The major focus of this volume is trade in raw materials, which is the basis for trade between Australia and Japan and, indeed, for the economic relations within the Western Pacific region. While dominance of world markets for raw materials is generally understood in Western Europe and North America, it is not yet appreciated in either country just how fundamental are her relations with her nearest neighbours in supplying the country’s resource requirements.

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Some 150 researchers joined in the work in both countries. The work of those who produced reports or papers is detailed at the end of the study. Special thanks are due to Ben Smith, Visiting Fellow to the Australian National University during 1975, for his contribution to the study. Ms Nancy Anderson, Mr Rory Allan, Ms Pat Daw, Mr Hugh Graham, and Ms Jenny Corbett provided research assistance during the course of the study and to them the study owes much. In Japan, Mr Nakanishi and Mr Korehiro Fujita of the Japan Economic Research Center and Mr Rokuro Sase supported the work of the Project over three years. Yuichiro Hama, Seisaka Fujisawa, Mitsuji Matsuba, Nobuyoshi Araki, Hiroaki Fukami, Satoshi Sunamura, Sachio Aoki, Tsuneaki Hattori, Kenichi Matsui, Naohiro Amaya, Takeshi Aoki, Haruki Naito, Toshisada Fujimoto, Sadao Nishimura, and Hirotoshi Kato all helped carry the research forward.

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This typescript was prepared for publication by Dr Alan Wilkinson and Dr Nancy Viviani and the index prepared by James Horne.
The Australia, Japan and Western Pacific Economic Relations Project is the result of a joint initiative by research economists in Australia and Japan to explore together some of the important international economic policy issues facing their two countries. We have been responsible for steering the Project through to completion. Professor Kiyoshi Kojima, of Hitotsubashi University, Tokyo, has been responsible for the direction of the research programme in Japan. Dr Peter Drysdale, of the Australian National University, Canberra, has been responsible for the Australian research programme. The study which follows owes much to drafting and editing work carried forward by Dr Drysdale and Professor Kojima. They were joined by J. W. Nevile, H. W. Arndt, E. S. Crawcour, S. F. Harris, B. R. Johns, Hisao Kanamori, Kenzo Hemmi, Chikashi Moriguchi, Makoto Ikema, and Koichi Hamada, among others, in Australia and Japan.

The Project was inspired by the need, which appeared at the beginning of this decade, to re-examine the bilateral economic relations between Australia and Japan as Japan entered a new phase in her economic growth and relations with the rest of the world, and Australia, closely linked through trade with Japan, was undergoing significant structural change and seeking new international economic policy approaches. Strains had also begun to appear in the international trading and monetary systems and presented new and common policy challenges to both countries. These developments have been associated with a questioning of economic goals in industrial societies and the oil crisis. On top of this, an unusually strong expansion of industrial output and inflation of commodity prices at the beginning of the decade is now being followed by an unusually severe and widespread recession. In these circumstances, co-ordinated research by Australian and Japanese economists on the potential for trade growth and economic development within the Western Pacific region and on the role of the major Western Pacific countries in the international economy appeared timely. Our hope is that the study which follows opens new horizons on the Australia-Japan economic relationship and both countries' inter-
Preface

dependence with neighbouring Asia and the world economy.

The object of the Project has been to bring together and co-ordinate research by Australian and Japanese economists, encompassing as wide a range of views and interests as possible in both countries, in a way which will be of direct assistance to policy makers in their handling of bilateral relations as well as of policy problems on a wider front.

In each country a small steering committee mapped out the priority areas of research, enlisted the co-operation of as wide a group of interested research workers as possible, and organised seminars and study groups to advance the work. Over 150 persons from ten Australian universities, four Japanese universities, five overseas research institutes and universities, the Reserve Bank of Australia and from Australian and Japanese industry have been involved in various aspects of the research. Support has also been forthcoming from several Australian, Commonwealth and State Government Departments, and three Japanese Government Ministries. Individual research workers have been free to publish the results of the research and papers produced in association with the Project have appeared in leading international and national journals.

Once or twice a year, joint meetings of the Australian and Japanese steering committees have been held, alternately in Canberra and Tokyo, to co-ordinate research and discuss substantive issues. We have from time to time reported informally to the respective governments.

This study provides an overview of what has been a very large and in many respects quite unique research activity. For Australia and Japan the Project represents perhaps the first of its kind. Policy-interested economists from each country have joined together in the examination of economic policy problems of mutual concern to both countries. This has had two directly valuable results. It has led to the accumulation of a large amount of policy-relevant information and its diffusion among professional economists and officials in both countries. It has also introduced into the consideration of researchers on both sides the different perspectives and approaches of the other. There is no economic relationship, certainly not one as substantial as that between Australia and Japan, that does not have to be worked at and, in part, our aim has been to generate more resources with which to work.

As the study points out, the policy perspectives and knowledge available in each country are not yet so readily accessible to the policy makers and commentators in the other as the size of the relationship suggests is desirable. This is natural enough since the experience and circumstance of each country have in the past been so very different.
The initiation of the research activity on which we have drawn in our study was an acknowledgement of the need to accelerate the huge and broad-ranging investment that has been taking place to date in studies and activities which in the longer term expand and deepen understanding between our two countries and to direct it towards resolution of some of the important and pressing economic policy issues with which they are currently faced.

The study itself provides evidence of the wide measure of agreement reached among the principal researchers from both countries about the character of the important economic problems which the two countries face and about the ways in which these problems can be tackled in the interests of both countries. Differences of approach and different interests have equally been identified. But the impressive fact remains that there has, in our research, appeared a common interest in guarding and developing the significant and mutually advantageous contact and exchange between our two countries.

Saburo Okita  
J. G. Crawford

Dr Saburo Okita was formerly with the Japanese Economic Planning Agency and Chairman of the Japan Economic Research Center and President of the Japan Overseas Economic Cooperation Fund and is now Chairman of the Japan Economic Research Center. Sir John Crawford was formerly Secretary of the Australian Department of Trade and Industry and Vice-Chancellor of the Australian National University, and is now Special Adviser to the World Bank, and Chancellor of the Australian National University.
PART I  INTRODUCTION
Within the Asian Pacific economic community, Australia and Japan have developed a bilateral economic relationship of considerable international significance. Australian-Japanese trade ranks among the world’s seven largest bilateral trade flows.

The basis of the trade between Australia and Japan, and indeed for economic relations throughout much of the Western Pacific region, is the exchange of raw materials for manufactures. The huge raw materials trade between Australia and Japan has been a crucial element in facilitating Japan’s heavy industrialization and it remains an important corner-stone in the extensive network of international economic relations upon which Japan’s industrial economy is founded.

While Japan’s dominance of world markets for raw materials is generally understood in Western Europe and North America, it is not fully appreciated just how fundamental are her relations with her nearest neighbours in supplying the country’s resource requirements other than oil. In 1975, Japan’s imports accounted for 43.1 per cent of the volume of world trade in iron ore, with Australia’s exports accounting for 25.6 per cent. Australia supplied 48.0 per cent of Japan’s total imports. In coal, Japan imported 56.0 per cent of traded world supplies and Australia exported 24.2 per cent of those supplies, but it supplied 27.6 per cent of Japan’s import needs. In bauxite, Australia supplies almost 60 per cent of Japan’s import requirements. On the basis of long term contracts existing in 1974 and projected demand, Australia will supply some 53 per cent of Japan’s contracted supplies of iron ore in 1980. For supplies of non-ferrous metal ores, timber and tropical food-stuffs the nearby developing countries in the Western Pacific and in South East Asia hold similarly large trade shares.

The bilateral trade between Australia and Japan has grown apace because these economies are very strongly complementary. Not only is this complementarity based on markedly different resource endowments, thus allowing a broad scope for bilateral specialization and exchange, but the patterns of economic development of each country have reinforced this potential for beneficial exchange.
Following post-war reconstruction, Japan's growth was based on heavy, chemical and engineering industries and this was importantly assisted by reliable and expanding supplies of industrial and agricultural raw materials from Australia in a period of increasing shortages from other suppliers. Japanese demand for minerals and agricultural commodities provided a strong growth-inducing factor for Australia after the late 1950s and the development of Australia's huge mineral potential in the mid 1960s was based on assurance of future demand from Japan.

Each country's interest in maintaining and expanding this advantageous bilateral relationship depends on a perception of the mutuality of gains from exchange and the possible losses that may occur from interruption to that exchange. Thus both sides see the relationship as an interdependent one, one which can produce security rather than insecurity. The qualitative dependence of each partner on the other is not adequately measured by the statistics of exchange, nor by the relative size of the two economies. The exploration of this proposition in what follows has been given point by the present climate of uncertainty about the future of the international economy and by concern about resource trade security.

This study examines the gains from interdependence in detail and explores the problems of instability in trade, hesitation regarding further deep involvement in the relationship, and the politically sensitive areas of structural adjustment.

Where these problems occur and remain unremedied by policy action a break-even point appears beyond which the development of further interdependence is constrained. These considerations apply to the whole Western Pacific region just as much as to Australia and Japan since both Australian and Japanese external economic involvement is heavily concentrated in this region.

The burgeoning trade between Australia and Japan was only one element in the development of an extensive, if not fully-integrated, matrix of commercial relations among Asian Pacific countries — Australia with Japan, the United States, and the South Western Pacific; the United States with Japan, Canada, and East Asia; Canada with the United States and Japan; New Zealand with Australia and the United States; and, at the centre, Japan with virtually the whole region. The development of the loosely knit Asian-Pacific economic community has, of course, to be seen in the context of a period of unprecedented growth in international exchange, a process to which Japan, through her rapid rise to great economic power status, contributed significantly. But in this era of expansion, economic interchange in the Pacific grew
deeper and wider as rapidly as it did almost anywhere else in the world.

It is true that the industrial countries of the Pacific have managed their high levels of interdependence less than disastrously. At the same time it is perhaps not sufficiently well understood how deep were the strains even among these countries during the years of the monetary, resource and oil crises. In the era of growth and trade expansion, much progress in fact was made in the improvement of communication between the private sectors of the Pacific economies. But in the last few years of stagnation and inflationary overhang in industrial countries, domestic pressures have been an overwhelming preoccupation and a major task has been simply to hold the line on inward looking attitudes and policies. Certainly the private sector in Japan and elsewhere is now cautious about taking the initiative in the substantial redirection of investment and production that must take place if the regional and world economy is to return to a condition of orderly development and reasonable growth. To help overcome caution, the need to define a confident environment for new international specialization through energy- and resource-saving industrial relocation in the Asian-Pacific region is more powerful now than it has ever been.

In economic relations among Asian-Pacific countries another factor has emerged of considerable significance. Many of the more pressing problems of the developing countries in the region are a consequence of their very large trade, investment, and development-assistance relations with the advanced countries in the Pacific. These have been represented most forcibly in the claims for a new international economic order. There are also problems among the developed countries and the bigger economic powers, in consequence of their poorly constrained and potentially divisive overlapping relations with developing countries. Among the bigger powers one must include China and the Soviet Union. These problems, which are heavily focused on the question of raw-materials trade, recommend even more strongly now than before the growth and resource boom of the sixties and recession of the early seventies, the definition of a more secure framework for the conduct of economic relations in the Asian-Pacific region.

A major focus of the present volume is Western-Pacific trade in raw materials. Raw materials security has always been seen as a crucial issue for Japan. It is clearly of vital interest also to the buyers of raw materials in Western Europe and North America and to potential sellers of raw materials to understand the special character of Japan’s relationships with her suppliers in the Western Pacific, especially with Australia,
through the operation of long-term contractual arrangements. This issue is analysed in detail in the chapters which follow.

Second, a comprehensive quantitative analysis of the nature of economic relations between Japan, Australia and the developing countries in the Western Pacific and South East Asia is presented. These trade relationships are important as they are indicative of the growth of an increasingly significant trading region. Australia alone, for example, accounts for over nine per cent of Japan’s imports and Japan accounts for over thirty per cent of Australia’s exports. Alongside this bilateral relationship, the growing industrial strength of the developing countries in the Asian-Pacific region is considered together with the aid and development roles played by Japan and Australia. These factors are important to economies outside the Pacific, since Japan has often expressed a desire to establish a balance in the trend to regionalization evident in the European Community’s policies. In some very concrete ways, regional trade relations, for example with ASEAN countries, are becoming a major concern for both Australia and Japan and this has implications for non-Pacific economies with interests in this region. If the political will to forge new regional arrangements were to be generated, the implications for the multilateral trading system and for the countries of Western Europe and North America would be considerable.

The development of the trading relationships in the Western Pacific evolved within the framework of the United States-dominated global foreign economic policy approach. The American perception of the relationship with Japan and her other Asian-Pacific economic partners, and trends in United States policies towards the region, set the context for growth of Western-Pacific economic relations. These are reviewed in Chapter 2 as a preliminary to analyzing the structure and problems of Western-Pacific economic interdependence in subsequent chapters.

Finally, the analysis of the ‘interdependent’ economic relationship among Western Pacific countries explores the way in which trade and investment activity has produced a ‘mutual dependence’. The role played by long-term contracts in maintaining the relationship and the implications for domestic economic management are of analytical interest to all countries where trade is concentrated in particular markets or to those countries which have special relationships with very much smaller or larger partners. An important part of the argument of this book is devoted to identifying the costs, as well as the benefits, of a close relationship with a rapidly-growing partner, since this has always been a preoccupation in public discussion. An interesting conclusion
we reach is that, for Australia, the cost in terms of increased economic instability has been relatively small. But an important problem of the clash between short- and long-term interests is also identified and particular attention is given to the interaction between short-term and long-term policy decisions.

The discussion of ways of increasing trade and providing a more secure framework for interdependence has clear implications for the conduct of other interdependent relationships including those existing in Europe and in the Atlantic Community. The issues of policy consultations and harmonization, the principles for the conduct of the crucial resource trade, the role of intra-industry specialization in balanced national trade and development programmes, the defining of new codes of behaviour and the role of consultative institutions in trade, investment and aid relations are of general interest in the ongoing discussion of international economic policy problems. They assume a new and particular importance in the conduct of the very rapidly growing economic relations among the countries of the Western Pacific.
AMERICAN FOREIGN ECONOMIC POLICY TOWARDS THE WESTERN PACIFIC*

Hugh Patrick

I Introduction

The general historical context of American foreign economic policy will be noted here before turning to a regional Asia-Pacific perspective and especially to Japan. These points may be so obvious as to be banal; nonetheless they are so basic that it is useful to make them explicit.

First, the main concerns of the American people and of the American government are domestic, not international or foreign. While this is true of all countries, the American case is especially important because the United States is the world's biggest super power. Policies it pursues for purely domestic reasons may have substantial effects on other nations, without that intent. Moreover, in the United States as in other countries there is the temptation to sacrifice international interests for domestic ones. All this is made more difficult by the fact that by and large Americans are ignorant about the rest of the world, though generally goodwilled, amiable and extremely anxious to be liked by others.

Second, the United States has practised an active and ambitious foreign policy throughout the post-war period, as it has exercised leadership throughout the world. There are two main aspects of American foreign policy which are worth restating. First, it is primarily global in nature. The United States has seen itself as world peace keeper, container of the spread of communism, establisher and leader of the free-world economic system and prime provider of aid and support for the development of non-communist developing countries. The tendency in the United States is to see major foreign problems as global in nature rather than regional or bilateral. As a corollary, the world is divided into three parts, but not by region: the economically-advanced countries, the communist countries, (both advanced and developing), and the non-communist developing countries. Second, the economic

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components of American foreign policy have been intimately intertwined with security and political objectives. From the early post-war period until the early 1970s the United States was willing to provide economic concessions to others in exchange for alliance and political goals. Economic benefits included easy access to the American market — the largest in the world — and tolerance of foreign restriction of American exports to their markets.

The main foreign economic policy objectives of the United States has been to create and defend a liberal international economic system based on a multilateral system of relatively free trade, payments, and capital flows as well as economic aid to the developing countries. The United States has been convinced that such a system was (and is) in the global interests of all market economy nations. Parenthetically, most Americans were not as aware of the benefits of this system to a rather narrow conception of American national interest; for example, the role of the United States dollar as the core of a fixed exchange rate system until 1971 had substantial benefits for the United States, although in later years it also exerted considerable costs. American policy also recognized that the developing countries have special problems, and they have been allowed to deviate from the norms of the liberal international economic system. It was expected that as developing countries succeeded in their development process and eventually achieved economically advanced status they would gradually but systematically adopt the norms of the international economic system. Japan has been an excellent example of this process and of the expectations that were implicit in it. It might also be noted that in the early post-war period and indeed well into the 1960s the United States had a fundamental decision-making role in formulating the international economic system with the assent of the United Kingdom and Western Europe. Other countries were presumed to accept and take the international system as given.

Forces Affecting the International Economic System

The American conceptualization of the appropriate international system and the attendant foreign policy obviously have not been immutable. Various forces have emerged which made the international economic order as initially established too simplistic and hence no longer workable. Some of these forces were inherent within the system itself, others came about due to outside factors and were perhaps even less anticipated.

One inherent feature has been the decline in the relative power —
both economically and militarily — of the United States. The very efforts of the United States to help other economies — to reconstruct Europe and Japan — meant their more rapid growth in the 1950s and 1960s than the United States. This has led to an increasing pluralism in broad economic power, first in the remarkable rise of Europe and then in the spectacular rise of Japan. At the same time there was a gradual but steady improvement in the relative position of a number of middle-ranked nations such as Australia and Canada. In the longer-term future there will be others — probably Brazil and Nigeria and perhaps Indonesia.

Second, the relative power position of the United States and indeed of all industrial countries has been shaken by the rise of OPEC, notably Arab oil power. By and large, the economic dislocations in international transactions caused by the oil country petro-dollar surplus have been absorbed within the international economic system without the degree of disruption or change that was anticipated; essentially, the Arabs have chosen to play the game by the prevailing rules. However, other costs have been high: the exacerbation of world-wide inflation by the fourfold increase in oil prices; the anti-inflation recessions in the industrial countries; the burgeoning balance of payments problems of Fourth World countries; and the enhanced economic nationalism of the developing countries, as is noted below.

Third, the Bretton Woods world monetary system contained technical but tremendously important deficiencies. Basically, countries in fundamental disequilibrium did not adjust their fixed exchange rates rapidly or often enough as economic conditions warranted, especially countries in surplus. The United States was unable to devalue despite the relative weakness of the dollar because of its role as the key currency and its link to gold. This resulted in a dollar overhang among the other industrial nations, especially in Europe where France and to a lesser degree West Germany became unwilling to hold additional dollars in their foreign exchange reserves. As is well known, this culminated in the 1971 dollar crisis, which in effect ended the fixed exchange rate system, and resulted in the present de facto system of pegged floating exchange rates. The changes which have occurred thus far in the international economic system have been primarily in the monetary arena rather than in trade or capital flows policies.

Fourth, evolution in the major world political forces has altered the basic premises on which American foreign policy, including foreign economic policy, was based. On the one hand, communism came to be much less monolithic, and somewhat less aggressive. This has been
reflected in the USSR-China conflict, increasing willingness among East European countries to trade with the West and the possibility of detente and enhanced economic exchange between the USSR and China respectively and the West, especially the United States.

On the other hand, the nationalism of newly-independent and other developing countries has become increasingly strong. The developing countries (symbolized in the 'Group of 77') have desired increasingly to have some say and to exert some power in determining the nature and rules of the international economic system. This is epitomized in the slogan of a 'new international economic order' and these desires are reflected in the number of not unreasonable policies. Developing countries want better access to the markets of economically-advanced countries, but the difficulty is that their manufactured exports tend to be those commodities where import-competing industries in the economically-advanced countries are of declining economic competitiveness but remain politically strong. Host developing countries seek greater control over foreign direct investment and they seek higher prices for their exports, especially of agricultural and mineral raw materials. At the most fundamental level the problem is that of developing countries' poverty amidst the wealth of the economically-advanced countries. The basic question is an ethical one involving the income and wealth redistribution by the rich countries to the poor. In reality, the developing countries do not appear to have substantial power in any positive sense, but they do have negative powers: to block and prevent activities which the economically-advanced countries desire.

Fifth, the United States in the past had a strong and often exaggerated sense of its ability to control and change the world (frequently in its own image). Rising economic pluralism has somewhat undercut that; the United States is no longer able to dictate terms and the size of the club in international economic affairs has expanded dramatically. The American perception is that foreign aid has failed in that it has not brought about great economic progress in the developing countries. In substantial part, this reflects a faulty perception of the seriousness and difficulties of the problems of economic development, and lagging recognition of what has actually been achieved. Probably most important was the Vietnam war, a traumatic and chastening event for the United States. American military power did not get the United States what it wanted despite terrible costs.

The United States, consequently, in the past several years has been in the process of a major reformulation of its perceptions of the world, the American role in it and the ways in which policy can be effected.
Introduction

This has been described as a rise of neo-isolationism, in part a frustration and agony over inability to shape the rest of the world or, where it does so, over the often harmful impact it has on others; but in substantial part due to a renewed focus on solving America’s own domestic problems of social and economic justice. The neo-isolationists are a mixed bag. They include traditional industries wanting protection, such as textiles. They include some industries which newly feel the need of protection; how the automobile industry tilts on this issue is crucial given its important political role domestically and its traditional liberal stance on international economic issues. Organized labour, which comprises only a third of the total labour force but which, unlike the remainder, is organized and vocal, has shifted from a liberal to a more protectionist stance on international trade, and certainly on international capital flows. Another new group among the neo-isolationists are left-wing and radical intellectuals. They deplore what they perceive to be American economic imperialism abroad and they believe the United States should solve its own domestic problems including the rights and opportunities for minorities and women.

Nonetheless, the internationalist commitment of the United States still prevails, but it is perhaps more realistic and certainly more limited than before. The internationalists include not only multinational companies and export industries, but a large portion of agriculture which has switched from a protectionist stance to an internationalist one as export markets have become ever more important. Consumers tend to be internationalists since they want the benefits of inexpensive imports, but they are politically weak. Most intellectuals are internationalists, at least those liberal in their commitment, as are many religious organizations. For these reasons the American internationalist commitment will remain firm and strong. However, American foreign policy in the future will become increasingly economically-oriented. Economic issues are likely to be more important in the range of international issues, and the United States will be less willing to trade off economic considerations for security benefits than it was in the past.

II The American Perception of the Pacific as one Region

Traditionally, the United States has not seen Japan and the Pacific as one region except in the simplest geographic sense. Partly this relates to the primacy of the global approach of the United States, rather than a predominantly regional focus. Moreover, the Pacific, however defined, turns out to be one of the most heterogeneous regions of the world —culturally, ethnically, in level of economic development and the like.
Rather, once the United States goes beyond a simplistic concept of Asia, which quickly evaporates, it tends to divide the Pacific and Asia into half a dozen or more sub-regions and in important cases to focus directly on the bilateral partner. These include the north-east Asian countries of Japan, Korea, and Taiwan; the People’s Republic of China; South East Asia, South Asia (India, Pakistan, Bangladesh, and Sri Lanka); the nations of Oceania, especially; Australia and New Zealand, and perhaps the Pacific rim countries of Latin America. For many Americans, Australia is the South Pacific, aside from romantic dreams of small South Pacific islands.

