domestic firms. Policies of administered protection and the strategic behavior of imperfectly competitive firms may also serve to limit market access. In the case of Japan, certain business practices that appear to be restrictive may in fact reflect rational

behavior in designing long-term contracts and maintaining long-term relations between firms and consumers.

11. The empirical evidence relating to formal trade barriers suggests that Japan's tariffs and nontariff barriers are relatively low overall and comparable to those maintained by the United States and Canada. When both formal and informal barriers are taken into account, the empirical evidence also suggests that Japan's trade barriers are not distinctive in comparison to the United States, Canada, and other major trading countries. Japan's trade performance can thus be explained in terms of its national factor endowments and distance from markets rather than by its trade policies.

Brief Summaries of Conference Papers and Comments

Having just indicated some of the pertinent insights and conclusions offered in the conference papers and comments, it may further be useful to summarize briefly each of the papers and discussants' comments that comprise the chapters that follow.

Helliwell: "Some Comparative Macroeconomics of the United States, Canada, and Japan"

Helliwell begins by reviewing the alternative approaches to the modeling of the balance of payments and the macroeconomic linkages among nations in order to provide a framework in which to examine the behavior and possible future evolution of the importance macroeconomic aggregates of the United States, Canada, and Japan. He shows that the private savings rate — which includes both household and corporate savings — is substantially higher in Japan than in the United States and that the Canadian rate has risen since the 1970s nearly to the Japanese rate. In order to explain savings behavior, one can rely on the simple Life Cycle model. But, as Helliwell notes, although the model may identify the reasons for international differences in savings rates, its parameters may not be robust in forecasting the future evolution of savings rates for the three nations. Helliwell also notes that the model is limited insofar as it does not take into account such factors as liquidity constraints and the diversity of motives and

circumstances characterizing the actual behavior of households. He mentions several additional factors that may explain intercountry differences in private savings rates, including: the tax treatment of consumer borrowing; availability of consumer credit; tax treatment of interest income and private savings for retirement; differential rates of inflation; increases in life expectancy; differences in the role and structure of the family; the work ethic; the Japanese bonus system; and differences in female labor force participation rates.

In presenting evidence on government savings rates, Helliwell notes that net government savings have become significantly negative in both Canada and the United States since 1980, but have remained positive and fairly stable in Japan since 1975. The growing fiscal deficits in Canada are attributable largely to rising transfer payments and falling revenues, while the U.S. fiscal deficits stem from growing current spending and falling taxes. The evidence on net foreign savings rates is that there has been a net outflow of capital from Japan that amounted to over 3% of GNP by the mid-1980s. Canada has been a net capital importer for the most part. The United States had a relatively small rate of net capital outflow/inflow until the early 1980s, but net capital imports rose to 3% of GNP by the mid-1980s, mirroring the experience of Japan. While there are several different views of the forces determining net capital movements, a currently popular view stresses the importance of high international capital mobility combined with the absence of tightly integrated markets internationally for physical capital and lack of effective arbitrage between equity and debt markets within countries.

It is especially noteworthy according to Helliwell that Japan has had higher and more stable rates of growth of per capita output and income than either the United States or Canada. These higher rates of growth have facilitated or caused the much higher rate of Japanese private saving and may themselves be partially caused by the much higher Japanese rate of investment. To help in the understanding of the links between investment and the growth of output, Helliwell develops a factor utilization model of

production. In this model, technical progress is treated according to whether the rate of technical efficiency is constant or whether there is a process of catch-up or convergence among the countries. The constant efficiency growth model is nested within the general convergence model. Helliwell's empirical results clearly favor the convergence model. It is thus suggested that Canadian and Japanese efficiency levels are approaching U.S. levels and in time would even exceed U.S. levels if higher capital stock growth is maintained in the two countries. He also presents results for the behavior of output and employment in the three countries.

In reflecting on the empirical evidence presented, Helliwell stresses the need for a quantitative model that would capture the important macroeconomic linkages that exist both within and between countries. While some models do exist, they do not adequately portray the supply-side structures of the national economies or capture longer-term trends. Nonetheless, these models suggest that fiscal contraction in the United States would have an important impact in reducing the U.S. current account deficit over a period of years. However, fiscal expansion abroad does not have symmetrical effects on the U.S. current account deficit because of offsetting changes in exchange rates.

In considering the likely future evolution of savings, investment, and external balances in the three countries, Helliwell offers the following tentative conclusions:

1. The rate of productivity growth and the savings rate in Japan will converge on the rates in the United States and Canada.

2. Changes in the tax treatment of interest expense and interest income will tend to raise savings rates in the United States and lower them in Japan.

3. It may well be that Japan's characteristically high rates of savings and investment may be emulated by other countries, but that Japan will continue to have savings rates well above the average of comparable high income countries.

4. Public and private savings rates in Japan are likely to be sustained to provide for the retirement incomes of older persons in the first quarter of the new century.

5. Japanese capital markets will continue to be integrated internationally, resulting in greater equality in interest rates on similar types of assets. There may also possibly be greater equality in returns on equities because of the increasing internationalization of business.

6. The convergence of growth rates in the United States, Japan, and Canada may be below the world average as the locus of economic activity and international real capital shifts to the emerging industrializing countries.

In his comment on Helliwell's paper, McKinnon notes that the sudden emergence of large U.S. trade deficits and Japanese surpluses in the mid-1980s is attributable to the increase in the structural U.S. fiscal deficit rather than to long-term trends in savings and investment behavior. It is interesting that, in Canada, a large fiscal deficit did not result in a current account deficit because there was a large increase in Canadian private savings. McKinnon attributes the increase in Canadian private savings to the more generous treatment of individual retirement plans in Canada beginning in the mid-1970s. He also considers the question of whether exchange rate changes are important in the process of transferring capital between countries. He argues that international transfers of capital are better expedited without nominal changes in exchange rates, noting the experiences of the U.S. dollar appreciation in the early 1980s and the subsequent depreciation in 1986–87.

In his comment, Fukao stresses the aging of the Japanese population and its interaction with the government sector via the pension system. He notes that the percentage of the population in Japan above 65 years of age will increase from 10% in 1985 to an estimated 22% by 2020. This in turn may result in a significant increase in the tax rate on employee income and a decline in savings. He also maintains that the

surplus in the Japanese government's social security fund will be substantially reduced in the future. He is therefore much less sanguine than Helliwell about the continuation of relatively high savings rates in Japan. Fukao calls attention further to the international crowding out effects of high real interest rates as investment is affected by changes in the real cost of capital and there is accompanying international movement of capital.

Sazanami: "Trade and Investment Patterns and Barriers in the United States, Canada, and Japan"

Sazanami first notes that Japan's trade with the United States accounted for over two thirds of its $56 billion global trade surplus in 1985, and that Japan's capital outflows have been increasingly directed toward the United States. Japan's trade with Canada was roughly in balance in 1985. Between 1980 and 1985, Japan's imports from the United States increased by only $1.5 billion while Japanese exports to the United States rose by $34.4 billion. Thus, the U.S. share in Japan's total exports increased from 24% in 1980 to 38% in 1985. Japan's increased exports to the United States were concentrated especially in automobiles, office machinery, telecommunications equipment, and electrical machinery. This same pattern of change was evidenced as well in Japan's exports to Canada. On the import side, there was a shift in Japan away from resource intensive products, which affected both the United States and Canada adversely.

The increase in U.S. imports from Japan has led to increasing frictions between the two nations, with the United States instituting restrictive import measures involving such products as color televisions, automobiles, and iron and steel products in the late 1970s and early 1980s. For its part, Japan introduced a number of measures that were designed to improve foreign access to its markets in a number of sectors. They took these steps even though there is no clear evidence, except for agricultural and food products, that Japanese tariffs and nontariff barriers are unusually high relative to the other major industrialized countries. While it is difficult to assess the impact of Japan's market opening measures, there has been a noticeable increase in the share of manufactured goods

in total imports in recent years. Some of this increase may be attributable as well to the sharp appreciation of the yen that has occurred since the winter of 1985. While the U.S. restrictions apparently reduced imports of color TVs from Japan, there is no indication that imports of other restricted goods such as electronic products and automobiles were seriously limited. The most noteworthy Canadian trade action was its decision to follow the United States in imposing a voluntary export restraint arrangement on imports of Japanese cars.

It is well known that Japan has emerged as a very substantial exporter of capital in the 1980s. This has involved both financial capital and foreign direct investment. Japan had formerly concentrated its foreign direct investment in resource industries but had switched to manufacturing towards the end of the 1960s. With the oil crises of the 1970s there was a renewed tendency towards foreign investment in resource industries, but this has changed once again as foreign investment in manufacturing and service industries has grown. Japan's direct investments in the United States have been concentrated especially in electric machinery, transport equipment, and metal products, all of which had been targets of U.S. import restrictions. Japan's direct investments in Canada have been primarily in resource based industries. Foreign direct investment in Japan has also increased noticeably in the 1980s in a variety of manufacturing and service industries.

Sazanami cites evidence of product upgrading by Japanese exporters to the United States in response to the VERs on electronic products and automobiles. As mentioned, the U.S. restrictions also resulted in increased direct investment in the U.S. market. The Canadian restrictions may have had a similar effect, although some of the investment may also have been designed to take advantage of producing in Canada and exporting to the United States under the free trade provisions of the Auto Pact. Japanese automobile investments in North America will thus have an impact on both final products and parts, but it is possible that some Japanese investments may be directed towards

certain newly industrializing countries (NICs) such as South Korea. The experience with U.S. restrictions on color TVs is interesting insofar as it led to a shift in the development of other sources of supply in the Asian developing countries and to direct investment by Japanese producers in the American market. At the same time, Japanese producers shifted their production and exports increasingly to newer electronic products such as audio equipment and video tape recorders.

Sazanami notes that Japan's trade surplus reached a record high of $9.8 billion in September 1986, which was more than a year after the yen had started to appreciate. Most of the change was in the value of exports, especially automobiles and parts, semiconductors, other electronic products, and machinery. The differential effects on imports and exports may be due to the fact that a substantial proportion of export contracts are expressed in yen so that export prices may not respond until new contracts have been concluded. This is especially the case for VCRs and other electronic and electrical products as well for automobiles. Yen appreciation appears to have had an impact on Japan's imports of manufactured products. Since the prices of crude oil and other raw materials declined, there was some increase in the import demand for these products. Japan's direct foreign investment seems also to have responded to the yen appreciation, with increased outflows both to the United States and other Asian countries whose exchange rates are pegged to the dollar. Sazanami concludes that Japan's trade and foreign direct investment will continue to respond to the yen appreciation and that there will be further changes especially in the composition of Japanese imports.

Sazanami draws a number of inferences from her analysis and discussion, as follows:

1. Country-specific trade barriers do not significantly reduce competition from foreign firms when direct foreign investment can take place in the restricting country as well as in third countries. The Asian NICs may thus benefit directly as a result of the U.S. restrictions aimed at Japan.

2. While the effects of the yen appreciation are somewhat difficult to assess especially on the import side because of the decline in the prices of crude oil and other raw materials, there is evidence that the volume of Japan's imports of manufactures has increased substantially.

3. The appreciation of the yen may give rise to increased foreign direct investment in the United States and in the Asian NICs.

4. Canada's close association with the United States may be a further factor motivating Japanese direct investment in Canada in order to serve the U.S. market.

In his comment on Sazanami's paper, Baldwin notes that the Asian NICs have become increasingly competitive in their own right and have increased their market shares substantially in the United States, Japan, and Canada. These developments have been reinforced by some of the changes in trade policies and exchange rates that Sazanami noted. Baldwin also calls attention to the ineffectiveness of selective protection, which is something that he has stressed in his own writings on trade policy. Finally, he notes the need for greater agreement at the multilateral level on a variety of issues, including safeguard actions, antidumping measures, and subsidies and countervailing duties. He focuses especially on safeguards and the issue of selectivity and discrimination in designing an acceptable safeguards policy. He suggests that safeguard measures might be applied on a tariff line-item basis that would distinguish the products to be restricted from those available from other sources that are not responsible for any import disruption that may have occurred.

Wonnacott suggests that, in light of Japan's record high trade surplus, it might consider a policy of massively increasing its imports. This would be beneficial in terms of economic welfare and at the same time it might serve to defuse the restrictive pressures in the U.S. Congress aimed against Japan. He also notes that the substantial appreciation of the yen since 1985 has created a great incentive for Japanese investors to buy large

quantities of U.S. and Canadian financial and real assets. Wonnacott considers whether the negotiation of a free trade arrangement between Canada and the United States would be detrimental to Japanese trading interests. He concludes that trade diversion would be unlikely in view of Japan's comparative advantage especially in electronic products. Wonnacott is less sanguine, however, about Japanese and other East Asian automotive investments in Canada that are designed to serve the U.S. market, especially if this investment has been encouraged by special incentives provided by the Canadian government. This could turn out to be a troublesome problem in sustaining the current arrangements under the Canadian-U.S. Auto Pact in the design and implementation of a free trade agreement between the two nations.