To the extent that regionalism in the Pacific has been emphasized in American foreign policy, it was mainly in a security perspective; the United States was active in establishing sub-regional alliances, such as SEATO and the ANZUS pact. Nonetheless, many security relationships have been essentially bilateral, notably with Japan, South Korea and Taiwan. Military pressures toward a regionalist approach appear to be evaporating. Perhaps new perceptions will arise through the interplay among the four major Pacific powers — the United States, Japan, the USSR and China — together with the reactions of the other important nations of the Pacific, but it is premature to judge. However, there are both negative and positive economic forces which encourage the United States to take a more serious view of the entire Pacific as a major regional entity. On the negative side, a Pacific regional grouping would be a useful countervailing force in bargaining with what may become an increasingly restrictive European Community. More positively, trade among the Pacific nations, including the United States, is becoming extremely large and important both absolutely and relatively. More than three-fifths of world output and more than one-third of world trade is among nations bordering on the Pacific and more than half of the United States trade is with them (these importantly include Canada, Japan and Australia). Moreover, output and trade in Pacific nations has been growing relatively rapidly. This provides a heightened impetus to American economic interests to improve communications and co-operation for economic interchange — in trade, investment and aid — among the Pacific nations.

III Evolving American Foreign Economic Policy towards Japan

Throughout the post-war period the United States has had an extremely close relationship with Japan, but one that evolved traumatically as Japan’s economic power developed. For both countries it is a very important alliance, combining a security relationship based on the
United States-Japan Security Treaty, extensive economic interchange, a close political relationship and expanding cultural exchange. On the whole the Japanese are quite well-informed about the United States and Americans, while Americans are not very well-informed about Japan and the Japanese.

Initially, it was inevitably a patron-client relationship with Japan fully dependent on the United States. Japan then needed a patron in international organizations. In the early 1950s Japan's per capita income was at less developed country levels, below that of Malaysia or several Latin American countries. Yet Japan had certain economic characteristics — notably large reservoirs of well-educated and well-trained labour and widespread managerial and engineering skills — which distinguished it from the typical developing country. Nonetheless, as a less-developed country and as a client state, Japanese policies, which deviated significantly from the norms of the international economic system, were initially condoned by the United States. Japan was allowed to be highly protectionist in import policy while stimulating its exports for both balance of payments and growth reasons, and to restrict foreign direct investment and portfolio capital inflows and outflows.

Over the past twenty-five years Japan, more dramatically than any other nation, has moved from the position of a developing country to status as one of the major economically-advanced industrial nations. Japan since the late 1960s has had the world's third largest GNP and its GNP per capita ranks with European nations, above the United Kingdom and Italy for instance. This profound change resulted from the sustained, extremely rapid growth of Japan's economy (averaging approximately ten per cent annually) throughout the 1950s and 1960s following post-war reconstruction.

Of course, Japan did not suddenly change from being a less-developed country to being an economically-advanced country; the process was evolutionary though relatively rapid. As the Japanese economy expanded, the United States began, from the late 1950s, to press Japan to behave as advanced industrial countries were supposed to — to liberalize trade, to liberalize the system of foreign exchange payments, and to liberalize the opportunities for foreign, especially American, direct investment in Japan. Nonetheless, American pressure was relatively mild until the mid to late 1960s, reflecting some lagging perception by all of the sustained nature of Japanese growth and continued relatively high priority to political rather than economic issues by the American government.
By the late 1960s pressures from the American side were growing rapidly, particularly from American transnational firms interested in entering the burgeoning Japanese market by investing and producing there. At the same time, Japan had become the second largest market for American exports (second only to Canada) and American producers were increasingly interested in Japanese removal of import quotas, reduction of tariffs (which indeed Japan was doing as a participant in the Kennedy Round of tariff cuts), and elimination of other barriers to the Japanese domestic market.

Over this period Japan was an increasingly important exporter to the American market as well. Throughout the post-war period the United States has been by far the most important foreign market for Japan, purchasing 25-30 per cent of her exports. As Japanese productive capacity grew, Japan loomed increasingly large as a supplier of imports to the American market. Moreover, Japan’s export growth to the United States was largest in amount and most rapid in precisely those large, important, import-competing American industries which were losing their competitive edge as their comparative advantage declined. This occurred first in cotton textiles, then in consumer electronic goods especially transistor radios and television sets, then steel, and most recently perhaps in automobiles. This pattern has posed serious problems for such industries, problems common to all rich countries: how can a nation cope constructively with the loss of comparative advantage in what have been large domestic industries, but industries for which the country has little future?

These special industry problems between the United States and Japan, essentially micro in nature, in the early 1970s became macro in both their economic and political significance when the United States’ balance of payments began to deteriorate so substantially. These specific commodity issues were symptomatic of the much more comprehensive problem, namely that the world economic system was insufficiently flexible to absorb readily a large, rapidly growing Japan. The emerging surplus of the Japanese global balance of payments in 1970-71, its large trade surplus with the United States, and the increasing undervaluation of the yen occurred at the same time that the United States was running a serious global balance of payments deficit, dollars were not so readily accepted by European central banks, the American trade position with Japan was particularly bad, and the dollar was overvalued. This led to the situation in which Japan came to be seen in the United States not just as the catalyst for the breakdown of the international monetary system, but the cause of its breakdown,
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and the main cause of the American balance of payments difficulties. What were essentially American problems of global economic balance were viewed substantially as bilateral problems with Japan.

This led to a major economic offensive by the United States from August 1971 to spring 1973, apparently global in nature but in substance directed particularly against Japan. During that period the level of debate in the United States about Japan was low, reflecting American ignorance of the Japanese economy and economic policies. Americans, both official and private, displayed a strong tendency to make Japan the scapegoat for their own problems.

Surprisingly rapidly, by summer 1973, all the bilateral issues between the United States and Japan had been resolved successfully and the tensions between the two countries eliminated. In a narrow sense, the American economic offensive was successful. Under American pressure, Japan revalued the yen more than that of any other major currency; eliminated virtually all its import quotas on manufactured goods (though not on agricultural goods), unilaterally reduced tariffs and otherwise encouraged imports; completed the liberalization of foreign direct investment in Japan so that foreign firms can now enter most industries with 100 per cent ownership; liberalized Japanese investment, both direct and portfolio, abroad; and engaged in substantial monetary-fiscal expansion of demand in order to avoid further yen revaluation. These actions, in conjunction with the policies the United States pursued, restored global balance of payments equilibrium for both nations and also sharply reduced the trade deficit which the United States had with Japan. Many of the policies foisted upon Japan between 1971 and 1973 were beneficial to Japan as well, since trade liberalization increasingly is in Japan's interest while a seriously under-valued yen resulting in large build-ups of foreign exchange reserves in dollars would have been excessive relative to other uses of these resources. Politically, it was, of course, advantageous for the Japanese government to be able to blame the American government for having to take policy actions which were desirable but politically unpalatable.

In a broader context the United States may have paid a high price for its economic offensive in terms of its overall relationship with Japan. The 16 August 1971 Nixon economic shock, following close upon the Nixon shock on China policy, seriously undermined the Japanese perception of the United States as a reliable and trustworthy senior partner who keeps its friends informed of imminent major changes in policy. The United States soya bean export embargo of summer 1973, although brief and in part brought on by Japanese trading company...
speculation, reduced the credibility of the United States as a guaranteed source of supply for Japanese agricultural imports. Perhaps it is healthier in the longer run for Japan to have been thrust into viewing its relationship with the United States as less dependent than previously assumed, forcing it into a more independent and perhaps more equal stance vis-à-vis the United States. While for the United States there may have been costs in the shorter run, in the longer run it may turn out beneficial in achieving a new relationship with Japan without the overhang of the previous patron-client relationship which lasted all too long.

With bilateral tensions virtually eliminated since summer 1973, the Japanese-American relationship has moved into a new phase. For the past two years it has been fashionable in both governments to see the relationship as having no major bilateral problems and indeed to see it not as predominantly bilateral in nature, but as a co-operative effort in a multilateral context in trying to solve, or at least respond to, the major global economic issues of the past two years. There is on both sides of the Pacific a sense of relief that the earlier bilateral tensions have disappeared, together with the usual preoccupation with the most immediate problems of the day. However, the view that bilateral economic issues between the United States and Japan are a thing of the past is probably too optimistic, as will be discussed briefly later.

IV Four Major Economic Issues for Japan and the United States

We cannot here consider in detail all outstanding major issues and how they reflect on the future American-Japanese economic relationship. Four sets of issues are considered which importantly shape the present and future American-Japanese relationship and the economic policies of each toward the other, as well as toward the world as a whole. They are: the nature of the world economic system; the implications of evolving comparative advantage in Japan and the United States; the foreign trade implications of the Japanese agricultural situation; and the problems of oil and energy.

The traditional discussion of the world economic system has made a dichotomy between the liberal, multilateral system of relatively free trade and capital movements and coordinated exchange rate adjustment to solve fundamental balance of payments disequilibrium, and the protectionist, discriminatory system, notably in the form of regional economic blocs, in which currency and trade preferences are given to bloc members at the expense of others. It is, of course, recognized that the real world rather than being dichotomized into two extremes, is a
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multi-layered spectrum of greater or lesser degrees of economic liberalism.

This way of conceptualizing about the international economic system may be less relevant for the future, however. Instead a more or less liberal economic order is likely to persist (with the exception perhaps of foreign direct investment) but with increasing politicization of issues. A larger number of countries, especially among the developing countries, want to share in determining the basic rules of the international economic system. The United States is no longer in a position in which it can dictate those rules, although inevitably it can and indeed must exercise a strong leadership role. One issue is whether the basic features of the new economic system will be determined primarily by the major industrial countries, with some knots to the developing countries, or whether the developing countries themselves will have a strong positive role to play and power to exercise. In addition, an attempt to substitute international negotiations for the market place in establishing the conditions for trade for a number of basic commodities — including oil, minerals and foodstuffs — is likely. International codes of conduct for foreign direct investment may well be established, to replace present reliance upon market forces and individual host nation regulations.

The United States and Japan share a common interest in a liberal system of relatively free multilateral trade and payments, and in having a substantial say in any systemic changes that may occur. Japanese policymakers have not yet enunciated, and probably not formulated, any comprehensive policy package for the international economic system. In monetary and capital flows issues Japan apparently is closer to Europe, in trade closer to the United States position. So far they have been less willing than Europe, and even the United States, to discuss the possibility of commodity agreements with the ‘Group of 77’ of developing countries. It is probably true that both Japanese and American policymakers prefer to rely on international markets and private initiative than on governmental negotiations to resolve most such economic issues.

The future evolution of comparative advantage is important both for the domestic economy and for international economic relations of all nations. Future American comparative advantage lies in food grains and certain other agricultural products where high technology and abundant land can be combined with skilled labour and fairly capital-intensive processes of production, and in manufacturing industries utilizing high technology, skilled labour and relatively capital-intensive methods of
production, or in certain specific sectors where such determinants as marketing may be important, as in high fashion. The United States will continue to lose out in traditional, relatively labour-intensive industries, including some textiles, some electronics consumer goods production, and probably certain types of machinery.

Japan's comparative advantage will be increasingly in high technology, skilled-labour manufacturing, particularly industries where only moderate amounts of capital are required. Japan long ago lost its comparative advantage in agriculture and the movement away from agricultural production and commitment of resources there will probably continue (see the discussion below). Importantly, Japan is now losing its post-war comparative advantage in relatively simple technology, relatively labour-intensive manufactured goods, including electronics assembly and many textiles. Some Japanese used to say that Japan had a comparative advantage in all manufacturing. While never really true, it is certainly even less true today. Some believe that Australia has a comparative advantage in everything—agriculture, minerals, all manufactures, and services: a major problem for Australia is to determine where its future comparative advantage especially within manufacturing, may be—and to encourage resource movement towards the more efficient sectors). Japanese comparative advantage has moved even further away from energy-using, capital-intensive, high-polluting industries, and, probably, from industries which use large amounts of water in their production processes. For example, Japan has lost whatever comparative advantage it may have had (and this is doubtful) in aluminium smelting and refining.

These changes in comparative advantage, and the domestic structural adjustments necessary to reallocate resources efficiently at minimum social cost, constitute major problems in the economic relationships among nations. In the bilateral relationship between Japan and the United States attendant frictions are potentially serious. To be specific, Japan is likely to continue to be the cutting edge of the first major source of imports in a number of those industries in which the United States will be losing its comparative advantage. Japanese goods will be perceived as flooding what previously has been a domestic American market. When that occurs, the political tensions which arise out of import competition will be focused on Japan. Similar political issues will persist in Japan as exporters of inexpensive American (and Australian) agricultural products press for Japanese markets, infringing upon Japanese agricultural policy. Policymakers must be aware of these potentials for friction inherent in these structural adjustment problems,
since although they are global in nature they may be perceived mainly in bilateral terms.

Japanese agriculture constitutes a special problem for both Japan and the United States. Though frequently viewed bilaterally by countries exporting agricultural products to Japan, the issue involves a broader set of interacting relationships, including not only the United States, Australia and New Zealand, but the European community and many developing countries as well. Certain basic facts of Japanese agriculture are important in any foreign agricultural policy towards Japan.

The fundamental economic fact is that Japanese agriculture, though technically quite efficient, is economically a very inefficient sector. Agrarian land is so limited that it is much more efficient to use capital and farm workers elsewhere in the economy, and also to use much farm land for other purposes. As a result Japan produces only one-half the food (in caloric terms) it consumes, when feed grains and similar inputs are taken into account; the remainder has to be imported.

A basic socio-economic problem is how rapidly labour can be transferred out of agriculture. In this respect the Japanese economy has undergone a major transformation over the past twenty-five years, as virtually all young people have left the agrarian sector. The share of agriculture in the Japanese labour force has decreased from almost forty per cent in 1950 to only about twelve per cent today. Concomitantly, the average age of the remaining agricultural labour force has been rising steadily: now most farm workers are forty-five years or older. Moreover many are women, wives and grandmothers. In practice it is not easy to absorb forty-five or fifty-year-old male or female farmers into productive work elsewhere. Their productivity (opportunity cost) in other uses may not be much higher than in agriculture, even though on an average agriculture is much less efficient than manufacturing or many services. What is needed is time for the present agricultural generation to fade away. Only when that comes about can a major reorganization of agriculture, including increase in farm size to more economic levels from current average farm size of 2½ acres, occur.

Agriculture also constitutes basic social welfare problem in Japan. At issue is how to share the benefits of rapid industrial growth to the slower growing agricultural sector, historically the poorest in Japan. This is consonant with income redistribution to achieve greater equality. Intertwined with welfare is a very important political fact: the agricultural sector remains very powerful. It is a major supporter of the Liberal-Democratic party, the political party long in power. Agriculture has a disproportionate voting power since voting districts have not been
redrawn to reflect the changing population distribution and concentration in urban areas.

Finally, agriculture constitutes a basic problem for Japanese national security. How would Japanese survive if for some reason the inflow of foreign food supplies were to be interrupted? Long a dormant issue, it has come to the fore in Japan in the past two years, following fears of world food shortages, the oil embargo and the short-lived but stupid American embargo of soya bean exports in summer 1973.

The government has handled these various agrarian problems — welfare, political, national security — by directly and indirectly subsidizing Japanese agricultural production, and subsidizing it heavily. Imports of selected agricultural products in which Japanese farmers specialize have been severely restricted by quotas. The government directly purchases a large portion of the rice crop, still the staple grain in the Japanese diet, at ever-rising prices. Rice is then sold to consumers at substantial loss — covered by taxpayers through government budgetary appropriation — but still at internationally high prices. By allowing and indeed encouraging the prices of agricultural products to rise much more rapidly than the prices of industrial goods, the government has passed on the benefits of industrial growth to farmers by improvement in their relative prices. Farm incomes are thus at a parity with urban workers, farmers support the government in power and foodstuff production is greater than it would be otherwise. Consumers bear the major brunt of this system, in the form of very high prices for food. If the objectives are predominantly political and welfare in nature, such a system is considerably more costly than the sort of scheme that England uses, whereby food prices are set at world levels and British farmers receive subsidies to ensure their production and incomes.

Over the past decade Japan has relied increasingly upon food imports, especially for the increases in demand as incomes rise and population grows. The United States has been a major supplier to the Japanese market, especially in wheat and soya beans. An important component of American economic policy until 1973 was to persuade Japan to eliminate or at least reduce quotas and other barriers to imports of agricultural goods. The recent events, previously noted, have made Japanese policy-makers much more concerned about possible world-wide food shortages and supply interruptions — not surprisingly the Ministry of Agriculture and Forestry has taken this opportunity to push for higher rates of self-sufficiency in food production.

Will foodstuffs really be a global shortage in the future? At issue is
whether adequate incentives will be provided to food-producing coun-
tries to produce adequate surpluses for export, and as a corollary how
the costs of stockpiling surplus foods essential to smooth out tem-
porary supply shortages will be shared. In the past the United States
took on the role of maintaining food surpluses for the world, financed
by the American taxpayer. The American government is no longer
willing to bear that burden alone. American policy is to persuade Japan
to cover part of the costs of stockpiling food; stockpiling is a reasonable
policy for Japan as well if it fears supply interruptions. And both the
United States and Japan desire access: the United States to a stable
Japanese market and Japan to stable sources of supply. Both have to
provide incentives so that steady agricultural production growth will
be assured. These same issues with Japan are vital for Australian agricul-
ture and meat producers.

How is Japanese agricultural policy likely to evolve under these
circumstances? The interruption of the physical flow of foodstuffs to
Japan for any sustained period seems extremely unlikely; it is difficult
to conceive of a scenario in which that might occur. Potential short-
term interruptions (or severe price fluctuations) could be insured
against by stockpiling. Nor are world prices going to be so high that the
Japanese will starve. As a sophisticated, large, rich economy, Japan will
always be able to pay for needed food imports. Moreover, anything
close to 100 per cent foodstuff self-sufficiency in production would
economically be so costly for Japan that such a policy is very unlikely
to prevail.

Recent discussions in Japan suggest that self-sufficiency will be
defined in much more stark, wartime terms: 100 per cent production
of domestic rice requirements, together with sufficient vegetables, to
keep the Japanese populace alive and reasonably healthy, if not
luxuriously or even particularly attractively fed. On the whole, the
economics of future growth mean it is very unlikely that overall agricul-
tural production in Japan will expand as rapidly as demand. Imports
can only become increasingly important with the passage of time. Self-
sufficiency in more than a very limited sense is not going to occur. Yet
to be resolved are the future organization of agricultural production,
particularly the number of farm households and average farm size, and
the age and composition of the agricultural labour force.

For both Japan and the United States by far the most immediate
and important issue in international economic relations is the supply
and price of oil and related sources of energy, though from quite
different perspectives. For the United States, energy is closely related
to concerns about national security. This is reflected in efforts to achieve energy autarchy, usually phrased as energy independence, even if at high economic cost. In contrast, the Japanese concern about energy is primarily economic. Japan imports virtually three-quarters of its total energy requirements, and ninety-nine per cent of its oil. Most oil imports come from the Middle East. There is virtually no way in which these conditions can be changed substantially over the coming decade. Even though the relative share of Middle Eastern oil may decline somewhat, nonetheless it will constitute more than half Japan's oil imports in 1985 or so, and oil will continue to be the dominant energy source for the Japanese economy. It is vital for Japan to have assured access to oil supplies. This perspective is particularly acute in Japan. Government bureaucrats seem to anticipate physical limitations on the supply of oil to Japan. These fears are highly exaggerated; sustained supply interruptions or even quantitative limitations are extremely unlikely to occur in the coming decade. The price of imported oil is somewhat less vital to Japan, since the economy has already demonstrated its capacity to adjust to worsened terms of trade and to expand export earnings. Operationally, however, price effects are likely to be much more important for the performance of the Japanese economy than oil supply limitations.

Japanese economic and American security interests thus converge in having the United States develop its own energy reserves. Such an American policy would increase world supplies; alternatively viewed, it would reduce American demand for Middle Eastern or other foreign oil. At the same time this would put pressure on world prices. To the extent the American energy-autarchy policy is realized the United States will not have to enter the world oil market. Similarly, to the extent the North Sea petroleum reserves are developed, Europe will rely relatively less on Middle Eastern oil. This could leave Japan as the major buyer of Middle Eastern (and perhaps other) oil, providing it strong bargaining power. However, this is not a possibility that the Japanese yet regard as likely, nor can their policy makers operate on such an assumption. In addition, to the extent that American energy independence is achieved through extensive and expensive research and development efforts, which are economically premature, other countries will benefit in the long run. This technology will become available, and inevitably in substantial part at low cost, to countries able to use it; Japan would be a prime beneficiary.

Inevitably, the Japanese-American economic relationship will be influenced not only by these but by a whole host of other significant
global issues — basic materials commodity agreements, control and use of oceanic resources, rules for foreign direct investment, economic aid and income transfer to the developing countries, among others. Nevertheless, in sum it can be said with confidence that the relationship will continue to be vital, strong, and of great economic importance to both the United States and Japan. While it will provide increasing opportunities for economic interchange, it is likely to be fraught with prospects from time to time of bilateral political tension emanating directly from occasional economic frictions. It will behove policy makers and pundits on both sides of the Pacific to be constructively responsive to both these expanding opportunities and possible pitfalls.
PART II ECONOMIC INTERDEPENDENCE IN THE WESTERN PACIFIC

Sir John Crawford, Saburo Okita, Peter Drysdale and Kiyoshi Kojima
WHO DEPENDS ON WHOM?

As with all forms of international contact, international economic exchange both enlarges and confines the freedom of countries to act as they would wish. It enlarges their freedom by permitting more economical use of limited resources; it confines their freedom, as Professor Richard Cooper has succinctly pointed out, by embedding each country in a matrix of constraints which it can influence only slightly, often only indirectly, and without certainty of effect. Each country, however large, can change that environment only slowly and with considerable effort. And it can unilaterally abandon the tacit international code of good behaviour only if it is prepared to accept the adverse reaction of other countries.

If it wishes to enjoy the fruits of international trade a country must adjust its trading behaviour to accord with the realities of the international environment. This may be done independently of its bilateral partners in commerce and trade. But there are constraints imposed by the geographical structure of international exchange that deserve separate exploration. World markets are generally large enough and closely enough interconnected for it not to matter with which among a number of potential partners trade and commerce is undertaken. But there are also discontinuities and fragmentations in markets that are, under some circumstances, especially in the short to intermediate term, quite important. Interdependence between any two particular countries needs to be examined in this context.

Concepts of interdependence which were formulated with the Atlantic Community in mind need to be re-examined, for substantial economic interdependence has come about in the Western-Pacific area without the political framework that accompanied the emergence of interdependence in the Atlantic Community. Among the developed states of the Western Pacific — the United States, Canada, Japan, Australia and New Zealand — the growth of economic interdependence has far outstripped any tendencies towards political integration. For the developing states of South East Asia and the South Pacific, political integration has been a fragile, slow-maturing experience while economic interdependence with the developed states of the region has
Economic Interdependence in the Western Pacific

proceeded apace. Bilateral economic interdependence has not notably strengthened political ties, and it seems clear that the pattern of forces which encourages economic interdependence does not coincide with the interplay of politics in the region.