Schmitz: "Trade in Primary Products: Canada, the United States, and Japan"

In his paper, Schmitz discusses the importance of trade in primary products among the three countries. He notes that Canada supplies about 7% of Japan's total farm imports, with canola, wheat, and barley together accounting for 70% of the value of Canada's exports to Japan. Canola in the form of raw seed is Canada's most important export, given that Japan's tariff on refined canola serves to discourage its import in processed form. Wheat and barley prices in Japan are several times higher than the world price. Japan's imports of wheat and barley are regulated by the purchases of the Japanese Food Agency. Canada supplies about 25% of Japan's imports of pork and pork products and less than 2% of Japan's beef imports. The United States accounts for about 40% of Japan's total farm imports. It is a major supplier to Japan of feedgrains (corn especially), soybeans, meat, and wheat. Schmitz notes that Japan's agricultural trade barriers are substantial, with the methods of protection including quotas and special buying arrangements by Japanese domestic agencies. For many commodities, Japanese producer protection is more than four times greater than in Canada or the United States. Nonetheless, Japan's imports of agricultural products have risen substantially over the years, although of course these imports would be much greater if Japan were to remove its

protection. In considering the competition between Canada and the United States in the Japanese market and in other markets, Schmitz calls attention to the 1985 U.S. farm bill that has resulted in lower loan rates and thus cheaper prices in importing countries. Both Canada and the United States use export subsidies to compete in the Japanese market and other markets, which results in a gain to these importing countries.

In examining Canadian-U.S. agricultural trade, Schmitz notes that Canada's main exports to the United States include live animals and and meats, and its main imports are fruits and nuts. Canada uses marketing boards in an effort to stabilize producer incomes in the dairy, poultry, and egg sectors, and the policies of these boards vary by province. The greatest social cost to Canada arises from the dairy sector. Provincial stabilization schemes are also common in red meats in Canada, and in the case of live hogs this led to the imposition of a countervailing duty by the United States in order to offset alleged Canadian subsidies. Canada provides significant domestic subsidies to grain producers, although the subsidies in the European Community and the United States are considerably higher. Schmitz notes that the liberalization of agricultural trade as part of a bilateral U.S.-Canadian free trade arrangement would provide significant, but fairly small, benefits. In contrast, he estimates that the annual cost of the 1985 U.S. farm bill exceeded $1 billion for Canadian Western wheat producers alone, which was at least five times greater than the potential net gain from free trade in farm products. Schmitz also discusses nonagricultural trade and notes the recent actions taken by the United States to limit imports from Canada especially of softwood lumber, uranium, and potash. Canada thus has an important stake in trying to limit U.S. protective measures involving primary products, although it is much more unfavorably affected by the price depressing effects and export subsidies arising from U.S. domestic farm policies.

In conclusion, Schmitz notes that Japanese agriculture is highly protected and that efforts at liberalization would benefit both Canada and the United States. The widespread resort to agricultural subsidies has unfortunate effects on exporting countries

and results in transferring resources to large importers such as Japan. More cooperation among the major agricultural exporters would be desirable accordingly to remove the downward pressures on world prices that result from their attempts to maintain or expand their market shares. There is also much to be gained if the United States would agree to refrain from instituting countervailing duties against the imports of its major trading partners such as Canada.

In his comment, Honma notes that Schmitz did not include in his discussion forest products and minerals that bulk large in Japan's trade with Canada and the United States. He notes further that cooperation among the major agricultural exporting countries might well lead to the creation of cartel arrangements, and he prefers instead to seek multilateral negotiations to reduce agricultural distortions under GATT arrangements. While there is evidence of tariff escalation in Japan affecting the imports of processed primary products, Japan's imports of processed products have in fact increased substantially. In this regard, Canada and the United States may not have been taking full advantage of these developments in Japan's imports. Changes in exchange rates are also important in terms of their impact on agricultural trade and should be taken into account in conjunction with trade policies. Honma notes that Japan's overall level of agricultural protection was 102% in 1984. Based on the average exchange rate in 1986, the weighted average rate of protection more than doubled to a level of 210%, and presumably further changes will have occurred in response to subsequent changes in the yen/dollar exchange rate. Honma's final point is that more attention should be paid to issues of structural adjustment in Japanese agriculture since this is really what is at the heart of the agricultural trade frictions between Japan and its major trading partners.

In his comment, Carter notes that Japan is basically an importer of primary products and an exporter especially of capital goods. This specialization has been favorable for Japan since the prices of primary products have on the whole been relatively low since World War II. He further notes that Canada's agricultural exports to Japan

have been limited for noneconomic reasons. Carter takes exception to Schmitz's contention that Canadian agricultural subsidies are lower than in the United States, and he argues instead that Canadian subsidies are on a par with and maybe even higher than those in the United States. Carter also notes that Japan's policy on lumber is designed to encourage the import of raw logs from Canada rather than plywood or lumber. Finally, Carter notes that reduction of the U.S. government budget and trade deficits is needed to restore macroeconomic balance between the two nations. But it is not clear whether and how this would affect the composition of U.S.-Japanese trade.

Lawrence: "A Depressed View of Policies for Depressed Industries"

In his paper, Lawrence distinguishes economic and political paradigms regarding the conduct of industrial policies. According to the economic paradigm, allocative policies may be required to complement market forces in the event of market failure. On theoretical grounds, it can be said that intervention may be inappropriate if it makes matters worse, the instruments of intervention should be used to achieve their objectives as directly as possible, and the policies should be long-run in nature, not used to reverse underlying market forces, and applied at the margin to correct market failures wherever they may occur in an economy. In the actual practice of industrial policy (IP), the foregoing economic principles are rarely applied however. Rather, political objectives are sought, which means that IP is more commonly used to maintain productive capacity, preserve capital, enhance technological capabilities, increase national prestige, redistribute income, reinforce job property rights, and support employment. Further, policies are frequently sector or firm specific rather than designed to correct market failures, and there is a general faith that governments can in fact achieve their objectives. Even though governments profess to follow market principles, the actual record indicates frequent departures from these principles, especially in the case of declining industries which are the focus of the paper. Lawrence notes that there is a common theme in the employment experiences of the United States, Japan, and Canada, although the actual policies used

have differed in interesting and important ways. In considering the policies adopted, Lawrence seeks to explain why different approaches have been used, how well they have worked, and whether the experiences can be carried over to other countries.

Lawrence observes that in the United States the pluralistic system of government and the continuously evolving economy have served to limit the direct role of government in the economy. Except for antitrust and regulatory policies, IP in the United States has been largely concentrated on trade. Trade policy in the United States is a shared responsibility of the president, Congress, and the International Trade Commission (ITC). U.S. industries seeking government assistance have followed a two-track procedure, either through the mechanisms under the aegis of the ITC or by exerting political pressure directly on the president and Congress. The larger industries such as textiles and apparel, steel, automobiles, meat, and sugar have achieved the most noteworthy successes by following the political track to obtain aid, even when the ITC may have found little evidence of trade-related injury. It appears that protection administered by the ITC route has been regarded credibly as temporary and conducive to industry adjustment, whereas the politically motivated protection has tended to be quasi-permanent with industry adjustment being forestalled rather than encouraged. In these latter cases, trade protection is an extremely imprecise method either for limiting the dislocation to existing workers or for inducing modernization. Lawrence cites the examples of the U.S. textile and apparel industry, steel industry, and the Chrysler bailout to illustrate the risks involved with detailed government policy intervention and the excessive costs imposed on consumers due to the protection involved. Lawrence suggests a number of changes in the administration of the escape clause in trade investigations by the ITC and in the program of trade adjustment assistance that are designed to improve the effectiveness of U.S. policies without at the same time imposing unduly large costs on the nation.