The growth of mutually advantageous relations between Australia and Japan over the last couple of decades is a very significant and remarkable story. The economic interdependence between the two countries is now very great indeed. It is a product of the huge transformation that has been taking place in each economy and the structure of the Australia-Japan relationship since around 1957. Even the established level of interdependence poses very important policy questions and demands policy attention and policy responses in both countries at many levels.

There are also opportunities for the development of still closer interdependence, within the framework of expanding economic relations with other countries in the region and throughout the world. If there is to be closer interdependence, it will involve both Australia and Japan in choosing a particular path among the alternative approaches to the achievement of each nation's social and economic goals. Such choice confronts a fundamental dilemma: on the one hand, the maintenance of expansion of the many and obvious gains from extensive international economic exchange in the form of the range and quantity of goods and resources made available through it; on the other hand, the preservation of a maximum degree of freedom to pursue national social and economic objectives independently. Among sovereign states close interdependence has to be reconciled acceptably with the achievement of national goals. It must also be pursued consistently with the broadly desired development paths of the partner countries.

Sometimes the term dependence is used to describe the nature of the economic relationship between Australia and Japan. In Australia, it is sometimes suggested that Australia is too dependent on the Japanese market for her major exports. The problem is seen by some to extend beyond particular commodity markets. An editorial in the Australian in 1970 urged a new commitment to policies fostering economic growth in Australia on the grounds that with growing disparity between economic welfare in Japan and Australia, 'Australia can forget about keeping any meaningful degree of cultural and economic independence by the end of the century. Australia will have some chance of avoiding satellite status only if we can move into the post-industrial era at the same time as Japan.'3 In Japan, it is also sometimes suggested that Japan is too dependent on Australia for supplies of crucial industrial
raw material imports. A special *Asahi Shimbun* feature observed in 1971 that Japanese policy makers were relying on Australian coal and iron ore suppliers, at the same time as it pointed out the problems of over-reliance on United States suppliers. Two years later concern about over-dependence on Australia was prevalent.

In non-mathematical language the term 'dependent' is usually used to imply weakness or vulnerability and this has come to be its application in popular discussion of international trade and economic relations such as those between Australia and Japan. Here the term interdependence is used to stress the fact that the mutual benefits of international trade between any pair of countries can only derive from each trade partner's holding a share in the other's markets and to stress the fact that where there is any vulnerability or weakness deriving from a trade partnership, there is commonly, though not always, a mutuality in that vulnerability or weakness. In this connection, it is worth stressing that large trade shares per se, either overall trade shares or trade shares in a particular commodity market, are not necessarily a sign of weakness or vulnerability, especially in the long term. Large trade shares per se are more properly taken as an indication of the gains from a trade relationship than the weaknesses in it. They are a reflection of complementarity in industrial structures between trading partners, of significant differences in comparative costs and the economic advantages of proximity.

Fears of weakness or vulnerability in trade dependence do not usually derive from economic factors but from political uncertainties such as the threat of external emergency or war. In Japan agricultural 'self-sufficiency' policies are justified by many on national security grounds. In Australia protection of manufacturing activities is justified by some on defence grounds. In the nuclear age no country is capable of completely defending itself alone. Nor is the cost of self-sufficiency generally justifiable in terms of preparation for emergencies. Mutual trust and a lessening of political uncertainties is therefore a precondition for large scale economic interdependence and, at the same time, a consequence of it. In the circumstances following extreme politicization of the oil trade and fears and threats of widespread cartelization in raw materials markets, the security of steady trade growth between Australia and Japan assumes even more importance. Doubts about the reliability of external supplies and markets can be too easily mobilized by political pressure groups to justify trade restrictions and economic protectionism which are contrary to community interests.

At the same time, large trade shares raise the possibility of
vulnerability, especially in the short to intermediate term. Short-term vulnerability, which is a consequence of international economic interdependence, presents special problems for macro-economic management. It also presents problems in micro-economic management, directed towards particular commodity markets and particular sectors of the work force or business community. In the longer term, there are problems associated with the choice of the desired but constraining matrix of relatively permanent international economic and political relationships.

Vulnerabilities are of two broad types. The first kind of vulnerability arises from international transmission of the economic stabilization problems that a given volume and structure of international trade may engender. The particular mix of monetary, fiscal, commercial and exchange rate policies chosen to achieve national economic and social objectives will have an important bearing on the success with which this type of vulnerability is limited. Vulnerabilities of this kind are associated with trade relationships in general but are likely to be more severe for particular sectors engaged in trade than they are for the whole economy. At the same time, they are not necessarily related to the geographical distribution of trade. Trade with any among a range of potential trading partners will generate the same kind of instability problems, although insofar as there are divergent fluctuations throughout world markets or insofar as particular markets or economic partner countries perform better or worse in respect of stabilization than others, geographical concentration in trade and commerce may sometimes have significant advantages in respect of managing stabilization problems. Nonetheless, short term stabilization problems are commonly endemic in high levels of international interdependence generally and will require the kind of policy attention given detailed consideration in Chapter 5.6 The relative performance of Japan and other major trading nations in respect of stability is shown in Charts 1 to 3.

The second kind of vulnerability associated with large trade shares derives from the costs that may be associated with limitations on the ability to switch trade to other markets, other sources of supply, or other commodities. These limitations arise from the nature of trade itself as well as the behaviour, institutions and policies governing the conduct of a particular trade relationship. Vulnerabilities of this kind are likely to be severe only for a few commodities in normally-functioning international markets and are likely to vary in intensity as between different elements of commodity trade. Moreover, such vulnerabilities are almost always greater in the short term than in the long
It is significant that it is the political or security costs associated with this type of vulnerability which are often perceived to be more important than economic costs more narrowly defined. Politically-motivated interference with trade or embargoes appear as a real threat to trade flows that can only be switched around over a five- or ten- or fifteen-year period. For example, it has been suggested that Japanese agricultural self-sufficiency policies are legitimized by claims that there are no reliably friendly agricultural supplier nations in Japan's geographical proximity. Again, the oil cutbacks of 1973-74 epitomized some of the worst fears in Japan about insecurity in the resource trade. Dangers to Australia's political security are also sometimes seen in the growth of international economic interdependence, although in Australia's case the fears are more about domination by foreign investment and business control than about trade dependence as such.

For Japan, policies such as diversifying sources of supply, economizing on the use of raw materials and energy, stepping up efforts at increased production from indigenous resources and building up emergency stocks of energy and food have been advocated as a feasible response to the political problems of heavy trade dependence. The basic character of Japan's trade dependence is said to argue for a happy yabure or 'defenceless on all sides' posture in international economic diplomacy. This posture also implies a low defence and military stance as well as multi-directional diplomacy. An important stream in Australian thinking, on the other hand, gives stress to the argument that increased interdependence with food and resource-consuming nations, especially Japan, far from increasing risks to national security will reduce them through removing the threat of destabilizing resource bottlenecks to regional economic security and political amity. These political and security considerations must be given due weight in assessing the more narrowly economic problems associated with a high degree of interdependence.

Exploration of policy approaches which allow most of the significant gains from economic interdependence to be preserved whilst avoiding substantial problems that may arise is a major purpose of this study. The existence of macro-economic stabilization problems arising from high levels of economic interdependence suggests some form of economic policy collaboration or co-ordination, the appropriate form being determined by the mix of national policy objectives which have to be reconciled through international economic policy. Other problems concern difficulties of adjustment and instability in the markets.
for particular products. They may require new forms of policy interven­tion or the withdrawal of inappropriate forms of policy intervention such as embargoes and permanent restrictions on trade.

Japanese policies aim to permit continued economic growth by re­moving or avoiding actual or potential bottlenecks of raw materials, land and labour. Australia is seen as a long-run elastic supplier of raw materials at relatively low cost, a politically stable country with many of the advantages of an advanced industrial economy and geogra­phically and politically placed so as to be more competitive in the Japanese market than in other markets. In the longer run there could be more Japanese interest in Australia as a more regular source of food and of resource-based industrial goods which are increasingly expensive to produce in Japan as well as environmentally undesirable. Japan looks to Australia as a market for her manufactures.

Australian interest has been primarily in Japan as a developing export market in a period when other overseas markets were declining. Preoccupation with exports was understandable when the major clearly discernible economic and social policy objectives were maintenance of full employment with steady population growth and balance of pay­ments equilibrium with stable exchange rates. Now new policy problems are being raised of maintaining economic stability and achieving appro­priate prices, a particularly difficult task when large transport cost differentials significantly limit opportunities for seller or buyer market diversification. At the same time the growth of bilateral trade with Japan has begun to have an impact on the structure of the Australian economy so that policy towards economic relations with Japan should now be related to policy on the long-term structure and level of indus­trialization of the Australian economy, but unfortunately there is no official Australian policy guidance on this.

The established size and structure of the Australia-Japan economic relationship is such that both economies are sensitive to developments in the other and each must take these developments into account in approaches to both short and long-term economic management. These observations may apply more strongly to Australia, the smaller eco­nomy, but they also apply to Japan in a different way. Australia holds a very large share in supplies for a range of key Japanese industrial raw material imports. The high proportion of imports to value added in Japanese industry means that fluctuations in the supply and price of imports from Australia will have a magnified effect on Japanese output. Furthermore, because of differences in the propensities to import from each partner, it has been shown that the impact of a change in Japan’s
expenditure would be four and a half times greater on Australia than the impact of a similar change in Australian expenditure on Japan. Since the Japanese economy is roughly ten times as large as the Australian economy, the Australian economy has a proportionately larger effect on Japan than the difference in size between the two economies would suggest.  

The established trade relationship between Australia and Japan includes a large degree of interdependence in the full sense of the term. An important objective in the following chapters is to explore the ways in which policy can be devised to overcome weaknesses that accompany the substantial gains there are from Australian-Japanese trade. In addition, as both countries seek to achieve their own long-term social and economic development objectives there is the prospect that interdependence should become even larger. Hence a second important objective is to examine the ways in which any growing interdependence required by the pursuit of long-term social and economic objectives can be managed without serious vulnerabilities appearing for either Japan or Australia.

NOTES

3. Australian, 13 February 1970. H. W. Arndt has observed that these fears are surprisingly little expressed in Australia though they may be latent. See H. W. Arndt, 'Australia's Economic Relations with Japan', in Arthur Stockwin (ed.), Japan and Australia in the Seventies, Angus and Robertson, Sydney, 1972. On the other hand, there has been much overseas comment in these terms. See Australian Financial Review, 2 March 1971.
6. The general question of harmonization in stabilization policies is taken up by J. Carmichael and D. W. Stammer, 'Economic and Financial Integration and the Harmonization of Macro-economic Policies', Australia-Japan Economic Relations Research Project, Research Paper, Australian National University, Canberra, October 1974, especially pp. 2-3 and pp. 20-28, Sectoral effects are discussed in D. E. James, 'The Assessment of Adjustment Problems in


10. For a closer examination of these issues see Arthur Stockwin, 'Where is Japan Headed?', *Australia-Japan Economic Relations Research Project, Research Paper*, Australian National University, Canberra, July 1975.


SHAPE OF REGIONAL INTERDEPENDENCE

Over the past two decades Australia and Japan have developed a bilateral relationship of major importance to the economy of each and of considerable international significance. This relationship is firmly based on the complementarity of the two economies and both countries gain substantially from it. This study is concerned with the nature and background of the relationship and its implications for each economy. It is concerned also with ways of preserving and further developing that relationship in the face of current world-wide economic problems which greatly exacerbate difficulties inherent in such a relationship. The main aim of the study is to identify these difficulties and suggest ways of overcoming them so that the potential of the bilateral relationship for the interests of each country, the Western-Pacific region, and the world as a whole may be more fully realised.

Japan and Australia share none of the cultural, political or sentimental links that once supported the trading relationship between Australia and the United Kingdom. Nevertheless Australia's trade with Japan has supplanted and outstripped its trade with its traditional trading partners. Primarily, that is because Australia and Japan are endowed with such markedly different resources as to allow the very broadest scope for bilateral specialization and exchange: in other words these economies are very strongly complementary. This complementarity has become increasingly strong as a result of the patterns of economic development of each country. Commercial contacts between the two have a long and chequered history, beginning in the nineteenth century and being coloured by the experiences of the Great Depression and the 1930s. While Japan was still predominantly an agricultural and light industrial country and Australian exports were primarily wool and foodstuffs, bilateral trade was comparatively limited.

It was not until the 1950s that the potential benefits inherent in the complementarity of the two economies as they were developing began to be appreciated by the more far-sighted in each country. Japan's post-war reconstruction was just ending and the phase of further growth based on heavy, chemical and engineering industries was beginning. In 1956, in response to Japanese overtures, the political decision was
taken in Australia to negotiate an agreement with Japan which would give "full scope to the natural factors making for close trade relations between the two countries". The resulting initiatives in commercial diplomacy established a pattern of bilateral trade that would increasingly reinforce the underlying complementarity between the two economies and translate it into actual and very substantial gains from growing interdependence.

The gains from this trade have not been limited to the striking benefits from specialization and exchange arising from the vastly different resource endowments of two countries geographically close together and linked by the Pacific Ocean. Bilateral trade has also played an important role in the economic growth of both countries. Japan's industrial growth and her increasing demands for Australia's minerals in addition to her traditional exports, such as wheat and wool, were strong growth-inducing factors for Australia after the late fifties. They helped to reduce balance of payments restrictions on growth and also provided assurances of future demand on which projects to open up Australia's huge mineral potential, which did not become apparent until the early 1960s, could be confidently based. At the same time, Japan's continued industrial growth was materially assisted by reliable and expanding supplies of industrial and agricultural raw materials from Australia in a period of increasing shortages from other suppliers.

Each country has an interest in maintaining this advantageous bilateral relationship and in seeking ways to reap even greater benefits from it by appropriate development of high levels of interdependence based on strong complementarity. The concept of interdependence simply expresses the underlying mutuality of the gains from economic exchange and the corresponding losses from any interruption to that exchange. Against the gains may also be set the costs of certain vulnerabilities resulting from the decisions to trade. The extent of the gains may be great or small, but the concept of interdependence stresses that where, as in the case of the Australian-Japanese relationship, involvement is large and the stakes high, the mutuality of the relationship can work to produce security rather than insecurity. It should be noted that neither the relative size of the two economies nor the quantitative measures of commercial exchange necessarily adequately reflect the qualitative dependence of each partner on the other. An examination of this proposition is an important part of this study and is of particular importance in the present context of international and bilateral economic difficulties and uncertainties.

Uncertainty and feelings of insecurity, as well as real dangers of
instability, work against the development of a solely bilateral pattern of economic relationships, however beneficial a particular relationship may be. In fact the greater the realized benefits of the relationship the greater the loss from its interruption by restrictive policy measures, cyclical fluctuations, or other factors: hence the desire for security in the mutual relationship. Hesitation to concentrate too heavily on one market either as a seller or as a buyer is based on a real danger that fluctuations in that market or its loss to competitors might bring extreme hardship to sections of the economy, at least temporarily. The monetary system, employment, structural adjustment, inter-sectoral income distribution and other politically sensitive areas may become harder to manage the greater the degree of involvement with the international economy generally and with particular countries. These difficulties must be set off against the gains from specialization and exchange. The operation of economic policy in one economy, however necessary and justifiable domestically, might have devastating effects on sectors of a major trading partner's economy that are closely linked to it. In the absence of specific remedial action there will be a break-even point of gains and losses beyond which bilateral economic involvement should not proceed. These considerations apply to the whole Western-Pacific region just as much as to Australia and Japan, since both Australian and Japanese external economic involvement is heavily concentrated in this region.2

Even if these shorter-term difficulties were to be overcome there still remain longer-term problems of allocating the benefits in a way satisfactory to each party, reconciling bilateral interests with multilateral objectives and ensuring that attempts to maximize the benefits of external relations are fully compatible with the internal economic and social aspirations of each country.

This study will investigate the long term aspects of the concept of interdependence seeking a basis for mutual reliability and predictability as a guide to realistic bargaining in a highly-developed long range bilateral relationship.

In this context, ways of increasing trade and providing a more secure framework for interdependence are considered. Here the main issues are: the role of policy consultation and indirect or direct policy harmonization; the importance of defining long-term national perspectives in developing the bilateral trade and economic relationship; the definition of guiding principles in the conduct of the crucial resource trade; the role of intra-industry specialization in balanced national trade and development programmes; and the role of consultative institutions and
new codes of behaviour in the conduct of relations with countries in the region. Although the recent intensification of Australia-Japan relations is remarkable, the world recession and lower growth rates in both countries have put some aspects of this relationship under strain. The responses by Australia and Japan to such difficulties in the bilateral relationship are considered below.3

I Basic Complementarity and its Development in the Australia-Japan Relationship

The degree to which bilateral trade has developed over the last decade is indicated in Tables 4.1 to 4.4. In 1973-74, Australia's exports to Japan totalled US $3036.0 millions or 31.0 per cent of all exports, whilst her imports from Japan were valued at US $1537.4 or 17.8 per cent of total Australian imports (see Tables 4.1 and 4.3). Whilst Australia has normally provided only a little over 9 per cent of Japan's total imports in recent years, she is usually her second largest source of imports after the United States (see Table 4.13). In 1973, Australia was the critical source of supply for a number of commodities, accounting for 47 per cent of iron ore supplies, 37 per cent of coking coal supplies, 58 per cent of bauxite supplies, as well as being the key supplier of wool, alumina and beef (see Table 4.2). In the same year, Japan took 87 per cent of Australia's coking coal exports, 86 per cent of her iron ore exports, and an estimated4 38 per cent of her bauxite exports (see Table 4.1). For Japan, Australia is a less significant but nonetheless relatively large market for manufactured exports. While the United States clearly occupies the primary market position, Australia is ranked among the next cluster of four countries (see Table 4.12) even though it accounts for only around 3 per cent of total exports over a wide range of commodities (see Table 4.4). In 1973-74, 31.3 per cent of Australia's imports of transportation equipment, 21.8 per cent of textile products, 25.7 per cent of electric machinery, and 12.9 per cent of general machinery imports came from Japan (see Table 4.3). Because of the effect of the Japanese recession and the oil price escalation on the level and structure of import demand, Japan's share in Australia's total exports in 1974-75 fell below 28 per cent, the first such marked reversal in almost twenty years, and Australia's share in Japan's total imports was cut back to under 7 per cent, lower than it had been at any point in the preceding decade. On the other hand, Australian imports from Japan, which had been running as much as 73 per cent above 1973-74 levels in the first half of 1974-75 were up 40 per cent over the full fiscal year. Australia's share in Japanese exports in 1974-75 thus
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Notes: (a) Country of consignment not available. For nickel Japan's share is virtually 100 per cent. For bauxite and alumina between 25 per cent and 35 per cent.
(b) Non ferrous metals n.e.i. almost wholly bauxite, nickel and manganese.
(c) Non ferrous metals n.e.i. almost wholly bauxite. All figures are for Australian fiscal years. Converted to US$ using I.M.F. trade conversion factor.
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Note: Converted to US$ using I.M.F. trade conversion factor.
Figures are for calendar years.
Source: Ministry of Finance, Japan Exports and Imports, Japan Tariff Association, Tokyo, various issues.
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Note: Converted to US$ using I.M.F. trade conversion factor. 
All figures are for Australian fiscal years. 
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Table 4.4 (continued)

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<td>55 599.74</td>
<td>3.59</td>
<td>1 997.85</td>
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</table>

*Note: All figures are for calendar years.*

*Source: Ministry of Finance, Japan Exports and Imports, Japan Tariff Association, Tokyo, various issues.*
recorded a sharp lift alongside Japanese exports to new growth markets in the Middle East.

Those commodities which are important in the overall trade of both countries are also important in bilateral trade. From the proportions that major commodities hold in each country's total trade, it is evident that the structure of Australia's export specialization matches the structure of Japan's import specialization extremely closely. For example, in 1974, iron ore represented 8.1 per cent of Australia's total exports and 3.3 per cent of Japan's total imports. Coal accounted for 7.7 per cent of Australian exports and 4.6 per cent of Japanese imports. Wool comprised 8.7 per cent of Australian exports but was less important in Japanese imports, at 0.9 per cent of their total (see Tables 4.1 and 4.2). At the same time, a significant proportion of Australia's imports is represented in Japan's major export categories. In 1974, 24.3 per cent of Japan's total exports comprised transport equipment, whilst 12.1 per cent of Australian imports were in the same category; 10.7 per cent of Japan's exports as electric machinery which held a 16.7 per cent share in Australia's imports; and 19.5 per cent of Japan's exports were iron and steel which accounted for 3.1 per cent of Australia's imports (see Tables 4.3 and 4.4).

Both countries now hold a sizeable proportion of world trade in the commodities which they exchange. Tables 4.5 and 4.6 set out data on Australian, Japanese and world trade in major resource, agricultural and manufactured goods between 1960 and 1973. In 1973, Japan accounted for 40.9 per cent of world imports of iron ore whilst Australia provided 15.6 per cent of world exports; Japan took 35.4 per cent of world coal imports and Australia provided 14.8 per cent of world exports; and Japan consumed 44.4 per cent of world wool imports of which Australia provided 85.2 per cent. Similarly, for the manufactured goods trade flow the other way, Japan accounted for 22.1 per cent of transport equipment exports and Australia 2.9 per cent of the world market for that commodity category; Japan supplied 10.4 per cent of world imports of non-electric machinery and 3.1 per cent of world imports went to Australia. The proportions for iron and steel were 29.9 per cent and 1.8 per cent respectively (see Table 4.6).

The extremely high complementarity in the trade flows of the two partners is not just a recent phenomenon. Its underpinnings have changed since the early days of significant bilateral relations but complementarity remains, alongside proximity, the fundamental cause of the extraordinary gains which the relationship has brought to both countries.
The importance of Japanese trade to Australia can be gauged roughly from the fact that between 1970-71 and 1972-73 exports comprised 16 per cent of Australian gross domestic product and almost one-third of these exports went to Japan. In 1973-74, mining accounted for 6 per cent of gross domestic product and 75 per cent of mining output was exported, principally to Japan. Between 1956-66 and 1973-74, 10 per cent of the increment in gross domestic product originated in the mining sector where the growth in labour productivity was 10.9 per cent per annum compared with an economy-wide average labour productivity gain of 2.1 per cent per annum. Thus mining product grew four times as fast as gross domestic product over this period and some 80 per cent can be attributed directly to trade growth, approximately 80 to 90 per cent of it with Japan. Similarly, a high proportion of agricultural exports was directed towards Japan and it is estimated that Japan took about 16 per cent of Australia's gross rural output in 1973-74, thus contributing substantially to the growth and maintenance of rural incomes in the sixties and early seventies. Overall, Japan accounted for almost one-third of the increase in Australia's total exports and one-fifth of the increase in her import supplies over the last decade.