Some observers argue that the Japanese experience with policies to aid declining industries demonstrates that government, business, and labor can act cooperatively to

implement policies that both facilitate industrial adjustment and at the same time assist those adversely affected by the changes taking place. It appears that Japan's approach to IP does not single out trade as a source of structural change calling for intervention and does not use trade policy as such in devising policies for declining industries. Lawrence attributes these features of Japanese policy to its distinctive political and economic institutions. The structure of Japanese firms and banks is such that they are subjected to strong pressures to adjust to change. Japanese policy makers also appear to provide considerable guidance to industries for which they are responsible. Yet budgetary outlays for industry assistance are kept to a minimum and efforts are made to avoid the use of restrictive trade barriers. In resorting to the use of cartels to deal with overcapacity during times of recession, large firms are favored in part because it is believed that they may be better able to promote adjustment and equity. Japan's policies have been apparently been most effective in reducing capacity in the relatively more highly concentrated industries, although it could be argued that the changes might have been induced by market forces in any case. While some observers have argued that Japanese policy anticipates the need for adjustment, Lawrence notes that this may in fact not be the case. It may also be that the use of cartel arrangements rather than explicit subsidies disguises the social costs involved. Further, while it has been claimed that Japanese intervention does not explicitly involve the use of trade policy, there are nonetheless several noteworthy instances of trade intervention designed to assist particular industries. Lawrence concludes that the Japanese experience is less attractive than admirers or government spokesmen would suggest. Nonetheless, the Japanese experience offers some potentially useful lessons to other countries: (1) trade problems are only one aspect of IP; (2) industrial structure must be taken into account in designing policies; (3) government policies create vested bureaucratic interests that may be difficult to change; (4) costs of adjustment may be shifted to third parties by policies that are not immediately

transparent; and (5) Japan's distinctive economic and social characteristics serve to shape its policy interventions and may not readily carry over to other countries.

Canada's IP involves a mixture of approaches, including both formal trade protection and explicit aid to depressed firms, regions, and sectors. As a relatively small country, Canada is subject to nationalistic pressures to develop a diversified manufacturing sector, and there are important regional influences as well stemming from the power and influence of the provincial governments. While market forces operate pervasively in Canada, at times there has been more of a propensity to intervene. Policies have tended to vary, however, as responsibilities have been shifted among various government agencies. Nonetheless, as Lawrence notes, in industries such as textiles and apparel and to some extent footwear, policies have been adopted that are not conducive to adjustment and that impose substantial costs on Canadian consumers.

In his comment, Okuno notes that the United States appears to have relied to a large extent on trade-related measures of policy intervention while Japan has used supply-oriented collusive policies to help promote adjustment in declining industries. Okuno attributes this difference in policies to a change in Japan's decision beginning in the mid-1970s to pursue policies in support of a liberal world trading regime. In this light, Okuno takes issue with Lawrence and maintains that Japan's policies have been quite "open." Okuno shares some of Lawrence's doubts about the effectiveness and desirability of recession cartels in Japan, but notes that the evaluation of cartels must take into account whether the industry is competitive as in the case of textiles or composed of a small number of relatively large firms. In the latter case, strategic considerations become important, especially insofar as there is incomplete information about the financial and/or demand conditions among competitors. The evaluation of Japan's cartel policy should thus take into account how the behavior of the firms is affected. While there may well be distortionary effects involved, Okuno notes that Japan's policy has prohibited the industries from expanding or building new capacity, something which is quite different

from the U.S. experience. Okuno further points out that Japan's policies must be viewed in a broader context of promoting adjustment in local and regional labor markets, again something which is in contrast to the the U.S. experience. Okuno maintains that the use of trade intervention by the United States has many undesirable features, resulting especially from the tacit collusion and rent seeking activities that the intervention serves to foster. Okuno recommends that multilateral discipline and the rules of GATT be utilized to deal with trade and related interventions as the most effective way of avoiding the distortions arising from unilateral and bilateral restrictions.

Although there is cause for concern about the policies adopted in the three countries, Trebilcock notes in his comment that a substantial amount of adjustment has occurred in the depressed industries despite the interventions that were implemented. Trebilcock notes also that it is necessary to examine the rates of adjustment both within and between individual sectors in each country. In this connection, he concludes that Japan has outperformed both the United States and Canada in productivity improvements in most of the declining sectors since 1955. He cites his own research on Canada and notes that there is little evidence of structural adjustment in textiles, clothing, shipbuilding, and coal mining. He stresses the importance of the political regime in Japan in understanding the effectiveness of Japan's policies. Trebilcock is skeptical of Lawrence's proposals for improving the effectiveness of policies on the grounds that they ignore the longer run interests and concerns of the labor and capital employed in the impacted sectors and the political influence that these vested interests may have in seeking permanent protection. A much longer view of the problems must be taken therefore and more expensive measures for adjustment considered. Efforts must also be made to reduce existing trade barriers through forceful negotiations. All of these considerations raise difficult and important political questions that must be addressed beyond the strictly economic issues involved.

Whalley: "Taxes in Canada, Japan, and the United States: Influences on Trade and Investment Flows, and the Role of Tax-Based Trade Irritants"

Whalley notes that major changes in tax policy were introduced in the United States beginning in 1987, and similarly far reaching changes have been proposed in both Japan and Canada. At the same time, there are a number of issues arising from the impact that particular types of taxes may have on trade. After reviewing the main features of trade flows among the three countries, Whalley considers differences in their tax structures. It appears that indirect taxes are more important and payroll taxes less important in Canada than in the United States or Japan. Japan has a much heavier emphasis on corporate taxes. The tax structure in all three countries tends to be biased against traded goods and services, and there may also be differential tax impacts on individual sectors that will have important implications for trade. The taxation of personal income in the three countries differs mainly in terms of the way that capital income is taxed, with comparatively little taxation in Japan and more generous treatment of capital income in Canada as compared to the United States. These differences may in turn serve to explain some of the intercountry differences in private savings. There are also substantial differences in sales and excise taxes among the three countries at both the federal and subnational levels.

In assessing the importance of tax differences for the pattern of trade and factor flows between countries, Whalley considers whether differences in tax levels between countries affect trade and how differences in tax structure may enter. He shows under simplifying assumptions that differences in levels of taxes, in and of themselves, will not have any effect on trade between countries insofar as relative consumer prices and the terms of trade are invariant to the taxes. However, taxes may apply more heavily to traded goods and services so that a country with higher tax rates will tend to restrict its trade. There may also be effects on labor supply and savings decisions that will in turn impact on trade and international capital flows.