For Japan, the period of most rapid increase in import trade from Australia was also the period of most rapid growth in real product and industrial output. Annual average rates of growth of national product of 11.6 per cent between 1965 and 1970 were accompanied by remarkable changes in the structure of industrial production. The major problem faced by the Japanese economy in the period of heavy industrialization throughout the sixties was how to avoid a resources bottleneck. Between 1960 and 1970, the ratio of imports to requirements of iron ore rose from 68.0 per cent to 87.9 per cent, whilst for coal it rose from 35.8 per cent to 78.8 per cent. Between 1965 and 1970, almost 40 per cent of the increment in imported supplies of four key industrial raw materials — iron ore, coal, bauxite and alumina — came from Australia. The domestic decline in agricultural self-sufficiency, from 87 per cent to 73 per cent between 1968 and 1972, was also associated with increased reliance on Australian foodstuffs imports for basic consumption needs.

In the early period of exchange between Australia and Japan, Australia's exports were heavily concentrated on pastoral and agricultural commodities. During the sixties the proportion of minerals and metals expanded remarkably. Between 1965-66 and 1974-75 the proportion of minerals and metals in Australia's total exports to Japan
Table 4.5 Australian, Japanese and World Trade in Major Resource Goods, 1960 — 1973

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<th>Commodity (SITC Classification)</th>
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<th>1965</th>
<th>1970</th>
<th>1973(1)</th>
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<td>Per cent of World Trade</td>
<td>USS (million)</td>
<td>Per cent of World Trade</td>
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<td>1970</td>
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<td>Sheep's and Lamb's Wools; Degreased whether or not Bleached or Dyed</td>
<td>(262–2)&lt;sup&gt;b&lt;/sup&gt;</td>
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Notes: 
(a) The figure for 1960 is for the category 283 and includes copper, nickel, aluminium, bauxite and manganese.  
(b) The figure for 1960 covers the whole of category 262.  
(c) Japanese figures for 1973 have been converted at a rate of ¥265 = US$1 (the IMF conversion rate).

Sources: 
(ii) Japanese figures are from Ministry of Finance, *Japan's Exports and Imports*, except for 1960 figures. Conversion at the rate ¥360 = US$1 except as above.
(iii) Australian figures are from Department of Statistics, *Overseas Trade*, Government Printer, Canberra.
## Table 4.6 Australian, Japanese and World Trade in Major Manufactured Goods 1960 — 1973

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jumped from 24.1 per cent to 61.9 per cent. In 1960 minerals and fuels comprised 31.5 per cent of Japan's total imports. That share rose to 32.4 per cent in 1965, 35.0 per cent in 1970, and 48.7 per cent in 1974. At the same time, Japan's growing specialization in the export of heavy industrial goods, including transport equipment, machinery and chemicals, matched the structure of growing Australian import demand. As early as 1965-66, transport equipment and machinery accounted for almost 40 per cent of total Australian imports and they continued to hold about that share throughout the following decade (see Table 4.3).

The transport cost advantage due to the proximity of the two countries was one crucial factor explaining the special advantages Australian resource exports enjoyed in the Japanese market. However, it was clear in the mid-1960s, and it is even more clear now, that the bilateral relationship has not been weakened by developments in shipping, which made mere physical distance a less important factor in determining the distribution of bulk commodities worldwide. The close trading relationship and the institutions which bind it were premised upon earlier flows of agricultural commodity and light manufactured goods trade and produced an interdependence which helped fashion smoothly still higher levels of interdependence as the structure of trade and growth in the two economies underwent change.

Japan's rapid growth was a key determinant of the substantial mutual gains which were to accrue from the Australia-Japan relationship. Her real gross national product grew at 9.0 per cent per annum between 1950 and 1960, 11.1 per cent between 1960 and 1970, and at comparable rates in the early 1970s until it fell by 1.2 per cent in 1974. This growth was at the base of, and at the same time made possible by, her growing importance in world trade. It was in this context that Japan and Australia developed and deepened their mutual trade relationship. In brief, the rapid emergence of Japan as one of the world's largest economies was itself a major influence on the international economy, a fact that was not immediately fully appreciated in Japan. During the 1960s — the period of Japan's most rapid economic and trade growth — the growth of Japanese demand had important effects on world markets for mineral fuels, minerals, metals and other industrial raw materials. Japan accounted for more than a quarter of the expansion of world petroleum imports, more than half the expansion of world imports of non-ferrous ores through the late 1960s and early 1970s. In addition, alongside the established Japanese market for agricultural raw materials, rising incomes encouraged the emergence of
Japan as a major market for foodstuffs and manufactured goods. In the early seventies, Japan accounted for about eight per cent of world demand for all imports, the third most important individual market after the United States and West Germany.

The pattern of Japan's growth in industrial production was also soon reflected in the pattern of export growth and she became a major world supplier of machinery, transport equipment, electrical goods, chemicals and other heavy industrial goods.

Japan began the 1960s with a sizeable deficit on current account in her international payments and with wide-ranging import controls and exchange restrictions. She entered the 1970s, having undertaken an extensive liberalization of trade and payments, with rising surpluses on current account in her international payments and with growing international reserves. This shift in the stature and the structure of the Japanese economy called for a re-orientation of foreign economic policy which was being pursued cautiously but surely even before the Nixon measures which led to a realignment of major currency parities and the initiation of a new round of trade negotiations.

Japan reacted constructively, if in some areas slowly, to the whole range of problems deriving from the new situation in the world economy at the beginning of this decade. Japanese demand continued to contribute significantly to the pressures on resource supplies even though there was anticipation of impending resource trade problems well ahead of the commodity price trends of 1973 and the 'oil crisis'.

In the development of the new foreign economic strategy, the problem of securing resource supplies was perceived in Japan to be linked to the problems of environmental deterioration, domestic labour shortages, inflation and payments surpluses. Within the new strategy, Japanese export specialization was to be shifted towards capital-intensive and 'knowledge-intensive' products, making less demands on imported natural resources, on less-skilled labour and on the domestic environment.

In aggregate terms, Australia is a far less important element in the world economy than is Japan. Nonetheless, as well as being an established major world supplier of foodstuffs and agricultural raw materials, she has now become, largely in consequence of her trade partnership with Japan, a major source of several minerals and mineral fuels in world markets as is shown in Table 4.5.

The appearance of growing and secure markets for resource exports in Japan helped to make the development of Australian mineral resources for export a feasible and economic proposition by greatly
reducing serious uncertainties normally associated with the large and
lumpy investments that are necessary in mining, processing and explora­
tion. Further, Japan’s own concern for resource security provoked
interest in Australian mineral developments long before capital pay­
ments liberalization in Japan had made Japanese investment on any
significant scale in Australian minerals development a meaningful
possibility (see Table 4.7).

The easing of Japanese exchange regulations on capital account in
the early 1970s facilitated increased investment interest in Australia.
Japanese sources estimate that accumulated Japanese investments in
Australia, New Zealand and Papua New Guinea at the end of 1973
amounted to US $637 million covering some 439 operations. Much of
this investment took place after 1966 and even more after 1971. Of
the total, 56.7 per cent was in mining, a further 6.8 per cent in metal
manufacturing, and 8.5 per cent in timber and pulping activities. The
concentration of Japanese investment in these sectors in Oceania was
much heavier than it was in total Japanese overseas investment, in
which mining held a 29.8 per cent share, metals 4.7 per cent, and
timber and pulp 3.5 per cent. However, although Japan’s share in
Australian direct capital inflow rose from 3.9 per cent in 1967-68 to
12.0 per cent in 1971-72 she is still a relatively small investor compared
with traditional United Kingdom and United States interests in
Australia. In addition, whereas manufacturing affiliates of Japanese
interests in Australia sell 88 per cent of their output on the local
Australian market, mining affiliates sell some 80 per cent of their
output to Japan. Thus, in the later sixties and early seventies the
links between trade and investment in the minerals field became
particularly important (see Table 4.7).

There were considerable changes in the structure of Australia’s
production as well as her trade during the last decade or more, although
these were modest by Japanese standards. Firstly, these changes reflec­
ted the growing international competitiveness of sections of the
domestic manufacturing sector. Australia’s post-war economic growth
was characterized by the large-scale immigration of capital and popu­
lation from the United Kingdom and Europe and capital from North
America. Factor migration was to some extent stimulated by the same
trade restraints which encouraged the expansion of the import­
competing sector. The effect of factor migration and forced industrial­
ization accelerated the effect of income growth, based on
established activities, in producing a new structure of production and
trade in which the manufacturing sector was much stronger. Secondly,
<table>
<thead>
<tr>
<th>Project</th>
<th>Japanese Interest per cent</th>
<th>Estimated Total Project Cost (Australian dollars)</th>
<th>Australian FIRMS</th>
<th>Japanese Interest per cent</th>
<th>Area of Operation</th>
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<td>Mt Newman Iron</td>
<td>10</td>
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<td>Mitsu-C. Itoh Iron Pty Ltd</td>
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<td>International Image Ind.</td>
<td>Machinery and equipment</td>
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<td>Industries Pty Ltd 50</td>
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<td></td>
<td>Dainippon Ink and Chemicals Inc</td>
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<td>Daishowa Paper Manufacturing Co Ltd</td>
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<td>Pi Ltd 37.5</td>
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<td>Jirokai Pty Ltd 50</td>
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<td>Izumi Dairy Supply Inc.</td>
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<td>Goonyella/Peak Downs/Saraji</td>
<td>15</td>
<td>$394m</td>
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<td>(Admiralty Gulf)</td>
<td>12.5</td>
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<td>Greenvale Nickel</td>
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<td>Japanese Consortium Loan of $30 million</td>
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<td>Consortium of Japanese Companies</td>
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<td>Machinery and equipment</td>
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<td>Dampier Salt</td>
<td>21.4</td>
<td>$20m from 1971</td>
<td>Marubeni-Iida</td>
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<td>Nissho-Iwai</td>
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<td>Lefroy Salt(9)</td>
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<tr>
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<td>Partner</td>
<td>Australian Company</td>
<td>Equity, $m</td>
<td>Japanese Company</td>
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<tr>
<td>Austen and Butta Ltd</td>
<td>12.85</td>
<td>Marubeni-Iida Corp. and Mitsubishi Chemical Industries</td>
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<td>Nichimen Co. (A.N.Z.) Pty Ltd</td>
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<td>Collie (W.A.) Char</td>
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<td>Marubeni-Iida K.K.</td>
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<td>26</td>
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<td>Seidensha A'Asia Pty Ltd</td>
<td>Yarragon Textile Mills Pty Ltd</td>
<td>Steel Abrasive Co. Pty Ltd</td>
<td>Steel Abrasive Co. Pty Ltd</td>
</tr>
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</table>

Notes: (a) This list is not necessarily complete.
(b) In addition to the above equity joint venture participation, there is probably some Japanese equity involved in various companies through portfolio buying since the liberalisation of capital controls in Japan—the extent of any such investment is not known.
(c) These Australian manufacturing companies are thought to have Japanese equity: Bontex Pty Ltd, Clark Daiken Pty Ltd, Kanematsu Gosho (Aust.) Pty Ltd, Landora Pty Ltd.
(d) Equity ratio estimated.
(e) Equity ratio and project cost unknown.
(f) This project has not been begun but is still proposed under an agreement with West Australian government.

Source: Updated from Senate Standing Committee on Foreign Affairs and Defence, Japan, Canberra 1973, Appendix VII. Department of Manufacturing Industry, Directory of Overseas Investment in Australian Manufacturing Industry, Canberra, AGPS, 1975.
the changes reflected the spectacular development of huge and in large part newly-discovered mineral resources for international markets, principally Japan. In these changes, Australia revealed a remarkable capacity for economic transformation in the context of steady albeit moderate income and population growth.

Like Japan, at the beginning of the 1960s Australia was in the process of dismantling extensive trade restrictions and was showing a substantial deficit on current account in international payments coupled with a persistent tendency towards overall payments deficits. She entered the 1970s with substantial current account and overall payments surpluses. Unlike Japan, Australia was not forced by the discipline of international prominence nor inclined, through any purposeful domestic initiative, to develop the various external and internal economic policies required for smooth adjustment to her new situation in the international economy. There was growing international interest in and concern about Australia's position, especially among United States administrators, but these pressures were small compared with the pressures upon Japan for more speedy adjustment. Tariff rationalization and liberalization, which could have opened more import opportunities, were proceeding gradually but independently. In the absence of strong external pressures, sufficient will to effect exchange-rate adjustment only appeared after a change of government in Australia in late 1972. Revaluation was followed in 1973 by a unilateral across-the-board tariff cut. The processes of policy change were not so different from those in Japan, but the timing was at a slow domestic pace rather than at a faster international pace because Australia's payments surpluses were less internationally significant and less outside pressure was applied for the adjustments to be effected.

This resistance to change was due in part to Australia's long history as a 'devoutly protectionist nation' and in part to the evolution of a domestic economic structure which would have to face significant adjustment costs in the event of sudden large scale liberalization of trade. Thus, major changes in import policies, such as those which occurred in 1960, were based on pressures which built up domestically. The tariff reductions of 1973 were also largely rationalized in terms of domestic inflation control policy.

As both Australia and Japan reacted to the changing international environment each tended to move towards greater trade involvement with the other. This can be illustrated by their responses to the discriminatory trade practices of the European Economic Community.

The prospects for Australian economic growth based on the
expansion of traditional markets for agricultural exports were damaged by the effects of the European Common Agricultural Policy.\textsuperscript{20} Australia's response was to intensify the development of new markets in Japan, the Pacific and Asia, whilst maintaining a range of commercial policies which encouraged import-competing industrial development. Until the late 1960s, Australia had very little chance for significant involvement in world trade negotiations since the major industrial nations were intent on increasing agricultural self-sufficiency and were unprepared to bargain over their severe agricultural protectionism.

Japan's response to the emergence of a discriminatory bloc within Western Europe was to encourage closer economic relations with its major Pacific trading partners and pursue a commercial diplomacy designed to counter the effects of intensification of European protectionism.\textsuperscript{21} Although Japan's exports to Europe and new markets outside the Asian-Pacific region were growing rapidly in the late 1960s, over 60 per cent of her export trade and almost the same proportion of her import trade was with Asian-Pacific countries, including the United States (see Tables 4.12 and 4.13). Japan was anxious to develop an alignment of interests within the Pacific economic community and to evolve contingency plans in the event of a more restrictionist attitude in Western Europe.

These policy responses were in part a product of the established trading intensity between Japan and Australia and their Pacific neighbours. But they were also destined to bring the two countries even more closely together. With rising trade intensities, a tradition of protection for sectors in each economy which suffered strong comparative disadvantages — sectors of agriculture and mining-based manufacturing in Japan and sectors of manufacturing in Australia — conflicts were bound to arise in commercial policy. Also, new trades were being developed in the minerals area at a dramatic rate and new and complex problems had to be faced and solved between the parties to these trades. And there were the problems of learning to cope with instabilities in trade with new partners.

For Australia, the search for agricultural markets outside the European Community led to attention being focused on barriers to agricultural trade that remained in Japan even after the major import liberalizations of 1972. After April 1972, only twenty-four agricultural commodities remained subject to quotas in Japan but many of these commodities (particularly wheat, barley, milk and milk products, beef, oranges and fruit juices) are those which do or could represent a significant proportion in value of the Japanese agricultural import bill and are
large items in the bilateral trade flow.\textsuperscript{22} In addition, variable import duties and levies are used to support Japan's domestic agricultural policy, and quarantine regulations (notably for apples, dried vine fruits and dairy products) present additional barriers to Australian entry into these markets.\textsuperscript{23}

Australia's interest in processing manufacture of metals also came up against the barriers in Japan of escalating tariff protection and of import and investment restrictions to market access which, so far, have limited the expansion of basic metal and intermediate goods exports to the Japanese market. Even after the 20 per cent tariff cuts of 1972 in Japan, average nominal tariffs on mining and manufacturing products, excluding oil, rose from 0.2 per cent for raw materials to 8.6 per cent on processed goods.\textsuperscript{24} 'Effective' rates of protection on intermediate goods average 14.7 per cent, according to one estimate, but on commodities of particular interest to Australia, such as nickel, rates are much higher.\textsuperscript{25}

On the other hand, Japan faces considerable difficulties in the Australian market. Tariff levels are commonly high and the structure of effective protection limits market opportunities of interest to Japanese producers. Australia's Industries Assistance Commission reports that the growth of total free-from-duty imports between 1972-73 and 1973-74 was 49 per cent whilst the growth of dutiable imports was 37 per cent. For imports from Japan these figures were 21 per cent and 30 per cent respectively.\textsuperscript{26} Items such as transport equipment and electrical appliances, which are of particular interest to Japan, have effective rates of protection in excess of 50 per cent compared to the average for the Australian manufacturing sector of 35 per cent.

The Australian government effected extensive tariff cuts on particular commodity imports during the twelve months following the across-the-board cuts of July 1973. Items affected included consumer electronics, motor vehicle parts, paper products, machinery, electrical machinery and agricultural machinery. However, the rapid turnaround in economic activity late in 1974 provoked the temporary re-introduction of import restrictions and higher tariffs on motor vehicles, textiles and white goods. The vagaries of policies relating to the motor vehicle industry have been of particular concern to Japan.\textsuperscript{27} These developments underline the importance to both countries of buoyancy in world production and trade.

Australia's policies towards capital inflow have emerged as an important source of friction in bilateral relations. The original introduction of restrictions on short-term capital inflow in 1970, the variable deposit
requirement scheme introduced late in 1972\textsuperscript{28} and the increase in the variable deposit ratio in 1973 all drew strong protests from Japan. More troublesome still were the announcements of policies designed to foreclose a significant part of the Australian mining industry to foreign investment and the uncertainty they engendered about investment opportunities and supply capacities in the major Australian mining industries.\textsuperscript{29} These issues and recent policy changes are taken up again in Chapters 6 and 7.

There was also the vexed question of Australian government intervention in mineral export-pricing decisions. However justified the Australian government may have been in some of its actions, these had the effect of creating potentially damaging uncertainty about the future of the trade with Japan in resources. Moreover, the obvious frictions between Federal and State government in Australia over export pricing decisions required much clearer explanation to a major trading partner whose interests were and are directly affected and whose domestic political system allows no comparisons to be drawn in this area. The export-pricing issue is discussed fully in Chapters 5 and 7.

II The International and Regional Environment

*International developments and problems*

The post-war decades were years of considerable expansion throughout the world economy, achieved within an evolving framework of liberal trade and international economic policies under the aegis of GATT, the IMF and the OECD. The present economic relationship between Australia and Japan was established in that era and its future structure will inevitably be affected significantly by the rapidly changing international economic environment (see Table 4.8) which will also have its effect on other countries in the Western Pacific Region.

There were two major developments in the 1960s which appeared to threaten the orderly expansion of world trade and opportunities for economic growth. The first was the emergence of the European Economic Community and the extension of its discriminatory trade arrangements with other countries. The second was the appearance of strains in international monetary arrangements and the worsening of the United States balance of payments position.

A whole sequence of monetary disturbances produced significant shifts in American attitudes towards the conduct of international economic policy at the beginning of this decade. The upsurge of protectionism in the United States, which followed the completion of the
Kennedy Round of tariff negotiations in 1967, was increasingly reinforced by concern about the balance of payments. A number of factors were important. First, there was growing American frustration at European obstruction of agricultural export opportunities. Second, there were strains in United States-Japanese economic relations due to rapid growth in Japan's export penetration of the United States market, which culminated in President Nixon's promise to curb import competition in the market for synthetic and woollen textiles and other products. This spilled over into a bilateral trade and payments dispute with Japan, which was having similar difficulties with its own European trade partners. Finally, the mood in the United States which had already induced substantial reduction in expenditure on overseas defence and aid was increasing in strength, especially with the commitment to withdraw from Vietnam. These trends assumed immense importance to America's economic partners in the Western Pacific and, in particular, provided an important incentive for Japan to strengthen her economic ties with other countries in the region.

The underlying cause of most of these problems in the mid 1970s was the rapid growth of almost all parts of the world economy in the previous decade notably in Japan and Europe — culminating in an unusually strong cyclical upswing in industrial countries. In 1972-73 world output was about three times as large as it had been two decades earlier and the economies of the advanced countries as a group were growing at an annual rate of over 6 per cent. Industrial production was pushing against existing productive capacity and raising demand for many raw materials so fast that expansion of world supplies could not keep pace, despite a spate of new developments in distant and difficult environments, one of the most spectacular being in the Western Pacific under the influence of explosive Japanese growth. At the same time, it is at least arguable that long years of low prices and unstable demand had produced underinvestment in key commodity production. The adjustment was dramatic. The spurt in demand provided the opportunity for primary producers in both developed and developing countries to raise their prices with or without collusive action.

There were other problems. Increasing public concern over environmental deterioration was threatening to raise costs. Political uncertainties inhibited investment in some locations. Difficult weather conditions reduced supply of several agricultural commodities. Unusually large grain purchases by the Soviet Union distorted the normal agricultural trading pattern in 1972-73. This circumstance was repeated in 1975 and, accompanied by negotiations for assurance, over
## Table 4.8 Long-Term Trend of World Trade 1960—74 (US$m)

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<td><strong>Japan</strong></td>
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<td><strong>European</strong> from United States and Canada</td>
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<sup>(a)</sup> Includes trade between United States and Canada

<sup>(b)</sup> Includes trade between Australia and New Zealand, Middle East, and Asia
### Table 4.8 (continued)

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<td>5275.9</td>
<td>2827</td>
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<td>33231.5</td>
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<td>78.8</td>
<td>1918</td>
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<td>.624</td>
<td>1443.9</td>
<td>-904.9</td>
<td>.779</td>
<td>3175.9</td>
<td>-2177.0</td>
<td>1021</td>
<td>6755.3</td>
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| Japan | 1757.9 | -531.2 | 1451 | 2719.3 | 124 | 1481 | 6492.9 | 85.4 | 2067 | 11264.5 | -728.0 | 1982 | 15352.6 | -837.0 | 1912 |
| from United States and Canada | 395.0 | 81.4 | .328 | 693.5 | 402.7 | .410 | 1967.1 | 954.5 | .660 | 4061.4 | 2512.9 | .741 | 5237.6 | 3428.6 | .652 |
| Europe | 375.3 | -207.5 | .306 | 613.5 | -233.0 | .329 | 1665.3 | -961.5 | .530 | 3903.7 | -2444.1 | .686 | 4421.8 | -1938.1 | .551 |
| Australia and New Zealand | 440.6 | -248.1 | .359 | 1098.8 | -803.1 | .589 | 2292.5 | -1735.4 | .728 | 6818.1 | -3272.3 | .855 | 15497.3 | -12177.3 | 1930 |
| Middle East | 903.1 | 316.2 | .735 | 1405.8 | 784.7 | .728 | 3013.5 | 1888.6 | .938 | 7944.5 | 9774.4 | 1411 | 12485.3 | 205.3 | 1555 |

**Notes:**  (a) Includes Eastern Europe. (b) Includes Japan.

**Source:** International Monetary Fund, Direction of Trade, Annual, 1960-1973, and Direction of Trade, Monthly, May 1975.
the long term, of United States wheat supplies to the Soviet Union, had the effect of increasing Japanese uncertainties in this area. Inflation and monetary uncertainty increased speculative demand for all commodities and the spectacular success of the OPEC cartel in lifting petroleum prices raised the prices of commodities for which oil was an input or substitute and encouraged further commodity speculation.

In brief, some of the symptoms of the commodity shortages and high prices were purely cyclical in nature and disappeared rapidly as a result of the stagnation in world incomes which followed the boom. Others, however, reflected long-term shifts in demand and supply that were merely accelerated by the recent period of rapid growth. This is notably true of the supply of energy and, to a lesser extent, of food-stuffs, where the evidence of shifts in the balance of supply and demand was apparent before these markets were disrupted by booming demand, crop failures and the behaviour of OPEC. Before the world economy can return to a condition of orderly development, substantial redirection of investment and production in these and related sectors is imperative.

A major task in international economic policy is to engineer a complete adjustment to higher oil prices. The main consequences of the changes in OPEC pricing policy stem more from its suddenness than from its magnitude. A slower rate of increase in oil prices over the years would have required adjustments with little effect on world growth and would have encouraged efforts towards more efficient use of energy. The acceleration of these adjustments and the funding of still necessary imports present the major problem (see Table 4.9).

Thus the main threat the oil price increase posed to the world economy and to OECD countries in particular lay in the possibility of a serious, perhaps long-term, reduction in growth rather than in the need to transfer two per cent of advanced oil-consuming country income and three per cent of developing oil-consuming country income to OPEC countries. Ultimately, all oil-consuming countries must live within their means, but the nature of the adjustment path to balance trade accounts with oil-exporting countries will have a profound effect on the prosperity of the world economy over the next several years.

Fortunately, there are grounds for cautious optimism about the capacity of the industrial world to adjust to the era of high energy costs. First, the oil-producing countries as a group have revealed more capacity to absorb imports than was assumed possible. Second, the recycling of oil funds through the market has been relatively successful. Third, the establishment of the IMF oil facility and
the OECD Financial Co-operation Fund has facilitated institutional recycling to deficit countries. These three factors cushioned the impact of the transfer problem. Fourth, the payments adjustment process proved manageable for some of the larger oil deficit countries, such as Japan, and there is at least the potential for growth to be resumed rapidly. Finally, there is now more purposeful co-operation among oil-consuming countries towards price containment and energy substitution. All five factors will have important influences on economic policy in the coming decade and all have direct and indirect implications for the Australia-Japan relationship which are discussed in Chapter 7.

These developments have put renewed stress on the international monetary system. Comprehensive reform of the international monetary system is an urgent priority in the face of the parity changes after 1971, world-wide inflation on a scale not experienced in the postwar period, the monetary effects of the oil crisis and fears of a 1930s style depression. Some flexibility has already been introduced into the monetary system \textit{de facto} following the Smithsonian Accords and the gradual stabilization of parities around the dollar and the mark seems likely to lead to the strengthening of this more flexible, if essentially bipolar, international currency system. The effect of this new international monetary regime on the conduct of the Australia-Japan relationship is discussed in Chapter 5.

Two crucial factors in the process of international monetary transition will be monetary and fiscal discipline in the major currency centres and among industrial powers and the careful international scrutiny of substantial parity movements. Beyond the monetary system itself an essential element in effecting the adjustments now required of the world economy is the preservation, even the extension, of a liberal trading and payments system.

\textit{Regional developments and problems}

The international developments just described have encouraged an increasing focus on structural adjustment issues affecting Australia and Japan. Attention is being focused also on the longer term problems of location of processing of those Western-Pacific resources utilized by Japan and more emphasis is being given to the issues of intra-industry specialization and the need for security in bilateral arrangements throughout the region in the resources and possibly the grain-supply fields.

Marked changes took place in the geographical structure of Japanese
Table 4.9 World Energy Consumption and Trade 1972 — 85

[millions of tons of oil equivalent (Mtoe = 10^13 Kcal)]

<table>
<thead>
<tr>
<th>Regions</th>
<th>1972</th>
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<th>1985</th>
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<td></td>
<td>Base</td>
<td>$6 case</td>
<td>^2</td>
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<tr>
<td>United States Total primary energy consumption</td>
<td>1 7 6 9 .2</td>
<td>2 3 5 7 .8</td>
<td>2 2 4 7 .4</td>
</tr>
<tr>
<td>Net Imports:</td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>2 4 0 .6</td>
<td>6 3 5 .6</td>
<td>3 4 2 .9</td>
</tr>
<tr>
<td>Coal</td>
<td>- 3 8 .8</td>
<td>- 4 4 .6</td>
<td>- 4 6 .8</td>
</tr>
<tr>
<td>Oil</td>
<td>2 5 4 .6</td>
<td>5 4 1 .9</td>
<td>3 3 1 .2</td>
</tr>
<tr>
<td>— per cent from Middle East</td>
<td>1 5 .2</td>
<td>1 0 .8 7</td>
<td></td>
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<tr>
<td>Gas</td>
<td>2 4 .8</td>
<td>1 3 8 .3</td>
<td>5 8 .4</td>
</tr>
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<td>1 7 2 0 .5</td>
<td>1 6 3 2 .4</td>
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<tr>
<td>Net Imports:</td>
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<td></td>
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<tr>
<td>Total</td>
<td>7 5 5 .3</td>
<td>1 0 3 2 .3</td>
<td>7 9 7 .3</td>
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<tr>
<td>Coal</td>
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<td>3 4 .4</td>
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<td>Oil</td>
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<td>9 4 8 .5</td>
<td>6 7 9 .8</td>
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<tr>
<td>— per cent from Middle East</td>
<td>6 0 .9</td>
<td>6 6 .7 4</td>
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<td>Gas</td>
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<td>6 2 .0</td>
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<td>1 4 1 2 .8</td>
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<tr>
<td>Total</td>
<td>6 0 5 .0</td>
<td>8 9 5 .3</td>
<td>6 7 7 .8</td>
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<td>Oil</td>
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</tr>
<tr>
<td>Net Imports:</td>
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<td></td>
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<tr>
<td>Total</td>
<td>2 8 7 .7</td>
<td>5 5 4 .0</td>
<td>4 9 2 .5</td>
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<tr>
<td>Coal</td>
<td>3 8 .9</td>
<td>5 3 .9</td>
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<td>Oil</td>
<td>2 4 7 .5</td>
<td>4 7 6 .2</td>
<td>4 0 7 .6</td>
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<tr>
<td>— per cent from Middle East</td>
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<td>7 7 .2 8</td>
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<td>8 0 .8 9</td>
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<td></td>
</tr>
<tr>
<td>Gas</td>
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<tr>
<td>— value at market price (US$ billions)</td>
<td>2 8 .6 7</td>
<td>3 2 8 .1 2</td>
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Notes: (a) Relying to a large extent on forecasts constructed by Member country governments and corresponding to the energy situation prior to October 1973.
(b) Corresponding to a price of $6 (in constant 1972 US dollars) per barrel of Arabian API 34° crude oil f.o.b. at the Persian Gulf.
(c) Corresponding to a crude oil price of $9 per barrel. 1 barrel of crude oil = 0.14 tons of oil equivalent.
(e) 1970 figures.

and Australian trade over the period 1960-75. The United States overtook the United Kingdom as Australia's principal import supplier in 1966 and, by 1973, Japan had moved up to second place, displacing the United Kingdom yet again (see Table 4.11). The Pacific area accounted for 55.8 per cent of all Australian import supplies in 1974 compared with 37.3 per cent in 1960. In export trade the shift was rather less striking but no less important. Japan was Australia's largest export market continuously from 1966 onwards and her share grew steadily until 1974. Pacific export trade to Australia rose from 41.6 per cent of the total in 1960 to 67.7 per cent in 1974 (see Table 4.10). Like Australia, Japan's trade is heavily concentrated in this same region (see Tables 4.12 and 4.13). In 1974, developed and developing countries in the Pacific area accounted for 60.2 per cent of Japanese exports and 53.8 per cent of her imports. Thus, despite broader multilateral interests and obligations, the international economic policies of the two countries bear a heavy regional stamp.

It is notable that continued and vigorous growth of trade among the five advanced Pacific countries has occurred without the framework of special institutional arrangements such as those which encouraged the growth of transactions within the European Community or the Organisation for Economic Co-operation and Development. Trade among the United States, Canada, Japan, Australia and New Zealand increased by 97 per cent between 1958 and 1965, and by 3.4 times between 1965 and 1973. The ratio of trade between them to their total trade rose from 32.5 per cent in 1958 to 42.9 per cent in 1973. Over the same years, trade within the European Community grew more rapidly than trade between the advanced Pacific countries, particularly during the period 1958 to 1965. The ratio of intra-EEC trade to total trade of the European Community countries rose from 30.1 per cent in 1958 to 48.9 per cent in 1973. The high rates of intra-regional trade growth within the EEC can be attributed in significant part to the pressures for political integration which have been closely associated with the development of closer economic ties since World War II. These political pressures facilitated the development of special institutional trading arrangements within the Community. Thus it was to be expected that the growth of trade between members of the Community would have been considerably stronger than that between the five advanced Pacific countries. The striking feature of this comparison is that trade between the advanced Pacific five constitutes a similarly large proportion of their total trade and that trade between them has grown relatively strongly without the framework of special government
Table 4.10 Australia: Distribution of Exports by Major Trading Region 1950—74 (percentage of total value)

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<td>27.45</td>
<td>28.25</td>
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<td>2.77</td>
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<td>Total Australian Exports (US$m)</td>
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</tbody>
</table>

Notes:  
(a) developing countries in South-East Asia, East Asia (excluding China) and the South Pacific  
(b) South Asia  
All figures are for calendar years.  
Source: Calculations by the Australian Department of Overseas Trade, based on International Monetary Fund, *Direction of Trade* (various issues)
Table 4.11 Australia: Distribution of Imports by Major Trading Region 1950—74 (percentage of total value)

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Total Australian Imports (US$mn)

|                | 1 551.3 | 2 139.1 | 2 598.6 | 3 713.1 | 3 568.1 | 3 858.3 | 4 302.1 | 4 463.4 | 4 993.5 | 5 143.9 | 5 056.5 | 7 563.1 | 12 287.1 |

Notes: (a) developing countries in South-East Asia, East Asia (excluding China) and the South Pacific
(b) South Asia
All figures are for calendar years.

Source: Calculations by the Australian Department of Overseas Trade, based on International Monetary Fund, Direction of Trade (various issues)
Table 4.12 Japan: Distribution of Exports by Major Trading Region 1960—74 (percentage of total value)

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Notes: · (a) developing countries in South-East Asia, East Asia (excluding China) and the South Pacific
(b) South Asia
All figures are for calendar years.

Source: Calculations by the Australian Department of Overseas Trade, based on International Monetary Fund, Direction of Trade (various issues)
Table 4.13 Japan: Distribution of Imports by Major Trading Region 1950—74 (percentage of total value)

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Notes: (a) developing countries in South-East Asia, East Asia (excluding China) and the South Pacific
(b) South Asia
   All figures are for calendar years.

Source: Calculations by the Australian Department of Overseas Trade, based on International Monetary Fund, Direction of Trade (various issues)
There are important differences between Australia's and Japan's trade with developing countries in the Western Pacific. Australia is more heavily involved in South East Asia (Indonesia, Singapore, Malaysia and Thailand) and in the South Pacific (including Papua New Guinea) than in East Asia. Japan, however, is involved more heavily in a wider area stretching from North and South Korea, Taiwan, Hong Kong and China to the countries of South East Asia and Papua New Guinea.

The structure of Japanese trade with Western-Pacific developing countries reflects the important general characteristics of regional economic relations. On the import side, foodstuffs and raw materials chiefly from South-East Asia make up 39 per cent of Japan's total imports while a further 37 per cent is taken up by light manufactured goods chiefly from East Asia. The structure of these trade flows is closely related to the structure of Japanese foreign investment flows and development assistance to these areas. At the same time over 60 per cent of Japan's exports to these developing countries consists of machinery and equipment. Australian exports to these areas include machinery and equipment, foodstuffs and a growing amount of raw materials and her imports from the region have a similar structure to those of Japan. Development assistance flows are not as directly related to trade flows as they are in the case of Japan.

The developing countries of the Western Pacific, like Australia, relatively well endowed with natural resources, have been beneficiaries of expanding resource markets through the sixties and of the commodity price boom of the early seventies. The long period of world trade growth, and especially the expansion of the nearby Japanese market, created opportunities for several new industries, including mining, timber and agricultural products. The new industries and the older primary industries both enjoyed huge windfall gains in 1973 and 1974. All are now suffering difficulties through the current world recession.

Exports from resource-rich developing countries in the region (Indonesia, Singapore, Malaysia, Thailand, the Philippines and Papua New Guinea) have risen marginally more than those from developing countries as a whole: by 214 per cent compared with 209 per cent between 1964 and 1973. In these resource-rich countries, export growth was most rapid in those commodities in which Japanese import specialization was strongest: petroleum, timber, mineral ores and fish. During that period Japan's share in this group of countries' exports
increased by 63 per cent.\textsuperscript{34} The economic prosperity of Japan and many neighbouring developing countries was closely linked through trade in resource-based commodities.

Japan's aid and investment have contributed to the growth of productive capacity in those Western-Pacific countries with the resources or level of industrial capacity to capitalize on the trade opportunities that were opening up with Japanese economic growth. It contributed to rising incomes and government revenues, drawing people away from traditional into specialized economic activities in Indonesia, Malaysia, Thailand and the Philippines, as well as the countries of East Asia. Development plans came to be premised on new international opportunities. But there has been a reaction against the massive presence of Japanese trade and investment in all of these countries. Feelings of 'dependence' are common in these circumstances and were complicated greatly by political processes in some countries. Perception of exploitation would lessen if the quality of the financial resource flows were upgraded and the aid relationships were broadened to include aid flows in which there were no direct donor-country interests. These problems are analysed more closely in Chapter 9 below.

Since early 1974, many commodity prices have fallen dramatically, private investment has become more cautious and demanding, investment funds from official sources have been more scarce and some products of resource-based industries have become difficult to sell at any price. Energy resources have remained valuable, although there are doubts even of the profitability of energy investments should the recession continue long. These essentially short-term developments could have a profound effect on attitudes towards the long-term economic relationship if they are subject to continued policy neglect. Short-term instability problems and their interaction with long-term development objectives are perhaps an even more important policy problem in Japanese relations with the developing countries of the Western Pacific than they are between Australia and Japan.

In this context the overwhelming importance of the resource trade in intra-regional relations deserves particular note. As the short-term problems increase and the developed economy partners are apparently unable to revert rapidly to stable growth paths, the developing resource-rich countries face extremely difficult problems of instability and uncertainty of foreign exchange earnings and government revenues. The resource-poor developing countries also face the problems of mounting oil-import bills, declining world markets for their light manufactured export goods and diminishing supplies of vital inputs.
The current demands for a new international economic order may be seen as attempts to reduce these vulnerabilities as well as to exercise the newly perceived bargaining power of the resource producers.

Australian and Japanese responses to those demands will shape future relationships within the region, not only the relationship between a large resource consumer and small resource producers but also the relationship between Japan and Australia, a resource producer itself. New alignments of small and large resource producers might also take place.

Australia’s approach has so far been cautious in respect of moves towards cartelisation of resource supplies. While calling for ‘a fair price in the world markets’ it was obvious, for example, that Australia had reservations about joining the International Bauxite Association. When the announcement of Australia’s participation was made in September 1974, the then Minister for Overseas Trade, Dr Cairns, said:

The Australian Government is firmly committed to seeking closer relations with the developing countries and to assist them in their economic and social development... Australia’s participation in the International Bauxite Association was seen as contributing to this objective. Australia’s membership is also consistent with Australia’s resources policies of fair prices, balanced development and enlarged opportunities for Australians to share in the ownership and control of our natural resources... the Agreement provides specifically that the Association take account of the recognized interests of consumers in obtaining adequate supplies of bauxite at reasonable prices. Australia has made its position clear that there should be no question of resource producers exploiting resource users...

An almost identical formula was used in announcing Australian participation in the Association of Iron Ore Exporting Countries in July 1975. It was stated that ‘the Association will not in any sense be a cartel type of producer’s organisation and that there are not provisions in the Agreement which would impose an obligation on individual member countries to be a partner in any collective action’. Australia might, therefore, be in a position to balance the legitimate claims of the poorer nations with the obvious need for greater consultation between user and producer nations. It will, however, require careful articulation of Australia’s view of producers’ associations before there can be confidence in this role.

Japan, for her part, has uncompromisingly contended that these arrangements are not desirable and that they will prove damaging to the
longer-term interests of the resource producers. At the same time she has been willing to accommodate to new bargaining situations and trading arrangements, as evidenced in the vacillation of Japanese policies during the early phase of the oil crisis.38

In a word, the oil crisis and the shift-around in world resource trade over the last few years have had a profound effect on the conduct of international economic policy. The focus has shifted to claims for a new world economic order in which the world trading and monetary systems are redirected towards redressing the imbalance of economic power between developed and developing nations and facilitating the development of the disadvantaged. There have been differences in perspective on these questions between Australia and Japan in the past and they are bound to be a continuing issue in the future. The most important issue on which these differences in approach to reordering the world economy could potentially become significant is that of commodity agreements and commodity stabilization arrangements. There is a long tradition of such proposals in Australia and the 1975 Economic White Paper of the Japanese Ministry of International Trade and Industry discusses possibilities for commodity stockpiling in Japan. These issues are discussed further in Chapters 5 and 8.

Because intra-regional trade is so large among Pacific countries, a recurring theme in Japan’s approach to foreign economic policy has been the need to develop a secure framework for the conduct of economic relations in this region. The proposals for a Pacific Free Trade Area in the mid-1960s were also in part a Japanese response to concern about the extension of European protectionism. The renewed interest in regional economic arrangements at the beginning of the 1970s was again in part a consequence of fears of a retreat to protectionism and blocism at this time. Further, some concern is emerging with respect to the conduct of the resource trade in the region and the hindrances to exports in manufactured goods from developing countries. The recent recession has demonstrated the existence of mutual vulnerabilities in regional trade in these areas.

The possibility of regional solutions to these problems depends on the condition of the world economy as well as on particular regional perceptions of coincidence of interest. In the context of approaches to the new international economic order a regional type of initiative may prove useful.

III Implications of the Current Situation

There is a need to re-examine the bilateral economic relationship
between Australia and Japan as both countries enter new phases in their economic growth and their economic relations with the rest of the world. The world trade and monetary system is now at a major turning point in consequence of strains induced by the significant changes in structure of world trade and payments that have taken place over the post-war years. In addition, the recent pressing problems deriving from the shift-around in the energy and resource goods trade and world wide inflation and recession have been linked to concerns about the limits to growth and an oil crisis exacerbated by the politicization of the oil trade. These long- and medium-term global developments are of special concern to the Western-Pacific region where Australia and Japan are closely involved through aid, investment and political ties. It is clear that the future Australia-Japan bilateral relationship will have to be shaped within this evolving international and regional economic environment.

These long-term international developments, together with domestic concerns relating to pollution and employment, are the major cause of Japan's interest in the relocation of industrial activities and in intra-industry trade specialization. The long-term implications of the growing interdependence between Japan, Australia and the region require cognizance of a need for balanced development of all economies of the region. Thus stable and restructured growth in the larger economies together with expanding trade, aid and investment activity, can be transmitted effectively into favourable long-term opportunities for smaller economies, especially through transformation of the resource trade. These questions are opened up in Chapters 6, 8 and 9.

At the same time, the intensity of bilateral and regional trade relations as well as the sheer size of Japan in world and regional markets also results in important vulnerabilities and potential costs. These costs can be very obvious in the short term because of trade and economic instability and they can translate into long-term costs of considerable importance by resulting in a withdrawal from interdependent economic relations. Both these problems need to be examined carefully in the context of bilateral and regional trade and are explored in Chapters 5 and 7.

The realities of the current world recession and the halt to growth in Japan and some uncertainties about Australia's social and economic development priorities will make the coming period a challenging one for the conduct of Australia-Japan economic relations. These challenges are not, of course, the product of the last few years' problems alone, although they have been underlined by these problems: they are a
product of the huge transformation that has been taking place in the structure of the Australia-Japan relationship since 1957, and what has, in the last seven years, been perhaps too much neglect of policy towards these changes in both countries. There has also been too little serious policy attention given to the problems of relations with other countries in the region. So significant internationally is the established relationship between Australia and Japan that its role needs to be now more carefully defined. In this context, a fresh look needs to be taken at regional economic consultative arrangements and regional economic co-operation, which could be an increasingly important component in both countries' overall foreign economic policy approach. These questions are considered fully in Chapter 9. A preliminary task is to consider more precisely the short- and long-term aspects and implications of interdependence in the Australia-Japan relationship.

NOTES

2. See below, Chapter 9 *passim*.
3. See pp. 76-8 and 80 below.
4. Estimated from information provided by company sources. Statistics of Australian bauxite and alumina exports are not published officially.
5. The term complementarity can be defined precisely and statistically to measure the importance of commodity structure in determining the trade shares between two trading partners. See Peter Drysdale, ‘Australia, Japan, New Zealand: The Prospect for Western Pacific Economic Integration’, *Economic Record*, September 1969.


14. In our study we have not been able to examine the impact of shipping arrangements upon the development of the Australia-Japan trading relationship. This is an important subject for future study.


16. This history of concern over the resource issue is brought out in Okita, 'Japan's High Dependence on Natural Resource Imports', pp. 5-6 and George, 'Japan's Oil Import Policies', pp. 6-15.


19. See James, 'The Assessment of Adjustment Problems in Australian Trade', p. 1 ff, for an outline of the history of tariff liberalization in Australia.

20. Crawford, Hemmi, *et al.*, 'Australian Agriculture and Trade with Japan', Chapter III.


22. Crawford, Hemmi, *et al.*, 'Australian Agriculture and Trade with Japan', Chapter III.

23. Peter J. Lloyd, 'Japan and Australia in the Multilateral Trade Negotiations', *Australia-Japan Economic Relations Research Project, Research Paper*, Australian National University, Canberra, March 1975, provides the most thorough review of these conflicts in trading interests.


28. The variable deposit requirement scheme was introduced by the Labour government as a means of mopping up excess liquidity in the economy. Under that scheme, a percentage of overseas borrowings was deposited with the Reserve Bank, thus effectively raising the interest payable on the usable portion of the loan. H. W. Arndt, 'Foreign Exchange Aspects of Australia-Japan Economic Relations', Australia-Japan Economic Relations Research Project, Research Paper, Australian National University, Canberra, June 1974, pp. 5-6.


31. The Pacific area here includes the developed countries (United States, Canada, Japan, Australia and New Zealand) and the Western Pacific developing countries in South East Asia, East Asia (excluding China) and the South Pacific.


33. However, Australia did have a relatively large trade with China before that country was opened up to a more extensive international contact.


35. Speech by the Prime Minister, Hon. E. G. Whitlam, to the American Australian Association, New York, 1 August 1973.


37. Press release, Hon. J. F. Cairns, Minister for Overseas Trade, Association of Iron Ore Exporting Countries, Canberra, 3 July 1975.