Differences in tax structure as, for example, the tax treatment of savings and border tax adjustments, may influence the size and composition of trade and international factor flows. As already mentioned, Japan's tax system apparently works to stimulate savings in comparison to the United States. This may in turn generate an excess supply of savings, and depending on relative rates of return, result in substantial international movement of capital between the two countries. Tax based investment incentives or disincentives and foreign tax credits may similarly affect international capital flows. Border tax adjustments depend on whether taxes are levied on an origin or destination basis. It is most common to levy indirect taxes on the destination basis so that imports are taxed and exports leave free of tax. Indirect taxes that are broadly based will not distort real economic activity and trade since domestic relative prices will not be altered. But if the indirect taxes are not broadly based and fall more or less heavily on, say, manufactures or resource products, it may make a difference whether the country levies the indirect tax on an origin or destination basis given the structure of existing trade. In order to judge the effects of domestic taxes on trade flows, Whalley reports some results based on his computational general equilibrium model of global trade. It appears that the effects of taxes on global trade and welfare are important, especially as compared to conventional trade policies such as tariffs.

Whalley presents information on the changes in taxes that are to be introduced in the United States in 1987 and that have been proposed in Canada and Japan. What is involved in all three countries is a reduction in personal tax rates and some broadening of the personal tax base, a lowering of corporate tax rates, and termination of various investment incentives. In addition, Japan and Canada hope to implement some type of value added tax. It is possible that these changes in taxes may affect savings and investment in the United States and Japan in ways that will reduce capital movements between the two countries and thus reduce the U.S. trade deficit.

Whalley considers a number of tax issues that have been the focus of trade disputes involving the United States and other major trading countries. These issues include the deferral of corporate taxes on income, border tax adjustments for indirect taxes, and the use of countervailing duties to offset foreign tax rebates. While these issues have attracted a great deal of attention in trade policy relations, Whalley notes that these issues are of only minor significance compared to the wider influences of taxes on patterns of trade.

In his comment on Whalley's paper, Auerbach contends that Whalley may be exaggerating the impact of Japanese taxes in stimulating savings and that other societal factors may be more important. Auerbach also argues that origin and destination taxes may differ if intertemporal factors affecting factor supplies and production and consumption are taken into account. He reinforces Whalley's view that the four types of tax policies affecting trade — fiscal balance, overall direct tax structure, indirect taxes, and tariffs — decline in importance as they become more closely associated with specific markets and private economic decisions. On the subject of U.S. tax reform, Auerbach does not anticipate much of an impact on the U.S. trade balance nor does he see any significant change in the intensity of feelings associated with tax-based trade irritants.

In his comment, Ishi notes that the proposed tax changes in Japan are designed to be revenue neutral, and that they would not have much of an impact on GNP and the balance of trade. He is also doubtful that Japan's tax treatment of capital income has had any clear impact in increasing Japanese savings. Ishi contends further that a change in Japan's existing system of commodity taxes would not necessarily be detrimental to the United States, as Whalley had argued. Finally, Ishi is skeptical of the computational results reported by Whalley that purport to show that replacement of existing differential taxes by a uniform rate would be detrimental to Japan.

Okita: "The Current Economic Situation and Future Problems in the Asia-Pacific Region"

In his conference keynote paper, Okita calls attention to the increasingly important role that the Pacific region has come to play in the growth of the world economy. He attributes the dynamism of the Pacific region to several factors, including export-oriented development policies, high rates of domestic investment and savings, an aggressive and active private sector operating within what is basically a market economy system, improvements effected in agricultural production and productivity, and the success of domestic adjustment policies in response to the world recession of the 1970s and early 1980s. He further notes that there existed a climate of cooperation that helped to coordinate and reinforce the individual national efforts in the region. This fostered an intraregional division of labor that has been called the "flying geese" pattern in which the leader surplus country (the United States/Japan) develops new technologies, invests in countries that are at the earlier stages of industrialization, and absorbs the exports of the low-cost producers.

In examining the recent trade and investment performance of the major nations in the Pacific region, Okita notes the need for the United States to take measures designed to reduce its very sizable budget and trade deficits. If such measures are adopted, the United States may no longer provide a rapidly expanding market for the products of the Asian countries as in the past. While there are signs that Japan's savings rate may diminish in the future because of demographic changes and increases in personal consumption, Okita expects nonetheless that Japan will continue to experience a net capital outflow for the next decade or so. He expects further that high rates of growth will be sustained in the rapidly industrializing countries of Asia as well as in the member countries of the Association of Southeast Asian Nations and the People's Republic of China.

Okita stresses that Japan must assume a leadership position in the region as well as globally in view of its role as a major creditor nation. He argues in particular that

Japan should direct its external capital flows increasingly to help finance the deficits of the developing countries. This would serve to enhance the import capacity of these countries and sustain Japan's exports at a time when the United States might be playing a less expansive role internationally. Okita envisions a "Marshall Plan for the developing countries" in which Japan would attempt to recycle some of its current account surplus by means of increased subscriptions to multilateral lending agencies and by the extension of risk insurance and interest rate subsidies to borrowing countries.

Okita emphasizes the need in the future for economic cooperation among the countries in the Pacific region. This should entail participation in the various governmental, private, and academic organizations and institutions that have been established in the region. There is also a need to deal with the region's problems by all countries concerned rather than bilaterally as has often been the case previously, and to provide new perspectives on global issues as they bear upon the interests and concerns of the region. Cooperation on a variety of noneconomic issues is also deemed vital for the region. In these ways, the essential dynamism of the Pacific region may become a catalyst for betterment in the global economy as a whole.

Harris: "'Market Access' in International Trade: A Theoretical Appraisal"

In his paper, Harris notes that the term, "market access," has several different meanings. One definition is when a foreign seller can capture a reasonable market share relative to firm size and degree of competition in the foreign market for goods that are comparable in terms of price and quality. A second definition is the security of the right to sell in a market without undue interference from government. A third definition relates to the practices of competing firms and/or their governments that lead to anti-competitive or entry deterring results. The preservation of market access is important, Harris notes, as a means for preserving the efficiency and consumption gains from international trade.

Harris considers the first definition of market access in terms of cultural bias as a possible barrier to imports. He notes, for example, that foreign firms may face barriers in

the Japanese market because the complexities of modern manufactured products make close customer-dealer relationships important. There may be a kind of social network that exists about which foreigners will have to learn and undertake the requisite investments to make their operations profitable. There may also be certain aspects of reputation and social custom involved that lead firms and consumers to prefer domestically produced goods rather than imports. These factors may make market access more difficult to achieve for products in which brand names and durability are important. By the same token, the internationalization of assembly and production operations of international firms may blur the distinction between a domestically and foreign produced good. Firms might therefore be advised to try to convince foreign consumers that their products are really produced in the importing country itself.