38. See George, 'Japan's Oil Import Policies', for a careful survey of Japan’s response to developments in world oil trade.
SHORT-TERM ASPECTS OF INTERDEPENDENCE

I Macro-economic Control and Harmonization Implications
As already noted, the established level of economic interdependence between the Australian and Japanese economies presents problems for short-term economic management in both countries. In what follows, these problems and their implications are spelt out with respect to both the control and stabilization of the general level of economic activity and also the effects on particular vulnerable commodity markets.

Vulnerability to the transmission of economic fluctuations between the two economies is, of course, not symmetrical because of their disparate relative size. Japan’s gross national product is about five times as large as that of Australia although Australia still enjoys higher per capita incomes. Thus, small changes in the large economy may have large repercussions in the small economy, whereas even large changes in the small economy are likely to have only small repercussions in the large economy.¹ For this reason the principal focus in discussion is from the point of view of problems in the Australian economy. However, there are aspects of Australian economic management of vital interest to Japan and they are examined also.²

Computer simulation studies suggest that, when the growth rate of the Japanese economy falls 10 per cent below its normal growth path, Australian exports to Japan fall, after a short lag, by half as much again, or 15 per cent below their normal growth path. The events of 1974 and 1975 are consistent with this pattern. By and large Australian exports to Japan do not originate from industries which employ relatively large amounts of labour, so that even when the multiplier (or secondary) effects of a fall in exports are taken into account, unemployment in Australia will not be increased greatly as a result of a Japanese slump. The computer simulation studies suggest that unemployment in Australia will rise by 0.5 of a percentage point as a result of a fall of 10 percentage points in the rate of growth of the Japanese economy.

Professors Moriguchi and Nevile suggest that even if one makes the extremely pessimistic assumption that Australian mineral investment declines by two-thirds in response to a 10 per cent slump in the
Japanese rate of growth, after three years, Australian non-farm national product would fall only about 3 per cent below the level it would otherwise have reached. In this extreme case unemployment would increase by less than 0.7 of a percentage point above the level that would actually have occurred in the absence of such a severe Japanese slump.

Such a rise in unemployment is not insignificant compared with changes in the rate of unemployment in Australia. In 1961-62, the average level of unemployment was 1.2 percentage points above that of the previous year. Apart from that case the largest increase in unemployment in any year from 1953-54 to 1973-74 was 0.6 of a percentage point. In 1974-75 unemployment again increased by an abnormally large amount, but that year and 1961-62 are the only two years in which the rise in unemployment was much greater than 0.5 of a percentage point. Thus a change of 0.5 of a percentage point is as big as any normal change in unemployment in Australia, but it is not so big as to cause undue problems for stabilisation policy. Chart 5.1 sets out the relationship between movements in Japanese industrial production and Australian exports to Japan. It suggests that generally Japan’s imports of metallic products from Australia have been rather less variable than total world imports of metallic products.

A fall in exports to Japan will affect the Australian balance of payments as well as national income and employment. When the level of economic activity is at, or close to, full employment, the Australian economy has a very high marginal propensity to import. If nothing is done to offset a decline in national income and employment caused by a fall in exports, Australian balance of payments problems are not likely to be very great, even though capital inflow declines. The more successful the Australian authorities are in offsetting the effects on employment and gross national expenditure of a decline in exports, the greater the balance of payments problems will be for Australia.

If there is no unusual build-up of export pressure from Japan and the Australian authorities do nothing to offset the effects of a Japanese slump on Australian national income, the resultant fall in Australian exports will produce no current account balance of payments problems for Australia. The balance of payments on current account will actually improve somewhat as, with the decline in national expenditure, imports will fall more than exports. The more pessimistic the assumption that is made about mineral investment the more gross national expenditure, and hence imports, decline and the more the balance of payments on current account improves. Even with the relatively optimistic
assumption that mineral investment falls by only a third there will be a slight improvement in the balance of payments.

The picture changes somewhat if the effects of a decline in Australian mineral investment on capital inflow are taken into account, but not enough to suggest that Australia would face serious balance of payments problems. If 50 per cent of mineral investment is directly financed by capital inflow, capital inflow will fall by an amount equal to half the fall in mineral investment. Under these circumstances a slump in Japan will lead to a fall in Australian exports and capital inflow greater than the fall in imports. However the net change in foreign payments would not be very great, according to the Moriguchi and Nevile calculation.\(^4\) If the growth rate of the Japanese economy fell 10 per cent below its normal growth path, the drain on Australian reserves over a three-year period would be between A$100 million and A$300 million, depending on the assumption made about mineral investment. The more pessimistic this assumption, the better the balance of payments outcome, but the difference between the effects of optimistic and pessimistic assumptions is slight.

A more serious situation, from the Australian balance of payments point of view, would arise when Australian authorities were successful in offsetting any potential fall in economic activity and employment in Australia, due to a decline in exports to Japan, so that Australian imports do not decline. In this case, assuming that real Japanese gross national product fell 10 per cent below its actual level for three years, by the third year total Australian exports would be 4.5 per cent below their original level and capital inflow might also be down by an amount equal to 3.5 per cent of the total value of exports. Thus the loss of foreign exchange would be equal to 8 per cent of export income or between 10 and 25 per cent of likely Australian foreign exchange reserves, depending of course on the balance of payments history of the previous few years.

The other circumstance in which the Australian balance of payments could be adversely affected by a Japanese slump would arise if the slump led to a strong build-up in export pressure in Japan and import competition in Australia. This would add to the drain on Australia's reserves, but it is more likely that special import-protection measures would be taken in Australia in response to this kind of pressure long before they were really necessary for balance of payments reasons. This is because such pressures would affect particular industries severely, be seen to be responsible for deteriorating employment conditions, and be readily translated into protectionist political action.
Chart 5.1 Fluctuations in Japanese Industrial Metals Production and Imports of Raw Materials from Australia 1965—74

INDUSTRIAL PRODUCTION

METALS PRODUCTION
Notes:

These graphs have been constructed by fitting a least squares regression line to raw data and calculating the residuals of the observations over the estimates as a percentage of the estimates. The percentage variations are plotted here. Except where otherwise noted the regression fitted was a straight line with one independent variable, time. The influences on the dependent variable are, of course, much more complex than this representation suggests. However, we are interested here, and in Charts 2 and 3, only in identifying fluctuations of related data around the most basic trends. The implied relationships between the sets of data on each graph are simple but nonetheless illuminating. World import figures, where they occur, refer to OECD countries imports from the world, as they appear in Organisation for Economic Co-operation and Development International Trade Statistics, Series C, Paris.

Industrial Production: Production and inventories data is quarterly over the whole period. The index of industrial production and producers’ inventories of finished goods data came from the Ministry of International Trade and Industry’s Indexes of Industrial Production and Indexes of Producers’ Inventories of Finished Goods which appear in Bank of Japan, Economic Statistics Annual, Statistics Department, Bank of Japan, Tokyo. These indexes are constructed with 1970 equal to 100 and based on value added information.

‘Japan’s imports from Australia’ data was originally in value (yen) terms, and is quarterly over the whole period. An attempt was made to fit the data to a log linear regression line but the fit was not sufficiently superior to warrant its use. However, with the linear trend line, information for the first four quarters showed very large positive fluctuations which did not fit the scale of the diagram. That information, therefore, does not appear. World imports of raw materials was in value terms and half yearly, covering the SITC categories 2 and 4.

Metals Production: Production and inventories data came from the indexes as above, calculated according to the weights which also appear in Bank of Japan, op. cit. All figures are quarterly, except for world trade figures which are half yearly, and in value terms. ‘Metallic imports’ was defined to cover SITC categories 28, 67 and 68. ‘Japan’s metallic imports from Australia’ was fitted to a log linear regression which gave a significantly better fit in terms of the size of the residuals.

Sources:

Recent experience in Australia, particularly in motor vehicle imports, provides evidence of this response.

The most likely situation would be one somewhere between the two extremes. If Australian policy offset some of the effects of a Japanese slump on Australian economic activity and employment and there were a build up in Japanese import competition there could be a loss of foreign exchange of around 8 per cent or more of the value of exports. While such a loss may well be important, in normal times it should not pose insuperable problems for economic management in Australia.

The major stabilization problems for Australia arising from Japanese-Australian economic interdependence are likely to be at the individual industry level. However, the macro-economic problems are of some significance and the greater either the unemployment or balance of payments aspects of these problems, the harder it will be to overcome problems at the individual industry level and the greater will be the temptation to revert to ad hoc protectionist policies. Japan, in her short run economic management, needs sensitivity to the effects elsewhere of relatively small shifts in her own economic activity.

The aspect of Australian macro-economic performance and economic management of most interest to Japan is the course and control of inflation. Australia is a very important source of supply for a number of commodities that are of critical importance to the Japanese economy including iron ore, coal, bauxite, wool and beef. While the mineral commodities are mainly sold under long term contracts in which the price is not affected by changes in Australian domestic prices, in the long run the prices of mineral exports are not completely independent of price movements in Australia. In the case of farm products the export price may reflect price movements in Australia in the short run as well as in the long run because of the supply effects on farm output. Japan has a real interest in the rate of inflation in Australia as well as any likely implications of that rate for the exchange rate of the Australian dollar.

Australia’s inflationary experience in 1974 and 1975, with rates of inflation of around 16 to 17 per cent, was not encouraging for Australia-Japan trading prospects but there has been some success with measures to reduce inflationary pressures. In general, in Australia between 1970 and 1974, the most important cause of the acceleration in the rate of inflation was increases in award wage rates that were much greater than increases in prices. Indexation of award wage rates to prices, introduced in 1974, did effect a degree of wage restraint despite some wage fixation occurring outside the indexation guidelines. In 1976, the
Australian Arbitration Commission, on the advice of the government, began to effect further wage restraint by reducing the extent to which indexation will apply. These measures, together with some controls over price increases and a reduction in the rate of growth of government expenditure, are succeeding in reducing the rate of inflation.

Because both countries have a vital interest in resolving quickly problems arising from sudden changes in each other's policies inspired by short-term production, employment, or balance of payments considerations, care will have to be taken in the application of any particular measures. Volatility in Australia's natural-resources policy is a serious concern for Japan. Volatility in Japan's capital-outflow policies and agricultural protectionism is a serious concern for Australia. At the same time, volatility in third countries, especially the United States, and each country's response to it, is of concern to the other. If there is better and more frequent consultation between policy makers in Japan and Australia, effective stabilization against short term international disturbances through the use of exchange rate, monetary, fiscal and commercial policies can be more easily achieved. In addition, with such consultation, short-term policy changes adversely affecting long-term economic interests of the other country might be avoided. It is clear that both Japan and Australia will benefit from successful short-run economic management in the other country.

Given exchange rates which are either fixed or flexible to a limited extent, some adjustment of domestic stabilization policies will be necessary among closely interdependent trading partners to insulate their domestic economies from significant external disturbances. In the case of Japan and Australia adjustment or harmonization in macro-economic policies will remain a fairly one-sided affair with Australia having to tune its policies to offset disturbances from Japan. However, these disturbances are likely to be manageable if they are properly monitored. Although the potential impact of disturbances from Australia, especially inflationary disturbances on key sectors of the Japanese economy, will be of some importance, they will not generally present the same sort of macro-economic management problems that Australia faces from disturbances in Japan.

More flexible exchange rate management can be used to give more freedom to authorities in the use of domestic stabilization policy instruments, such as fiscal and monetary policies. The question of an appropriate exchange rate regime and the question of what form of international monetary association there should be between Australia and Japan are taken up in section III.
One important aspect of Australian-Japanese interdependence is that short term changes in demand in one country will tend to be reflected by volatility in individual commodity markets in the other. For example, instability can be induced by sudden supply changes as a result of seasonal variations, industrial action or policy factors. The problem of supply shortages threatened Japan in the world-wide commodity boom of 1973, especially in agricultural goods, such as soya beans, and raw materials, such as timber. In the sixties the Japanese nickel industry was seriously disturbed by industrial trouble in Canada. And, of course, the oil embargoes of 1973-74 presented this threat in a particularly extreme form. Volatility in particular commodity markets can also be induced by demand fluctuations. Changes in the fortunes of the Japanese woollen textile industry are reflected in variations in Japan's demand for raw wool, and these are a significant destabilizing influence in the Australian wool market (see Chart 5.2).

The link through trade between demand conditions in one country and commodity markets in another may present problems when market shares are heavily geographically concentrated. However, where a demand shortfall in either Japan or Australia adversely affects particular domestic import-competing industries, there is liable to be strong pressure for policy measures to shift the reduction in demand disproportionately on to suppliers of imports. Thus, policy responses to demand changes may greatly exaggerate the problems of trade instability. This factor was evident in recent experience in Australian-Japanese trade, with weakening of Australian demand for a range of importable goods in 1974, including motor vehicles, electrical goods and textiles. These problems were combined with other recession effects. At the same time as Australian demand for importables was declining, there was a rapid build-up of export pressure from Japanese industries because of the slump in Japanese domestic demand. Australian import competing industries were faced with more than usually competitively priced imports. The result was a substantial increase in protectionist restrictions in Australia which, although they were explicitly of a short-term nature, adversely affected Japanese producers.

Detrimental trade effects arising from a demand slump in one country can also be exacerbated by policy action which is not directly related to cyclical changes in the economy. For example, in 1974 the Japanese government placed a ban on the import of beef primarily to induce higher domestic beef production. This was in response to domestic political demands that, in order to achieve greater security of

**WOOL**

- World imports of greasy wool
- Japanese production of wool yarn
- Japanese imports of Australian greasy wool
- Japanese inventories of wool yarn

**BAUXITE/ALUMINIUM**

- Japanese production of aluminium
- Japanese imports of Australian bauxite
- World imports of bauxite

Data for each year from 1965 to 1974 is shown graphically.
Notes: These graphs show percentage variations from a trend line calculated according to the method outlined in the notes to Chart 1.

Wool: The world import data is half yearly for the period 1965 to 1973. More recent data was not available at the time of compilation. Wool yarn production data is annual for 1965-1970 and quarterly thereafter. All other data is quarterly. All data was originally in quantity terms. Data for the first quarter of 1965 for the inventories function did not fit onto the scale of the diagram and does not appear.

Bauxite: World import data is half yearly, 1965-73. Aluminium production figures are annual for 1965-1970 and quarterly thereafter. All figures were originally in quantity terms. The trend line for Japanese imports of Australian bauxite was estimated using a log linear regression. Aluminium stocks data was fitted to a linear regression line but was considered not to be sufficiently well fitting to be included.

Coal: World import data is half yearly, 1965-1973. Iron and steel production data is annual for 1965-1970 and quarterly thereafter. Coal data was originally in quantity terms. Iron and steel production and inventories data were taken from the Ministry of International Trade and Industry’s Indexes of Industrial Production and Indexes of Producer’s Inventories of Finished Goods which appear in Bank of Japan, Economic Statistics Annual, Statistics Department, Bank of Japan, Tokyo. These indexes are constructed with 1970 equal to 100 and are based on value added information.

Iron ore: World import data is half yearly, 1965-1973. Iron ore import data is quarterly and was originally in quantity terms. Iron and steel data was as above. An attempt was made to fit the Japanese imports of Australian iron ore data to a log linear regression line but the result was a marginally worse-fitting line and the straight line was chosen in preference.

Chart 5.3 Fluctuations in Production, Inventories and Exports for Selected Japanese Industries, 1965-74.
Notes:

These graphs show percentage variations from a trend line calculated according to the method outlined in the notes to Chart 1.

Iron and steel: Production and inventories are as in the notes to Chart 3. All other data were in value terms. 'Japan's Exports to Australia' was fitted to a log linear trend line. An attempt was made to fit the 'Total Japanese Exports' data to a log linear line but the resulting scale did not fit with the other functions appearing in the graph.

Electrical machinery and apparatus: Production data were based on the Ministry of International Trade and Industry's Index of Industrial Production which appears in Bank of Japan, Economic Statistics Annual, Statistics Department, Bank of Japan, Tokyo. Unfortunately comparable (SITC category 72) inventories data were not available. 'Japan's Exports to Australia' data were half yearly, from Organisation for Economic Co-operation and Development, International Trade Statistics, Series C and were unavailable on a comparable basis after 1972. All data not in index form were in value terms. Both sets of export data showed large positive fluctuations for the first four quarters, which were outside the scale of the graph.

Textiles: Production and inventories data are annual from 1965 to 1970 and quarterly thereafter. They were based on the Ministry's Indexes of Industrial Production and Producer's Inventories of Finished Goods, as above. Textiles were defined to include SITC categories 26, 65 and 84. A large positive fluctuation in Japan's exports to Australia in the third quarter (1965) was outside the scale of the graph.

Motor vehicles: All data were quarterly and were in quantity terms (numbers of vehicles). Only passenger vehicles (SITC category 732-1) were included. All data were fitted to log linear regression lines which in all cases produced an extremely good fit.

Sources:

food supplies, Japan should become less dependent on outside sources and should work towards a higher self-sufficiency ratio in food production. Japan’s policy response to domestic pressures for self-sufficiency helped create a far greater adverse effect on the Australian pastoral industry than the weakening of the Japanese market alone would have induced.

In some measure, this kind of policy response is inevitable where the sales of home producers are confined to the domestic market. For internationally competitive activities, with substantial export sales, fluctuations in domestic market conditions will, to some extent, be offset by reverse movements in export markets. Consequently a shortfall in domestic demand will produce less, and more resistable, pressure for trade restrictions. The policy-induced aspects of market instability due to interdependence are therefore likely to be reduced the more both Australia and Japan move away from protecting activities which are inefficient by international standards. Nowhere is this seen more clearly than for markets in which import instability is institutionalized in the protective mechanism, such as the beef market currently in Japan.

The principal danger perhaps is not that there are short term external disturbances through trade, but that arbitrary and abrupt actions by either government are likely to be harmful in themselves, especially when they have been taken, as so often seems to have been the case, in ignorance of the underlying facts. Such actions are likely to be important in reducing confidence and the desire to co-operate and grow through mutual interdependence. These observations underline the need for high-level monitoring and review procedures. Such policy consultation should involve assessment of movements in important macro-economic indicators as well as assessment of developments in particular industrial sectors of importance in the trade between the two countries. Disputes over the application by either country of short-term safeguard measures against rapid changes in import competition for particular industries, would be reduced or even avoided altogether if adequate and enforceable rules relating to notification, consultation and application were introduced. Though such safeguards are currently the subject of negotiation under the multilateral round of negotiations, there is every reason why Australia and Japan should agree to regularise safeguard measures bilaterally and not await the outcome of these negotiations.

The link between fluctuations in commodity demand in one country and market instability in another appears to present more problems for
Australian producers than for Japanese producers. In general, the Australia-Japan trade is characterised by much larger export shares and markets for Australian exporters to Japan than for Japanese exporters to Australia (see Tables 4.1, 4.2, 4.3 and 4.4). A much larger proportion of Australian iron ore is exported and a much larger proportion of exports is directed to the Japanese market than is the case in the reverse direction for exports of, say, motor vehicles from Japan to Australia. This is particularly so where the degree of bilateral monopoly in the market situation is significant. The existence of bilateral monopoly requires that, to some extent, Australia and Japan find it to their mutual advantage to trade with each other rather than with third countries12 and the factors contributing to it are a variety of trade resistances, such as transport costs and ownership ties.13 In the present context, a degree of bilateral monopoly in the market situation will imply that it is costly and difficult, in the short term at least, to reallocate trade to alternative partners and to diversify rapidly against stable demand in the particular trade.

On the other hand, for commodities, such as wool, coal, iron ore, bauxite and alumina, the share of Japanese imports coming from Australia is so large that disturbances from the supply side are potentially extremely damaging to Japanese output, employment and incomes, perhaps more so than Japanese demand-induced instability would be for Australia. But, despite some climatic seasonality and labour disputes, supply instability is not a noticeable characteristic in the trade.

For some important commodities exported from Australia to Japan, such as wool, in which 30.7 per cent of Australian exports form 78.6 per cent of Japanese imports, there may also be more short-term flexibility for the Australian industry in the sense that switching to markets other than Japan can be effected more readily in the face of decreased demand there (see Tables 4.1 and 4.2). However, Japanese demand is now such an important component of world demand for most basic commodities that its vagaries have an important bearing on world market conditions where bilateral market fragmentation is not significant (see Table 4.5).

Historically, the Japanese economy has experienced a strong growth trend and has not been subject to such marked fluctuations in the aggregate level of economic activity as have other major industrial countries. However, the structure of Japanese industry is such that relatively small fluctuations in product demand may produce strong market pressures on suppliers of raw materials. Where the level of
geographic concentration in Australia's export trade is particularly high, it may be that the effects of Japanese demand on commodity markets cannot easily be significantly offset by reverse demand effects from other trade partners. For some commodities, then, the heavy dependence on Japan as a purchaser of exports may mean that the Australian market, if left uninsulated in any way, would be potentially more volatile than would be the case if the export market were more diversified. In this kind of bilateral monopoly market situation the gains in boom periods are likely to be high but so, too, are the costs in slack periods (see Chart 5.2).

Long-term contracts offer one means of reducing potential commodity market instability. The principal advantage to Japan of long-term contracts is that they ensure continuity of access to supplies of essential raw materials. In exchange, Japanese buyers may be prepared to forego the option of varying significantly their short-term purchases, so that the quantity traded or the rate of change in the quantity traded becomes more stable over time. Typical contracts for the supply of minerals have specified a price which is variable only in respect of inflating costs and a quantity which may be varied by plus or minus ten per cent. For Australian producers, such arrangements provide insulation against potential market instability under alternative short-term supply arrangements, and long-term advantages in terms of increased financial access and production capacity.

From the suppliers' viewpoint, the adverse effects of short-term market fluctuations can be overcome, at a cost, by holding buffer stocks. The advantage of the long-term contract is that it stabilizes price and reduces the requirement to hold buffer stocks to the level necessary to meet the relatively small quantity variations specified in the contract. The cost of holding stocks necessary to cover any further fluctuations in quantity should then, if the contractual arrangements are observed, fall upon the purchaser. There have been few occasions where variations have been necessary beyond the contracted minimum tonnages in the Australia-Japan minerals trade and where they have, for example because of a severe shortfall in Japanese demand due to a recession in steel production, both sides accepted an increased stockholding cost with the shortfall in tonnage purchased commonly being added on later in the life of the contract. The copper trade represents another case. The severe cutback in Japan's copper requirements during 1974 resulted in Japanese stockpiling, both in Japan with government assistance and, because it is less costly, at the source of supply. However, Japan has not stockpiled to the extent that would have been
necessary to honour its contracts in full, so that the quantities pur­
chased from suppliers have been severely cut. The agreement by
producers to cut back exports to the Japanese smelters by ten per cent
was secured in return for an undertaking on the part of Japanese smel­
ters to limit the export of surplus copper metal produced in Japan on
to world markets. The existence of contractual arrangements has
certainly operated as a constraint on Japan’s ability to vary demand, so
that the impact on suppliers has been smaller than would have been the
case in the absence of such arrangements.