The second definition involving the security of market access relates especially to the contingent or administered protection that foreign firms may encounter in import markets. The key considerations here involve the commitments that firms may make in production and distribution and the degree of contestability that will determine entry or exit in the industry. In cases where there are substantial sunk costs in the capital equipment of exporters, contingent protection could be potentially very damaging. By the same token, contingent protection could be beneficial to import-competing firms. It is possible that firms may deal with contingent protection by setting up production and/or distribution facilities in the importing country, or by engaging in licensing arrangements that will facilitate market access. The presence of contingent protection may also lead to lobbying activities by both foreign and domestic firms that are trying to protect their interests. Harris considers the risk-shifting aspect of contingent protection insofar as this protection may serve to compensate for incomplete markets that prevent firms from insuring against costly disruption from imports. He points out that contingent protection is not an efficient policy in these circumstances as compared to measures of unemployment insurance and improving access to equity markets. Policy coordination may be necessary

to make contingent protection effective, but this coordination may be difficult to achieve. Finally, small countries are not in a good position to shift risks by imposing contingent protection.

Harris's third definition of market access involves considerations that relate to issues of imperfect competition, scale economies, and strategies that are central to the "new" trade theory. He sees three lessons from the analysis involved: (l) fostering competition is an important way to curb the abuses of monopoly power and thus enhance welfare; (2) increasing market size may be beneficial in enhancing gains in real income; and (3) entry deterrence by incumbent firms or by governments may be potentially very damaging to competition and welfare. The issue is to assess the empirical importance of these lessons and at the same time to urge governments to adopt measures that will foster greater competition rather than protectionism.

In his comment, Deardorff characterizes Harris's analysis of market access in terms of informal barriers arising from the behavior of demanders, governments, and competing suppliers. Deardorff asks whether consumer preference for domestic goods should be considered grounds for trade policy action. The issue is whether the preference is autonomous or policy induced. If the former, there are no grounds for a trade policy response since preferences for domestic goods are as legitimate as any other preferences. Deardorff also considers whether Harris's framework is helpful in understanding barriers to international direct investment. Deardorff argues that barriers to direct investment might be defended on grounds of national sovereignty and, accordingly, Harris's framework might be more applicable to questions of market access for goods than it is to direct investment.

Itoh calls attention in his comment to the importance of whether or not traded goods and services are standardized. Market access is not a serious issue if there is standardization, but otherwise for trade in nonstandardized goods and services, the service content becomes a critical variable in terms especially of providing for distribution and

assuring a particular level of quality. This suggests that certain unusual business practices may arise in expediting efficient transactions between firms. Itoh offers two examples relating to Japan. The first example relates to long-term transactions that are common in the paper and steel industries in Japan. Newspaper publishers in Japan are greatly concerned about the quality of the newsprint that they purchase and, accordingly, this creates incentives to undertake long-term contracts with firms supplying paper to be used in publishing. As a consequence, this may generate intense competition among the latter firms for these long-term contracts. Such arrangements may be common in other industries like auto parts and may serve to explain why imports into Japan may be slow to respond to exchange rate movements. The second example relates to long-term relations in the Japanese distribution system. Itoh notes the differences between the United States and Japan in the purchase of used cars, with newspaper advertising being the main medium used in the United States and purchases from dealers being most common in Japan. This example of indirect dealing in Japan can be explained by the relatively more limited geographic mobility of the Japanese population, the importance of dealer reputation, and the multiple transactions that may occur over long periods of time as customer-dealer relations become firmly established. There is considerable saving in information costs to consumers in these circumstances, which serves to solidify long-term relations and create a type of barrier to entry to new firms (both domestic and foreign). Long-term transactions may thus play an important role in defining the conditions for market access. Itoh suggests that these considerations that are based on rational behavior may be more important than what Harris attributes to cultural factors. This same point applies to Harris's treatment of barriers to entry due to monopoly or oligopolistic behavior. That is, it makes a difference whether the barriers to entry are generated by some rational mechanism arising in long-term contracts or whether the barriers are created intentionally by incumbent firms.

Saxonhouse and Stern: "An Analytical Survey of Formal and Informal Barriers to International Trade and Investment in the United States, Canada, and Japan"

In their paper, Saxonhouse and Stern seek to assess the role of formal and especially informal barriers in the trade and investment relations of the three nations. They are concerned in particular with whether Japan's barriers are unusual in restricting the access of imports into its domestic market.

Formal barriers include tariffs and nontariff measures that are stated explicitly in official legislation or government mandates, whereas informal barriers may arise from the conscious efforts of governments to favor domestic over foreign interests or as byproducts of practices and policies that are rooted in domestic institutions. Informal barriers may be associated with administrative procedures and unpublished government regulations and policies, characteristics of market structure, and political, social, and cultural institutions. A list and brief description of the most important nontariff measures in current use provide examples of the chief formal and informal barriers that may exist in particular countries. It appears that there is some difficulty in distinguishing policies that are used to achieve particular domestic objectives from those designed to restrict trade and investment. Also, while it may be the case that social and cultural institutions influence consumer behavior and attitudes that result in the favoring of the purchase of domestic goods, it is by no means clear that these institutions should be considered as informal barriers.

The evidence presented on formal tariff barriers for the three nations indicates that the weighted average tariffs on total imports are about 5% or less, although some of the sectoral rates are considerably higher. This is especially the case for Japanese imports of agricultural and food products and for certain labor-intensive imports in each of the countries. The evidence presented for NTBs suggests that the percentage of trade covered by NTBs is roughly comparable as between Japan and the United States once fuels are excluded from the coverage calculations. Formal NTBs are concentrated in particular sectors in each country, especially agricultural and food products in Japan, printing and

publishing, food products, clothing, iron and steel, and transport equipment in the United States, and clothing, footwear, food products, and transport equipment in Canada. In terms of ad valorem equivalents, the formal NTBs appear relatively small when allowance is made for trade coverage. Information is provided on the main formal restrictions on inward direct foreign investment in the three countries, but it is not possible to assess the severity of these restrictions except in a qualitative manner.

There is unfortunately no unambiguous way to identify the informal barriers that exist. One approach is to list the complaints that have been lodged by exporters and foreign investing firms with a nation's trade authorities. Information of this kind has been collected for Japan and Canada by the Office of the U.S. Trade Representative and for the United States by the European Community. While the lists of barriers look imposing for all three countries, it is not possible on the basis of the lists to assess how valid the complaints about the barriers may be and to make comparisons between countries concerning the severity and impact of the barriers. What is needed is some type of empirical framework that can be used to gauge how the countries compare in their use of barriers.

In devising a framework to assess how important the existing barriers are in each country, some difficult conceptual issues arise. With respect to particular formal barriers, it would be best to consider the specific details of the implementation of that barrier. But it may be the case that there are formal barriers that the investigator does not recognize, and it may be difficult to compare and aggregate across different barriers and to take into account the substitution and complementarities among barriers and possible general equilibrium effects involved in their use. In any event, informal barriers will be left out of consideration since they cannot be explicitly observed.

This suggests the use of more general approaches to assess the importance of barriers. These approaches include: (1) the construction of price-impact measures in terms of tariff equivalents or price relatives; or (2) the construction of quantity-impact

measures based upon econometric estimates of models of trade flows. Price-impact measures involve serious information problems since they require knowledge about supply and demand conditions and market prices, product characteristics, and market structure. Quantity measures are in principle preferable insofar as they reveal the extent to which existing barriers may reduce trade. The question can be posed accordingly in terms of what trade would have been in the absence of existing barriers and then this estimate can be compared to the trade that actually occurs. In order to implement this approach, it is necessary to have a satisfactory model of the determinants of trade covering a variety of trading situations for individual countries. There are two models that suggest themselves for use. One is the Heckscher-Ohlin model in which differences in factor endowments are the primary determinants of trade and the Helpman-Krugman model in which product differentiation and scale economies are the motivating factors determining trade. Regardless of which model is chosen, there is a considerable burden placed on the model insofar as barriers are presumed to account for all differences between the predicted values of trade based on the included explanatory variables and the actual values of trade that are observed. Also, the models are only capable of determining patterns of trade in an average sense and may not be able accurately to predict trade for particular countries and industries. Finally, the models cannot assess how far observed patterns of trade depart from free trade. While it is granted that these are important qualifications, the models may nonetheless be useful in identifying relative levels of nontariff protection across countries and sectors.

Saxonhouse and Stern call attention to several studies that have attempted to assess whether national trade barriers are distinctive in terms of their limitations on market access. Since the studies differ in the time periods examined, countries sampled, level of aggregation, and empirical specification employed, care must be exercised in interpreting the findings reached. As an aid in evaluating the different studies, a formal statement of the Heckscher-Ohlin model is presented in which net exports of individual

sectors are shown to be linear in factor endowments. Leamer has used this framework in a cross-national analysis of trade flows and concluded that few countries have distinctive trade policies that affect their sectoral trade patterns. Saxonhouse has used a similar framework, but with allowance for differences in factor quality, and reached essentially the same conclusion. Results of a more comprehensive empirical analysis are presented by Saxonhouse and Stern, based on a test of the influence of trade barriers on trade structure over all sectors in a given country. It is concluded that there is no statistically significant evidence of the effects of trade policy in the cases of Japan, the United States, and Canada.

The Helpman-Krugman framework attempts to explain gross trade flows and intra-industry specialization in terms of product differentiation and scale economies. This framework has been used by Lawrence, but Saxonhouse and Stern note that his work does not make allowance for the simultaneous determination of import, export, and production shares, and, furthermore that his model is not appropriately identified. Lawrence's findings that Japan's trade policies are distinctive in comparison to other major industrialized countries are thus not convincing. Saxonhouse and Stern develop an estimating equation based on Helpman-Krugman in which factor endowments are the main explanatory variables, and they conclude as before that Japan's trade structure is not distinctive. The empirical findings are thus invariant to whether the Heckscher-Ohlin or Helpman-Krugman models are used to account for the effects of trade policies on the structure of trade in Japan and the other major countries.

Saxonhouse and Stern also review a number of studies that have focused on the total volume of trade rather than the structure of trade. Of these studies, the one by Balassa is the most noteworthy because of its conclusion that Japan's trade structure is highly distinctive. Aside from conceptual problems and possible specification error in his estimating framework, Balassa's results are highly dependent on his rather unusual treatment and measurement of distance and transport costs, which would appear to vitiate

his findings. Saxonhouse and Stern conclude therefore on the basis of their review and assessment of empirical studies of trade structure and volume that Japan cannot be singled out as having distinctive nontariff barriers in comparison to other major trading countries once account is taken of cross-country differences in factor endowments and distance considerations. As for informal barriers affecting foreign direct investment, they note that there is not sufficient evidence available to reach any conclusion about the restrictiveness of the existing barriers for individual countries. The overall conclusion that Saxonhouse and Stern reach is that if one wishes to understand the causes of the existing U.S.-Japanese trade imbalance, the focus should be on the macroeconomic structure and determinants of absorption and output in the two countries rather than on national trade policies.

In his comment, Markusen objects that the methodology employed in the studies by Leamer and Saxonhouse does not distinguish differences in the level of protection among countries and that the methodology is not very sensitive in accounting for existing protection. It would be useful, he notes, to determine how large or small the effects of protection might be on sectoral employment or profitability, which is something that the methodology used does not address. Markusen is also critical of the approach because important elements of the trade performance and national endowment vectors are endogenously determined rather than exogenous as assumed. He notes that factor endowments may respond to changes in protection, as will the transfer of technology between countries. There may also be changes in per unit costs when protection enables an industry to capture scale economies. He suggests therefore that the methodology being used is not capable of reflecting the cumulative influence especially of Japanese trade barriers and the ways in which Japan's economic structure has adapted over time and resulted in its remarkable performance in international trade.

In his comment, Kreinin notes that the list of barriers compiled by Saxonhouse and Stern does not in itself provide an indication of the restrictiveness of the barriers. He

suggests that the classification of barriers might be organized according to how sensitive they are to changes in relative prices and their impact on the structure of protection. He also suggests that the list of barriers might be used as a check in interpreting the results of the studies of trade structure. He expresses some concern moreover that the methodology used may not account fully for all variables of importance, intercountry similarities in the structure of protection, and the influences associated with differentiated products. He notes, finally, that international general equilibrium effects must be taken into account in evaluating the impact of such nontariff measures as voluntary export restraints.

Henderson and Alexander: Liberalization of Financial Markets and the Volatility of Exchange Rates

Henderson notes that there has been a significant reduction in restrictions on financial transactions in several major industrialized countries, including Japan, since the mid-1970s. During this same period, most measures of exchange rate volatility have increased. It might appear therefore that financial liberalization has contributed to the increase in exchange rate volatility.

In order to investigate the effects of financial liberalization, Henderson develops a theoretical, two-country portfolio balance model. The thrust of the model is that financial liberalization affects exchange rate volatility by increasing the degree of substitution between assets denominated in different currencies. Two types of substitution are involved: currency substitution (CS) between different national moneys and bond substitution (BS) between bonds denominated in different currencies. Henderson considers how increases in CS and BS may exaggerate or dampen the exchange rate changes resulting from changes in three exogenous variables: the foreign interest rate, the home money supply, and the expected exchange rate.

He concludes that increases in CS *dampen* the exchange rate changes resulting from changes in the foreign interest rate and the home money supply, whereas increases

in CS *exaggerate* the exchange rate changes resulting from changes in the expected future exchange rate. As for increases in BS, exchange rate volatility is increased no matter which of the three exogenous variables is changing.

Henderson is careful to point out that, even though CS and BS may have increased, the observed increase in exchange rate volatility may be due mainly to increases in the variances of disturbances rather than to increases in CS and BS given the same distributions of disturbances. He also notes that even if exchange rate volatility has increased, this would have to be weighed against any efficiency gains resulting from financial liberalization.