Arrangements which tend to stabilize incomes for Australian
suppliers may, in some cases, be costly for Japanese purchasers. So long
as long-term contracts are required to ensure access to supplies,
Japanese buyers have an incentive to offer greater demand stability in
exchange for guarantees of supply continuity. Thus, for minerals and
energy goods where long-term market guarantees may be necessary to
bring resource deposits into production or where available supplies
could be contracted to alternative buyers, there is a clear incentive for
Japan to make long-term arrangements. In the case of wool, on the
other hand, where there is little prospect of Japanese buyers losing
access to Australian supplies, they have been most reluctant to discuss
long-term arrangements, preferring to be able to vary their purchases
as the market for their product dictates.15

In some respects, recent Australian practice* regarding long-term
contracts may reduce the value of their stabilising role. The require­
ment that the base price should be subject to regular open-ended
renegotiation—in some cases annually—may provide Japanese buyers
with the option to bargain down the price when faced with temporarily
weakened home demand for their products without actually reducing
quantities purchased, as well as encourage Australian suppliers to
exploit temporarily rising market situations. It may also lessen the
advantages of contracts as a stabilising influence on traded volumes.

Long-term contracts have been a valuable stabilization device in the
minerals sectors. Their advantages to both sides in this connection
should not be jettisoned for short-term advantage. It is desirable to
maintain long-term contractual arrangements consistent with providing
security of market access through new guidelines for dealing with the
changed monetary and other circumstances in which they must now be
framed. It is also desirable to develop long term arrangements, including
adequate stocking, for the growth of consumer and producer security in
food trade. Compensatory financing of stocks could provide one useful
avenue for extending these arrangements in some commodity markets.
III Foreign Exchange and International Monetary Management

A key factor in insulating or protecting against externally induced short-term stabilization problems is the exchange rate regime under which both countries operate. The international monetary system has undergone significant change in the last four or five years, and both Japan and Australia now operate within a framework of more frequent changes in exchange rates and more general movement in international parities. Although both countries have opted for less flexibility in the use of the exchange rate instrument than some other countries, this variable is becoming more crucial in short-term macro- and micro-economic management and has important implications for stabilization aspects of their bilateral relations.16

Future developments in the international monetary environment are difficult to predict precisely but, following the adjustments of exchange parities of the last few years and the accommodation of the liquidity problems associated with the oil crisis, a relatively stable though dynamic system now seems to have emerged. The United States dollar will continue to play a key role alongside the emerging European currency system, and it seems likely that the present international monetary system, modified by smaller and more frequent parity changes, will persist and remain viable. There is certainly strong official preference in Japan for the maintenance of the dollar link and a re-grouping of currencies under the United States dollar umbrella in order to achieve more stability in exchange parities than has been prevalent in recent years. Concern about the effect of exchange rate variation on the trade and investment climate and, more recently, on worldwide inflation control underlies this view. At the same time, there has been advocacy in some quarters of internationalization of the yen and the extension of its use as a major international transactions currency. Advocates of this course admit that the transformation of the yen into a significant international vehicle and reserve currency would be a slow process, and it is not likely to affect significantly the international monetary environment within which Australia and Japan operate for a good number of years.17

A broader assessment of the effects of more frequent changes in exchange rates requires consideration of the effects on the domestic allocation of resources as well as the effects on the level and structures of international trade and investment.18 It is very difficult to provide any clear-cut empirical evidence on these issues. Briefly, variations in the exchange rate can affect the relative rates of return in traded and non-traded goods activities and thus the distribution of income and,
over time, the allocation of resources. The alternative to an exchange rate change may be inflation or deflation combined with controls or both. Whether these alternatives have more or less favourable effects on resource allocation and income distribution will depend, of course, on the social and economic priorities of individual countries and the dynamics of the adjustment process.\textsuperscript{19} The important point in this context is that the mix of policies chosen to cope with these external and internal adjustment problems significantly influences the nature of the process whereby their effects are transmitted to economic partner countries. Also, it is argued, the use of more frequent changes in exchange rates for payments stabilization could discourage international trade and investment by increasing uncertainty and costs, although the alternative of direct controls on international payments of various kinds seems likely to be more damaging. The relevant point is that there are key areas in Australia-Japan trade, notably the trade in minerals, food and the resource goods, for which trade decisions have to be taken in a long-term setting in which exchange rate and other uncertainties have to be appropriately managed. These two issues are the principal focus of the remaining paragraphs in this section.

The Japanese Government’s approach has been to rely on domestic instruments to effect external adjustments and this choice of policy weapons would seem to have significant implications for Japan’s trading partners, including Australia. The major external adjustments are made effective indirectly through monetary and, less importantly, fiscal controls operating through traded commodities’ markets and through direct controls on international capital transactions.\textsuperscript{20} In 1974-75, for example, a massive shift-round in Japan’s external payments position was effected through severely deflationary monetary and fiscal policy, capital transaction controls, and short-term borrowings abroad. This choice of policy weapons had a significant impact on Japan’s trading partners, especially raw material suppliers such as Australia and the Western Pacific developing countries. The avoidance of any substantial devaluation may have been important to the conduct of international economic diplomacy under the rather extraordinary circumstances of these years, but it remains true that commonly the Japanese external adjustment mechanism works more through commodity market movements produced by deflation or inflation than through commercial policy or exchange rate measures, the latter being associated with cushioning financial flows. In terms of geographical and commodity distribution, the size and structure of commodity market shifts which are a consequence of this approach have to be taken into account in
managing economic partnerships.\textsuperscript{21}

Although the Australian approach to the management of external adjustments is of less consequence to Japan, it is not without importance. Like Japan, until very recently Australia has operated external adjustment policies within the constraint of fixed official exchange rates, and the only adjustments made until December 1972 were limited responses to pound sterling devaluations. Since long-term contracts in the minerals trade were set in United States dollars and since the rural sector saw in revaluation a threat to recovering export incomes, there was strong resistance to correcting the external surpluses of the early 1970s through revaluation. Although the exchange rate instrument has been used more positively since the revaluation of 1972, limited official exchange rate adjustments appear favoured by the Reserve Bank and the Treasury. In September 1974, a twelve per cent devaluation against the United States dollar was accompanied by a break with the United States dollar link and thenceforth the Australian dollar rate has been fixed daily against a weighted basket of the international currencies of most importance in external transactions (see Chart 5.4). The management of exchange rates is now buttressed by an extensive system of exchange controls on capital transactions.\textsuperscript{22} In the event, it was probably the extension of these controls throughout the early seventies to curb growing liquidity rather than the inflationary adjustment to external surpluses which was of most direct concern to Australia's major economic partners, including Japan. On the other hand, both the inflation and exchange rate changes of recent years present special problems for long-term contracting in the resource trade and this issue is discussed below.

There have been suggestions that the size and potential of Australian-Japanese economic relations point towards monetary union between the two economies.\textsuperscript{23} This would have the advantage of completely eliminating exchange risks in dealings between Australia and Japan, especially in the resource trade, and of facilitating direct payments settlement. But complete monetary union, or partial union in the form of a fixed Australian dollar-yen parity link, would involve a great deal of policy co-ordination, reserve pooling or central bank swap arrangements and other measures that would not seem warranted by the size or potential of the relationship and the structure of each country's interdependence with the world economy. Bilateral economic relations are not confined to the resource trade and each country has a wide network of economic relations with other countries. In particular, they both maintain close links with the United States dollar area as well as
with each other. Australia, which would have to accommodate her policies and financial arrangements most to a yen bloc arrangement, is likely to maintain a large trade with other countries (although her trade share with Japan could increase still further as suggested in Chapter 6), and will continue to conduct an overwhelmingly large proportion of her invisible trade and capital transactions with countries other than Japan. Permanently fixing the Australian exchange rate to one currency among the several of importance to her in the foreseeable
future is not a desirable policy option for Australia.\textsuperscript{24}

There remains, however, a rather extensive range of impediments to efficient financial dealings between Australia and Japan under present institutional arrangements. Their elimination or modification would minimize the exchange risks and reduce the costs of transactions between the two countries. Exchange transactions are currently handicapped by a lack of adequate forward exchange trading facilities as well as by the extensive capital transaction controls which both countries apply.\textsuperscript{25}

The exchange rate regime is of particular importance in the approach to commodity market stabilization through long-term contracting arrangements. Even in the more flexible exchange rate era of the 1970s, central bank intervention continues to have a substantial impact on exchange rates in the short and medium terms, and exchange rate changes continue to occur in discrete jumps, albeit in smaller jumps which occur more frequently than in the past. These factors may be unimportant in the long term and bilateral exchange rates may reflect bilateral differences in inflation rates in the long term, but currency protection and inflation cover are increasing concerns in the avoidance of short-term instability in real prices, which are likely to jeopardise long-term trade decisions.\textsuperscript{26}

An important objective is to separate out procedures for dealing with risks associated with currency parity changes and inflation from issues determining the real price in long-term contract pricing. The basic factor in long-term contracts is undoubtedly access. A genuine long-term contract could be seen as one which gives fixed real prices, fixed quantities and a fixed time period. In fact none of the contracts in the Australia-Japan resource trade now have all these features and most are drawn up with some provisions for flexibility. Contracts have occasionally broken down or been put under extreme stress because of this flexibility. There has been government intervention in the case of coal. There has also been negotiation over prices which is not provided for in the contract. It would seem desirable that costs and uncertainties created by inflation and greater exchange rate flexibility should be eliminated as far as possible by appropriate revisions of the terms of long-term contracts, rather than incorporated into the trade relationship through a movement towards shorter term trade arrangements. Although there are clear limits to the period over which either party can make reasonable predictions of future market trends, setting a constant real price for a period of five to seven years should not prove impracticable.
It would seem that there is no formula which can completely insulate both buyers and sellers from fluctuations in the real contract price. A number of industry and academic economists have argued that perhaps the best available solution would be to denominate the price for half the delivered tonnage in Australian dollars and the price for the other half in yen. In a world of zero inflation, but in which exchange rates vary in the short to medium term as a result of other factors, this solution would provide both parties with an assured real price for half the volume of trade, with each party accepting half the risk of loss, or chance of gain, from any change in the Australian dollar to the yen exchange rate.

The currency realignments since 1971 have highlighted the problem of currency protection in long-term contracting. However, for the future, providing adequate cover to inflation is likely to pose a greater problem in any attempt to set a long-term fixed real price. Smith has made a number of useful observations about coping with this circumstance. So long as there is a uniform world rate of inflation, and both sides can agree on the appropriate index of that rate, the only necessary amendment to the proposal for denominating half the price in Australian dollars and half in yen is that both the Australian dollar price and the yen price be linked to the inflation rate. If the Australian and Japanese inflation rates differ, however, it would be appropriate to link the Australian dollar price to the Australian rate of inflation and the yen price to the Japanese inflation rate. Real windfall gains and losses will then only arise to the extent that the Australian dollar to yen exchange rate does not adjust to the differing inflation rates, and then for only half of the contract tonnage. It is important to note that the kind of cost escalation clauses which have characterized long-term contracts in the Australia-Japan minerals trade to date do not seek to achieve this kind of inflation cover.

Once there is a problem of coping with differential rates of inflation, it is important that exchange rates should be flexible. Attempts to maintain the foreign currency value of the Australian dollar in the face of a relatively high rate of inflation in Australia will result in a real cost to exporters for that part of their trade conducted in constant value yen, and a real loss to Japanese importers for that part of their trade conducted in constant value Australian dollars.

The indexation of prices discussed above would not represent a freezing of relative prices in an attempt to escape the effects of market forces. Rather, traders would seek to set a single real price for a number of years ahead and this price would reflect their expectations as to
changes in market conditions over the period concerned. The indexation arrangements would then serve as a means of ensuring that this real price was, in fact, maintained.

Clearly, price indexation poses problems of determining the appropriate indices. As a starting point, it could be suggested that the wholesale price index in each country might be the appropriate index for prices denominated in that country's currency. However, there may be substantial scope for bargaining over the indices to be used. In a sense, division of the contract price between the two currencies, and the consequent need to adopt a Japanese index and an Australian index, might help to resolve the problem, since there would then be scope for offering concessions on the index to be used in relation to the domestic currency in return for similar concessions on the index to be used in relation to the foreign currency.

Once agreement is reached on appropriate price indices, there remains the problem that the lag in adjusting prices to inflation has a redistributive effect which disfavors the sellers. This effect can be offset by providing for a predetermined rate of price increase, with indexation only operating to eliminate deviations of the actual rate of inflation from the anticipated rate, but it is not possible to anticipate the rate of inflation more than about twelve months ahead. Thus, there would probably need to be annual meetings to discuss the appropriate ex ante rates at which Australian dollar prices and yen prices should be increased over the next year.

The alternative to the above automatic adjustments to maintain the real price, as closely as possible, is to have frequent renegotiations of the contract price. However, though it is possible that such renegotiations would concern themselves only with problems of restoring and seeking to maintain the real long-term price, it is improbable that either side would be able to resist the opportunity to exploit any bargaining power provided by current market conditions. Thus, frequent price renegotiations are likely to lead to the dismissal of any concept of a long-term real price in favour of the introduction of adjustable real prices following short-term market trends.

If, in the future, contracts are to specify yearly pricing arrangements, it is likely that clauses will be inserted to provide either side with the option to terminate contracts at relatively short notice. Such a development would represent an important weakening of the role of long-term contracts in Australia-Japan trade. Neither side will have any guarantee that contract prices will continue to justify initial investments over a reasonable time period. At the same time, the possibility
that there may be a failure to agree at some future date will be likely to mean that both sides will seek to achieve a smaller degree of dependence on each other in order to minimize the disruptive effects of possible termination of contracts. Such moves are especially likely to take place if frequent price negotiation is accompanied by a degree of government intervention which constrains either of the parties to make maximum use of short-term bargaining strengths.

Long-term contracts have provided the element of stability necessary to develop a highly interdependent trade relationship in which there is substantial quasi-integration between Australian and Japanese companies. The long-term benefits to be derived from stable and co-operative relations, for both sides, lie in the possibilities of improved efficiency in the location of productive activities with greater participation by Australian based companies in processing activities having access to the Japanese market. On a wider front, the demonstration that stable long-term supply arrangements are possible for minerals can be expected to have some effect on the view taken by Japan of the desirability of maintaining a high degree of self-sufficiency in agricultural production.\(^3^0\)

The sort of inflation cover and currency protection proposed here can work to eliminate substantial problems in an environment of relative flexibility of exchange rates and prevalent price increases. Nevertheless, it will remain true that, whatever contractual arrangements may be made to attempt to guarantee the real value of contract prices, there will continue to be a need for a readiness on both sides to make adjustments outside the contract terms to accommodate the particular problems of trading partners. Indeed, such a readiness has played, and should continue to play, an important role in the development of co-operative trade relations.

**NOTES**

1. This point has been developed in several studies for the Project. See Kiyoshi Kojima, 'The Long-Term Path of the Japanese Economy', pp. 40-41; Carmichael and Stammer, 'Economic and Financial Integration', p. 29; and Moriguchi and Nevile, 'The Effects of Economic Fluctuations'. An extreme example of exaggeration of the vulnerability of Australia to short-term fluctuations appears in a statement by a Japanese economist suggesting that: 'An important indirect effect of the oil crisis upon Australia has registered itself via Japan in the reduction of Australia's exports to Japan of wool and meat, and it is not inconceivable that, if the effect of the oil crisis upon Japan should become more severe, up to half Australia's exports of iron ore and coal to Japan would disappear.' Australia-Japan Economic Institute, *Economic and Trade Bulletin*, Vol. 6, No. 19, December 1974, p. 14.
2. Moriguchi, 'Japanese-Australian Economic Stabilisation Policy', pp. 161-3. As Moriguchi explains, a one unit change in Japan's domestic autonomous expenditure would induce a change in Australian income of only 0.088 of a unit. On the other hand a similar change in Australia would bring about a 0.194 change in Japan. If one assumes that the size of changes in autonomous expenditure in each country reflects the relative size of that country's economy, autonomous expenditure changes in Japan will typically be about ten times as large as those in Australia, and the impact of the change in the Japanese economy on Australia will be 4.5 times the impact of Australia on Japan. The Australian economy has a proportionately larger effect on Japan than the difference in size would suggest. *Ibid.*, pp. 160-1.


Factors Affecting Real Export Growth (Growth rate over the previous period in per cent)

<table>
<thead>
<tr>
<th></th>
<th>Real Export Growth</th>
<th>World Import Growth</th>
<th>Growth Due to Relative Price Change</th>
<th>Growth Due to Domestic Factors including Inventory/Sales Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average for 1973</td>
<td>5.0</td>
<td>17.6</td>
<td>1.2</td>
<td>11.4</td>
</tr>
<tr>
<td>Average for 1974</td>
<td>17.1</td>
<td>1.4</td>
<td>2.6</td>
<td>18.3</td>
</tr>
<tr>
<td>Jan-March 1974</td>
<td>2.5</td>
<td>3.2</td>
<td>1.5</td>
<td>0.8</td>
</tr>
<tr>
<td>April-June 1974</td>
<td>17.0</td>
<td>4.3</td>
<td>3.6</td>
<td>16.3</td>
</tr>
<tr>
<td>July-Sept. 1974</td>
<td>22.5</td>
<td>2.9</td>
<td>3.2</td>
<td>22.8</td>
</tr>
<tr>
<td>Oct.-Dec. 1974</td>
<td>20.5</td>
<td>4.5</td>
<td>2.3</td>
<td>27.3</td>
</tr>
</tbody>
</table>

Note. Estimation Equation

\[
\log JX = 1.5992 \log WP - 0.2407 \log WP - 1 + 0.4942 \log IR - 0.0708 Q_1 - 0.0480 Q_2 + 0.0046 Q_3 3.2697
\]

\[
(43.92) (-1.60) (-8.34) (-9.24) (-6.61) (+0.64) (-13.42)
\]

\[ R = 0.9950 \quad DW = 2.255 \]

\[ JX: \quad \text{Value of Japanese exports (¥ million)} \]
\[ WP: \quad \text{World import excluding Japan (¥ million)} \]
\[ WP: \quad \text{World export prices for industrial products (1963 = 100)} \]
\[ WP: \quad \text{World import prices (1963 = 100)} \]
\[ IR: \quad \text{Inventory-sales ratio for Japanese manufacturing} \]
\[ Q_1, Q_2, Q_3: \quad \text{Seasonal dummy variables} \]

Figures in parentheses under each coefficient are the t statistic. A indicates a decline.

These findings strongly confirm the suggestion in the Report of the importance of domestic push factors on export performance.
These findings strongly confirm the suggestion in this study of the importance of domestic push factors on export performance. See also Chart 5.3.

10. The sensitivity of the Australian import competing sector to such changes is dealt with in work undertaken by James, 'Australia-Japan Merchandise Trade', pp. 15-20.


13. An extensive discussion of the importance of different sorts of trade resistances in conditioning bilateral trade flows is provided by Ross Garnaut, Australian Trade with South-East Asia: A Study of Resistances to Bilateral Trade Flows, Australian National University doctoral dissertation, Canberra, 1972. The elaboration of a technique for measuring these resistances and their measurement over a long period in Australian-Japanese trade is found in Drysdale, Japanese-Australian Trade.


15. Ibid., pp. 43-6.


17. Ibid., p. 117-8. See p. 103 for schematization of the alternative types of yen internationalization. See Arndt, 'Foreign Exchange Aspects of Australia-Japan Economic Relations', pp. 17-18, for a discussion which effectively rebuts similar proposals for the internationalization of the Australian dollar.

18. For a useful review of the factors influencing Japan's recent approach to international payments management see Krause and Sekiguchi, 'Japan and the World Economy', pp. 70-90.

19. Ibid., pp. 79-87; and Yasukichi Yasuba, 'Economists and Society in Japan', Australia-Japan Economic Relations Research Project, Research Paper, Australian National University, Canberra, July 1975.


21. Cooper, The Economics of Interdependence, pp. 250-9, has noted the divergent domestic income costs of alternative approaches to external management.


25. For a discussion of these difficulties in Australia, see Arndt, 'Foreign Exchange Aspects of Australia-Japan Economic Relations', pp. 2-11. Kojima,
'Moves Towards Internationalization of the Japanese Yen', pp. 113-21 and Roope, 'The Development, Operation and Control of the Japanese Foreign Exchange Market', pp. 25-54, discuss the Japan case.

28. Smith, 'Long-Term Contracts', pp. 31-5.
29. See ibid., pp. 13-28, for a survey of contractual arrangements and their provisions in the minerals trade. Smith's proposals are consistent with the view taken in Kanamori, Sekiguchi, Murota and Yamanoue, The Future of the Japanese Economy, p. 28.
LONG-TERM ASPECTS OF INTERDEPENDENCE

The previous chapter was concerned with problems posed by short-term fluctuations and adjustments. In the short run, the degree of bilateral trade intensity and economic interdependence may be taken as given. In the long run, however, the degree of interdependence is variable. So long as underlying complementarity persists and the Japanese economy continues to grow, market forces can be expected to produce growing bilateral trade intensity. This study therefore considers how the direction and extent of developments in each country over the next ten years are likely to affect complementarity and trade intensity. In the long run (ten to twenty years), moreover, there is the possibility of influencing the degree of interdependence by policy action. Australia and Japan could, if they wished, agree to adjust development in each country in such a way as to produce a greater degree of complementarity than might otherwise exist. The potential advantages of such mutually acceptable interdependence are considered below. At the same time there are very real limits to interdependence, and each country's perspective on where these limits lie will need to be well understood by the other.

I Long-Term Policy Choices for Japan

Over the past twenty years or so the output of the Japanese economy has grown very rapidly through a high rate of investment in heavy and chemical industries including shipbuilding, transportation equipment, machinery and electronics. Japan's remarkable structural change (already referred to above on pages 28-31) allowed her to adapt to the growth and transformation of domestic consumption and foreign demand and to catch up with the income and productivity levels of Western Europe and North America. The huge investment which produced these changes embodied improved technology available from abroad and was associated with a high rate of savings and with the transfer of labour from much less productive employment in agriculture and labour intensive manufacturing activities such as textile production and its absorption into higher productivity capital and technology intensive activities. The technology gap between Japan and the
advanced industrial economies and the productivity gap between sectors within the Japanese economy permitted very high rates of growth of output. Growth was limited several times by foreign exchange constraints of an essentially short-term nature. The situation has now changed in a number of ways that will constrain growth over the next decade or so.¹

First, the international technology gap has been narrowed significantly and Japanese industry will increasingly have to generate new technology and new products through intensified research and development activity in order to sustain growth of productivity. There is no longer any substantial pool of labour in low productivity employment. At the same time, it is projected there will be an increase in the Japanese workforce of 5.26 million over the fifteen years 1970 to 1985 and recently official concern has been voiced about the capacity of the economy to absorb the growing workforce without changing utilization patterns.² In any case, a high rate of investment can no longer achieve the dramatic productivity increases of the past. Further increases in productivity have to come from labour-saving technological innovations, the upgrading of capital- and technology-intensive productive processes and increased international intra-industry specialization.

Second, with incomes now at a much higher level than in the past and still rising, there is pressure for the structure of demand to shift from investment and exports to welfare, personal consumption and a generally higher quality of life. And higher incomes have led to a re-evaluation of the costs of economic growth. It is becoming increasingly difficult to expand basic heavy and chemical industries within Japan because of geographical and environmental problems. These problems have important implications for the Australia-Japan relationship and for Japan’s relations with the resource-rich developing countries in the region.