Alexander concentrates on the question of why the Japanese yen appears more volatile than the Canadian dollar. He notes that, based on research conducted in the Bank of Canada, there is evidence of currency substitution, but this substitution has not increased since 1980 and is in any case very small in economic terms. Further, Alexander notes that there is an extremely high degree of asset substitutability in Canada and virtually perfect substitutability between U.S. and Canadian financial assets. He also stresses the high degree of integration between the U.S. and Canadian economies and the fact that the Bank of Canada sought actively to smooth out exchange rate movements after 1982 when monetary targeting was abandoned. In these circumstances, the more limited volatility of the Canadian dollar as compared to the yen does not appear to depend on changes in currency substitution. Alexander concludes by noting that innovations in national and international financial markets may have contributed importantly to exchange rate volatility, and that policy uncertainty has resulted in unstable expectations with regard to exchange rates. Factors such as these rather than changes in currency substitution may thus be what is behind exchange rate volatility or stability for individual currencies.

McKibbin, Roubini. and Sachs: "Correcting Global Imbalances: A Simulation Approach"

In their paper, McKibbin, Roubini, and Sachs call attention to the large swings in trade balances and exchange rates that have occurred in the world economy during the 1980s and that have led to growing economic tensions among the industrial countries. They attribute these swings in large measure to the divergent fiscal policies followed in the major countries. Their paper is designed to study the macroeconomic linkages that exist in the world economy and the policy options available to deal with the current imbalances. For this purpose, they use a dynamic general equilibrium model of a six-region world economy that includes the United States, Japan, Canada, the rest of the OECD countries, non-oil developing countries, and OPEC. The model allows for a full intertemporal equilibrium in which agents have rational expectations of future variables. It has a mix of Keynesian and classical properties in its assumption of slow adjustment of nominal wages in the labor markets. The model is solved in a linearized form to permit policy optimization exercises and to use linear-quadratic dynamic game theory and dynamic programming solution techniques. The parameters of the model are based on econometric estimates obtained from the literature rather than being estimated directly. All stock-flow relationships are carefully observed, asset markets are efficient and allow for intertemporal arbitrage conditions and rational expectations in order to analyze anticipated future policy changes, and the supply side is specified to allow for intertemporal profit maximization by firms, differing wage-price dynamics by country, and lags in the passthrough of exchange rate changes into prices.

The model is first used to analyze the effects of fiscal policy, taking into account that tax and spending policies are consistent with the intertemporal budget constraint of the public sector. The experiment involves a permanent increase in government spending equal to 1% of potential output, with the fiscal deficit assumed to be financed by the issuance of public debt and the money supply constant. The results for the United States conform to what would be expected from the Mundell-Fleming model of policy transmission

under flexible exchange rates. That is, there is an increase in domestic income, an appreciation of the exchange rate, a rise in short and long term interest rates, and a worsening of the trade balance. The effects abroad are ambiguous insofar as there is an increase in world interest rates that tends to depress investment coupled with an appreciation of the dollar that tends to increase foreign net exports. Canada is stimulated by the U.S. fiscal expansion, but the other major industrial countries experience a contraction. Fiscal expansion in Japan has contractionary effects abroad, which suggests that this type of measure in itself would not be helpful in stabilizing world economic growth as some observers have argued. Fiscal expansion in Canada results in a larger and more sustained increase in output compared to the other countries, a much larger trade deficit in view of Canada's openness, but a relatively small impact abroad.

Monetary expansion is next examined. A permanent increase of 1% in the U.S. nominal money stock is considerably more inflationary in comparison to fiscal expansion because of the currency depreciation that occurs. But it is striking that there is little net impact on the U.S. trade balance or on the level of economic activity. The reason for this is due to the lower interest rates that occur in the United States and the higher rates abroad, with associated effects on investment and consumption. The results of monetary expansion in Japan and Canada are broadly similar to those obtained for the United States.

The model is then used to examine whether the overall changes in fiscal policies in the major countries between 1980 and 1985 can explain the overall shift in trade balances and exchange rates that occurred. The results reinforce the expected effects of own-country fiscal policy on the trade balance and the movement of the dollar-yen exchange rate, but the exchange rate effects for the other OECD countries are not well tracked because West Germany is not considered separately. The final question considered relates to the explanation of the dollar depreciation that has occurred since 1985. The modeling of the Gramm-Rudman-Hollings law on reducing the U.S. budget deficit suggests

that the shift in public expectations that may have occurred explains only a part of the dollar depreciation. A number of other hypotheses are investigated, including a policy mix of fiscal contraction balanced by monetary expansion, an autonomous decline in private spending, collapse of a speculative bubble, a rising risk premium on dollar assets due to foreign portfolio shifts, monetary expansion by itself, and the start of a new speculative bubble involving dollar depreciation. While it is difficult to sort out these different explanations of dollar depreciation, it is suggested that the main contributing factors include the combination of the anticipated shift to tighter fiscal policy, a decline in private investment demand, and relatively expansionary U.S. monetary policies. There is reason to expect that these factors will serve to bring about some improvement in the U.S. trade deficit, but not enough to restore trade balance by the early 1990s.

In his comment, Truman questions the use of assumed coefficients since the model used by McKibbin, Roubini, and Sachs (MRS) then does not have to be consistent with the underlying data and there is no way to determine how the results compare to those of other models. He also notes that MRS did not take into account the problems and policy failures of the 1970s that led to the subsequent difficulties of the 1980s, and that their assumption of offsetting monetary policy in the context of fiscal expansion is at variance with what actually happened. Truman cites some alternative results of the issues based on the Multi-Country Model used by the Federal Reserve Board. He notes that the effects of a U.S. fiscal expansion are larger and more persistently positive than the MRS results and suggests that MRS parameterization may be inappropriate. Also, he notes that the MRS results of a Japanese fiscal expansion are inexplicably small and may not reflect some important feedback effects on other countries. Further, he maintains that the apparently trivial results obtained by MRS for their U.S. monetary policy simulation ignore the positive effect of the dollar depreciation particularly on investment income inflows, and that they may underestimate the impact that lower real interest rates abroad may have on aggregate demand. Finally, he questions the way in which the Gramm-

Rudman-Hollings legislation was modeled. On the whole, Truman is skeptical that the MRS model and its results can provide a convincing and useful explanation of macroeconomic linkages and policy options since their results may be model dependent and their policy characterizations incomplete.

While simulation models are useful in providing information on the magnitude and direction of change resulting from changes in policies, Hamada notes that it is important to understand the crucial features of such models and to exercise caution in basing policy decisions on the results. The use of parameters based on the econometric literature is convenient, but there may be some arbitrariness in what is selected and what ideally should be used in terms of the theoretical structure of the model. It is also not clear how to model the expectations of economic agents with regard to whether changes in announced policies will be considered temporary or permanent. The handling of speculative bubbles poses difficulties furthermore in conducting simulations across time periods. Another problem arises from the dynamic modeling of consumption behavior in relation to changes in wealth and the formation of expectations about changes in taxes. The specification of independent policy instruments raises difficult issues as well, and there might be some merit in considering how real exogenous shocks affected the model results. Finally, Hamada notes that differences in country size should be taken into account in assessing the effects of alternative policy packages. Thus, the MRS model may embody a number of ad hoc features and contain some technical drawbacks which should be considered carefully before using the results in making policy predictions and descriptions.

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