Third, demand for raw materials and fuels necessary for heavy and chemical industries is getting beyond the level at which supply from overseas is logistically manageable. Economization of transport and production costs suggests relocation of supply capacity to sites at the raw-materials base abroad. There is, in addition, some concern that Japan’s large and growing presence as a demander of ‘scarce’ natural resources may provoke resentment. Her growing importance as a supplier of world markets for manufactures presents similar problems. Whether these concerns are actually justified or not, they influence the climate of Japanese opinion towards trade dependence and economic growth.³
The reconsideration in Japan of the long-term prospects for the growth and industrial structure of the economy is a continuing and important debate. Its contours have been delineated clearly by Professor Kojima in a paper which refers to the growing inward-lookingness in some influential circles' approach to long-term economic policies. In particular, attitudes which question the wisdom of radically re-structuring the economy towards a technology-intensive industrial base and which question reliance on imports for a growing proportion of food supplies have gathered strength in the oil-crisis period and the recession period which followed it. Interestingly the business world has expressed grave doubts about 'knowledge-intensive industrialization' and argued for the preservation of a strong and reliable heavy industrial base. Keidanren's Industrial Policy Committee stated:

In recent years there have been strong demands for a switch towards a knowledge-intensive type industrial structure. Knowledge intensification, however, does not only mean promoting the development of so-called knowledge industries. [We have] argued that raising the degree of knowledge intensity means raising the degree of technological intensity within each industry by promoting technological development of a resource-energy-environment and power-saving type, while at the same time working towards more highly processed products and higher value added . . . recent theories advocating the movement of Japanese heavy industries abroad and ideas of what would be a desirable industrial structure for our country look too much as though they are simply pushing out pollutant type industries and looking for ways of importing such products into Japan from plants located abroad. This seems to show a lack of a sense of co-operation in the economic development aspirations of the host countries, and it should be fully reconsidered . . . The argument that intermediate goods industries should move abroad in the interests of saving raw materials neglects the fact that demands for a solution to the problems of natural resources, energy and the environment are world wide.

Leaders in the Japanese iron and steel industry have been notable exponents of these views as well as their corollary that overseas capacity should not be drawn in to service Japanese demand for crude steel, at least before 1985.

In brief, Kojima has argued that the views which have emerged since the oil crisis reduce to three main propositions: first, that Japan should
refrain from importing too much of the world's scarce natural resources and foodstuffs by transforming her industrial structure along resource- and energy-saving lines and should raise her rate of self-sufficiency in foodstuffs; second, that the objective of structural transformation from heavy and chemical industries to knowledge-intensive industries is an over-reaction to the shortage of industrial sites, the need for pollution prevention and restrictions on resource availability; and third, that a switch from a high rate of growth to a lower rate of growth will serve to reduce import dependence and restrain excessive export expansion. Kojima observes that, while these views have some merit, they are less a product of the need for 'harmonization and co-operation with the international economy' than of negative inward-looking interests, in particular, insecurities relating to resource availability. Also, although they hold a good deal of sway in the immediate post oil crisis situation, they could give way to a reassertion of the view favouring more rapid structural change as the international and domestic economic outlook improves.

This debate qualifies the defining of the long-term direction of Japanese industrial and trade growth. Yet there can be a certain amount of confidence in specifying the limits to Japan's economic choice over the next decade or so. First, the structure of industry will move further away from relatively labour-intensive, low-productivity industries (such as textiles and miscellaneous manufactures) towards more knowledge-intensive industries which have high value added per worker and per unit of raw material (such as data processing and control equipment, high precision engineering and fashion goods). This shift towards a higher level of industrial sophistication will take place within each industry as well as between industries.

Second, there will be a shift away from intermediate goods production towards more highly processed products and more knowledge-intensive machine industries, such as electronic computers, electric cars and aircraft. It is worth noting that the term knowledge-intensive industry in Japan is used to cover a wide range of activities including electronic computer industry software as well as the more sophisticated products of the heavy and chemical industries. This shift will not only raise productivity but will also reduce the problems of environmental pollution and logistical problems associated with the importation of fuels and bulky raw materials. The composition of exports will move in the same direction as the composition of production, although the change cannot proceed too rapidly without creating structural
employment problems. The share of machinery in total exports, which was 50.2 per cent in 1974, is expected to rise to 64.6 per cent by 1985 with the major expansion being in electrical machinery. Third, a considerable part of the increase demand for intermediate goods, such as non-ferrous metals, iron and steel and basic chemical products will be serviced from abroad, although there is debate about how rapidly this relocation of intermediate goods supplies can be effected. As a result of these shifts, the composition of imports will change so that the proportion of raw materials and fuels in total imports will fall somewhat from 62.7 per cent in 1974 to 58.3 per cent in 1985, whilst the proportion of manufactures and intermediate goods will rise. The trebling of oil prices and substantial increase in coal prices have temporarily reversed an already evident trend in that direction over the past few years. At the same time, overseas investment in the development of resource and resource-based goods capacity abroad, as well as in manufacturing activity, will be financed by a substantial trade surplus and long-term capital inflow from Japan and elsewhere if present goals are realized. Measured in 1970 prices, total Japanese investments abroad were valued at US$8.4 billions in 1974, of which US$2.6 billions was invested in agriculture, fishing, mining and forestry activities. Total investments are expected to grow to US$48.1 billions by 1985, of which US$18.8 billions will be directed to raw materials producing activities and US$9.5 billions to intermediate metal manufactures.

Fourth, the location of labour-intensive goods production in developing countries to service Japanese demand has already proceeded a long way. The production of these goods in Japan will also decline and they will be imported from plants to be promoted overseas with the help of Japanese capital, technology and managerial know-how. It is significant, for example, that Japan should soon become a net importer of textile goods.

Fifth, there are considerable doubts about the direction of agricultural policy. Plans to raise self-sufficiency in food even slightly may be hard to achieve and it will be difficult to reconcile self-sufficiency in basic foodstuffs and claims for rising farm incomes with reasonably stable prices. The overall rate of agricultural self-sufficiency in agriculture products fell from 90 per cent in 1960 to 73 per cent in 1972. The expressed policy objective to raise this overall rate to 75 per cent by 1985 by means of increases within the existing structure of agricultural protection could give rise to a bias which will
make future dismantling of protection difficult. In addition, increases in agricultural protection will have an immediate profound effect on agricultural suppliers such as Australia.12

It is argued that the best approach for Japan is to diversify and improve the quality of production within all sectors including agriculture, mining, light manufacturing and intermediate goods manufacturing rather than attempt to dispense completely with one or two broad sectors. Through the growth of more productive economic sub-sectors and the contraction of the less efficient sub-sectors, Japan can promote effective intra-industry specialization, especially with her neighbours in the Western-Pacific region, across all broad economic sectors. Although some broad sectors may grow more or less slowly than others, it is seen as unlikely and undesirable for specialization to lead to the complete elimination of any one broad sector. The opportunities for intra-industry specialization in this sense are seen to offer large scope for economies and efficiency in trade. Increased trade based on intra-industry specialization is seen to ease structural adjustment problems for Japan and her economic partners and preserve sufficient industrial and economic diversification to avoid some of the cost of over-specialization by smaller trading nations. It would serve the objectives of the smaller partner economies to promote balanced industrial growth in the interests of full employment and efficient specialization.

Through this process of adjustment it is hoped to maintain a rate of growth of real GNP of somewhere between four per cent and seven per cent up to 1985. Growth and structural change are clearly not independent of one another. Structural change will be the engine of growth, but at the same time a steady and reasonably high growth rate will make structural adjustments much easier. Hence, the four per cent lower limit of growth represents a minimum of structural change while the seven per cent higher limit could be close to the maximum. The crisis mentality which developed in Japan after the oil embargoes in October 1973 continues to exert a powerful depressing influence on attitudes towards recovery from the severe recession and towards long-term growth prospects. However, the successful adjustment to higher oil payments and the need to finance continuing deficits on account of oil and raw material imports from the Middle East and the Pacific through export expansion both encourage more expansive attitudes towards recovery and growth. The experience of the last few years has not weakened Japanese export competitiveness but tended to strengthen it. In so far, therefore, as international circumstances allow, the Japanese economy seems likely to grow at an average rate close to the
maximum over the coming five to ten years.\textsuperscript{13}

Although the rate of growth of Japan's demand for raw materials and fuels will be lower than in the recent past it should still be between five to eight per cent per year in real terms and the absolute addition to world demand each year will be large. This will also be true for agricultural and pastoral products, with imports growing at between four to six per cent each year in real terms.\textsuperscript{14} Japan should thus continue to be a growing market for Australian exports of natural resources, agricultural and pastoral products. Moreover, Japanese plans to purchase additional requirements of basic intermediate goods from overseas, even though they have been severely modified for some sectors, notably iron and steel, could provide opportunities for upgrading the processing of natural resources in Australia. The increment in Japanese demand for key intermediate goods alone will provide significant opportunities for overseas expansion of capacity, either independently or through investment ties. The Japanese steel industry appears to be tooled up to supply the overwhelming proportion of demand expansion through to 1985, although it is likely to do so less and less competitively. The aluminium industry, on the other hand, is not. Some idea of the scale of these opportunities can be gauged from Table 6.1 which details incremental demand by major industrial category and the source of likely supply. Specialized production of manufactured goods in Australia could find large markets in Japan within a framework of such intra-industry specialisation.

II Long-Term Developments in the Australian Economy

Compared with Japan, Australia is relatively lacking in guidelines, wide public discussion, or a published consensus on its long-term economic objectives.\textsuperscript{15} Traditionally, Australian economic policy has been more concerned with the maintenance of full employment, the balance of payments and short-term stabilization issues than with long-run economic objectives. Possibly, these priorities are a reflection of already high standards of living, but they also reflect historical dependence on trade with the United Kingdom and problems associated with heavy specialization in primary production for export. Institutional factors related to the sources of political support for the major parties and to strongly held views within the Australian bureaucracy have also contributed to a climate of opinion which is unfavourable to the conception of long-term economic planning.

It is scarcely possible to consider longer-run policy towards bilateral economic relations between Australia and Japan without some picture
### Table 6.1 Incremental Demand by Major Japanese Industry: Domestic Production, Imports, Exports and Overseas Capacity, 1970 — 1985

<table>
<thead>
<tr>
<th>Major Industries</th>
<th>Year</th>
<th>Unit</th>
<th>Domestic demand (C)</th>
<th>Export (Ex)</th>
<th>Output (X)</th>
<th>Import (M)</th>
<th>Per cent of Exports (Ex/X)</th>
<th>Per cent of Imports (M/C)</th>
<th>Stock of Overseas Investment (US$ million)</th>
<th>Number Employed in Japan ('000)</th>
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</thead>
<tbody>
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<td>(1) A Steel Industry</td>
<td>1970</td>
<td>million tons</td>
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<td>26.5</td>
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<td></td>
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<td>431</td>
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<td></td>
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<tr>
<td>B Crude Steel</td>
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<td>million tons</td>
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<td></td>
<td>2.0</td>
<td>640</td>
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<td>(2) Aluminium metal</td>
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<td></td>
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<td>110</td>
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<td>-</td>
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<td>(5) Coking Coal</td>
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Note: " represents not available.
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(8) Chemical industry

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<td>1 346</td>
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<td>36 906</td>
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(9) Transportation

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<td>47 926</td>
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(10) Electrical

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<td>1980</td>
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(11) General machinery

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(12) Sophisticated machinery

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(13) Textiles

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</table>

(a) These estimates were prepared by the Japan Economic Research Center.
(b) Included in paper industry.

of the Australian economy as it may develop in the future. Towards the
end of the sixties the view became more prominent that Australia
should aim in the long term for future industrialization more heavily
integrated with the international economy based on resource develop­
ment and the expansion of resource processing. This aim was qualified
by established patterns of industrial development, by concern about
conservation and environmental issues, and by doubts about depend­
dence on foreign markets and foreign capital. There are also aspirations
for high technology-based industrial development. However, important
questions remain about Australia's approach to the transition to the
new era in energy use. It has become especially important to appreciate
that, in the area of resource and industrial policy and resources and
industrial goods trade, the private and economic-policy decisions of
today have their effect on the level and structure of production and
trade five years, a decade or more hence. Although there are important
short-term costs in policy uncertainty, the real problem is that policy
has to be much more long-sighted, not only on the conservation side,
but also on the investment, production and trade side, than it has
been in the past.16

Despite lack of clear or official guidelines, it is possible to spell out
the principal desiderata to be satisfied in the pursuit of long-term
social and economic development since these specify the broad limits
to long-term economic choices for Australia. The desiderata include the
maintenance of full employment; expectation of real income growth
per head; a more equal distribution of incomes; and expenditures on
welfare and public goods at a high and possibly growing level.

Australia's population will continue to grow steadily, with more
diverse but more skilled migration a source of slower growth. Yet on
present indications it will not reach 20 millions by the end of this
century, so that heavy international specialisation will remain essential
to the enjoyment of high standards of living. Without net immigration
it is estimated that Australia's population, whose nature rate of
increase, like that of Japan, is leading towards a stationary domestic
population level, would reach around 16 million by the turn of the
century. This population expansion will, however, be supplemented by
net immigration of probably between 50,000 and 100,000 per annum,
which would yield an additional population of between 1.7 million and
3.5 million over the next twenty-five years.17 The climate of opinion
and policy in Australia currently favours the lower target for net immi­
gen. Although there will undoubtedly be some secular variation in
intake which is related to the way in which demographic factors affect
manpower requirements, it seems plausible that natural population growth and net immigration will result in a population approaching 18 million at the turn of the century.\textsuperscript{18} 

It is worth stressing that Australia’s migration programme, like that of most countries, is not simply a manpower programme. The various social objectives and constraints in migration policy create difficulties in the dovetailing of immigrant flows to assessed manpower needs.\textsuperscript{19} Migration certainly gives some flexibility in the long-run redeployment of resources including labour, but it is neither feasible nor acceptable in terms of widely and deeply held social values in Australia to use variation in migration flows as an instrument for breaking specific labour bottlenecks. It is not feasible because the character of the migrant population is determined by factors independent of pure workforce considerations, such as family associations, and because Australian laws and Australian trade-union institutions aim to protect new migrant labourers and ensure that they join the work force on a basis of equality in terms of labour practice.\textsuperscript{20} For these reasons the overwhelming body of public opinion and official attitude is against any form of guest-worker programme.\textsuperscript{21} Schemes of this kind have been proposed from time to time by Japanese businessmen and commentators\textsuperscript{22} but the idea of industrial estates employing guest workers is outside the framework of Australian social practice and thoroughly inimical to the vast majority of Australians’ concept of social justice.\textsuperscript{23} 

At the same time, the migration of permanent residents, including a rapidly growing proportion of non-Europeans,\textsuperscript{23} will assuredly continue to play an important role in Australia’s economic and social transformation in the years ahead.\textsuperscript{25} Growing population and productivity should ensure a four to six per cent growth in real incomes per year over the coming decade. The structure and growth of Australia’s output necessary to meet this objective will have the following general features, consistent with resource endowment, stage of economic development and forecast population size.

First, the development of natural resources, including iron ore, coal, non-ferrous ores, oil and uranium, must continue to play an important role in achieving income growth and generating the foreign exchange necessary to sustain higher levels of national consumption and investment funds. Long-term forecasts by the Australian Bureau of Mineral Resources suggest a strong but tapering growth rate of exports of these products through to 1983-84.\textsuperscript{26} Second, the further processing of these resources should be
undertaken in Australia to the greatest extent possible compatible with competitiveness in overseas markets. In the past several years, opportunities for profitable investment in resource-based industries have been frustrated by institutional and policy restraints on foreign market access. Whether or not the Japanese market for intermediate goods becomes more accessible, thus providing opportunities for large-scale export production, Australia is likely to become a more important world supplier of such products as alumina, aluminium, nickel metal and steel. Recent work by Australia’s Industries Assistance Commission has stressed the importance of manufacturing activities closely related to the mining and rural sectors, which industries already provide two-thirds of Australia’s manufactured goods exports.27 There is an emerging consensus that the expansion of exports from these industries should be encouraged in a number of ways. Protection policies should be restructured so that the costs of imported inputs are reduced, and more rational energy pricing policies should be devised. Overseas marketing links should be extended through ‘capital investment by potential overseas purchasers and ... the development of further reciprocity in Australia’s trade relations. This [in turn] will require a close link between Australia’s industry development and trade policies...’28

With policy changes in these directions and the appearance of profit opportunities, an expansion of Australian intermediate resource-based goods production will find a ready market in Japan and other important consumer countries.

Third, output of the pastoral and agricultural industries will continue to rise, but at a lower rate than in the past. Export demand will continue to be liable to fluctuations and induce long-term investment uncertainty in the agricultural sector. Agricultural protectionism in advanced industrial countries remains a major constraint on achieving the productivity increases in agricultural activities necessary to sustain their expansion alongside other sectors. However, even if the development of resource-based industries is not restricted and especially if agricultural protectionism in industrial countries proves more tractable, there is every reason why the agricultural sector should continue to remain an important foreign exchange earner alongside the resource-based industries. Crawford, Hemmi, et al. have estimated that the volume of rural output destined for Japan alone could rise by about thirty per cent by 1980.29 These estimates do not assume significant import liberalisation in Japan but they are premised on restoration of access to the Japanese beef market and an expansion of 20,000 tonnes on the level of shipments achieved in 1973. However, in 1976 Japan
placed further restriction on its imports of beef from Australia. This can only worsen the already depressed state of the Australian beef industry. It is not clear at the time of writing what the medium-term outlook for beef exports to Japan will be, but the short-term application of import restrictions without adequate consultation will clearly deter investment in the beef industry. The use of long-term contracting and assurances on the security of market access would ensure stronger rural investment, output and export expansion.

Fourth, while the resource-based industries will produce an increasing share of industrial output, Australia will continue to rely on manufacturing to provide the bulk of industrial employment even though not all sectors may be internationally competitive. This implies the maintenance of some degree of industrial protection even in the long term. It may become possible to improve industrial efficiency through intra-industry specialization but this still appears problematic in major sectors. The Jackson Committee\textsuperscript{30} has stressed the strategic nature of manufacturing development. Only if this approach is consistent with the Industries Assistance Commission's identification of the principal factors in manufacturing competitiveness and its stress on integration of Australian manufacturing with international markets will it encourage efficient intra-industry specialization and strong industrial development. The opportunities for intra-industry specialization for Australian manufacturing depend significantly on the establishment of market access for resource-based industries as well as on the strengthening of the important machinery and equipment industries.\textsuperscript{31}

Australia's trade balance is likely to be favourable and, even after deducting an adverse balance of non-trade items, her balance of payments may show a favourable trend. A substantial inflow of long-term capital can also be expected although there will be forces encouraging its limitation. Maintenance of both price stability and full employment in this situation is likely to be a continuing problem. The skill structure of the expanding work force will not allow its easy absorption into a growing tertiary sector although there will be some scope for this. An important aim in the long term will be to raise productivity in some sectors of manufacturing to internationally competitive levels. Apart from scale and capital considerations, market access and technology access will play an important role in this process.\textsuperscript{32} There are, however, limits to the rate at which this can be achieved concurrently with a high rate of investment in resource development. Here a basic problem is the highly-skewed pattern of comparative advantage with a wide gap between primary industry and
manufacturing. Even so, the closer Australia's industrial growth is linked to her raw materials base, the better the outlook for competitive Australian industrial production.

Australia's approach to resource development, foreign investment and industrial policies will be important determinants of her success in the achievement of income growth and a strong external position. Expectation of higher real incomes and levels of private and public expenditures will be met consistently with external and internal balance only if there is adequate and efficiently-directed investment in the resource-based industries and manufacturing sector.

In this connection some questions about resources policy and foreign investment policy have been of major concern in the course of this study. Although since September 1975 a surer policy basis has been established for investment by foreign enterprises in Australian industry, the issues are only gradually being clarified both in Australia and Japan and, for this reason, special attention is given to them in the following paragraphs. It should be pointed out that changes of policy towards foreign investment in Australia were under way before the Labor Government took office in 1972, and that the climate of opinion favoured more scrutiny of foreign investment activities and a review of resource development policies. By September 1975, the Labor Government had taken the position that foreign equity control should be limited to fifty per cent in mining, but totally excluded from the development of those uranium deposits which were discovered as a consequence of future exploration licences. These were to be regarded as guidelines and not regulations and consideration of projects was to be undertaken on a case-by-case basis. Takeovers of domestic enterprises by foreign firms also were made subject to review. The Liberal-Country Party government which took office in December 1975 maintained similar guidelines for foreign investment while explicitly indicating that the fifty per cent Australian equity provision was to be applied to large-scale energy, agricultural, pastoral, forestry and fishing projects as well as mining. Uranium development was again singled out for special consideration but the stipulated level of Australian equity was reduced from 100 to 75 per cent. Thus for governments of both complexions, the economic consequences of restricting direct investment in Australia had become an important area of resources policy.

There are areas of potential conflict of interest in foreign direct investment activities in Australian mineral and other natural resource industries. For one thing, it is in Australia's interest to extract, through royalties or taxation, as much as possible of the 'rent' element in the
profits of the foreign investors (that is, of any excess above the return they require to undertake the investment). Professor Caves has suggested the adoption of the Garnaut and Clunies Ross Resource Rent Tax proposal to deal with this problem and there would appear much merit in his suggestion.\textsuperscript{37} The possibility of imposing such a tax has been considered by Australia's Industries Assistance Commission in two recent reports.\textsuperscript{38} The first of these, concerned with the general problem of mining industry taxation, contains only a limited examination of the Resource Tax proposal and reveals some misunderstanding of the issues involved.\textsuperscript{39} In the second report, which recommends raising of the price of Australian crude oil to import parity, the Commission was forced to consider appropriate means for returning to the community a substantial proportion of the massive windfall gains which would accrue to producing companies. The scheme which it appears most to favour bears a very close resemblance to the original Resource Rent Tax proposal. A separate conflict arises because it is obviously in the interest of the foreign investors to minimize their tax liability, through 'transfer pricing' or other devices of tax evasion. It is also in Australia's interest to encourage favourable spillover effects or external economies, such as transfer of managerial or technical know-how, and discourage unfavourable ones, such as pollution. But it is not obvious that these purposes are best served by sharply reducing foreign or increasing domestic ownership. It has often been pointed out that an increase in domestic ownership does not necessarily increase domestic control, for example, if it merely adds to minority equity participation. Most potential risks of foreign ownership can be dealt with quite adequately by ground rules for foreign investors embodied in legislation and administrative surveillance. For the rest, diversification of foreign ownership through the encouragement of consortia of interests from more than one foreign country probably does more good than rapid expansion of domestic ownership.\textsuperscript{40}

Conflicting objectives in respect of foreign participation in resources development in Australia have created a climate of uncertainty among foreign investors as well as domestic enterprises. Under these circumstances, where the general guidelines laid down are conflicting and not easily applied to particular projects, effective procedures for scrutinising resource projects and foreign investment in resource development are crucial. One problem has been a certain paralysis in case-by-case decision-making following the assumption of more active government interest in the direction of resource development and foreign investment. This was essentially a short-term problem and
should not be allowed to affect Australia’s long-term interests which will continue to be served by encouraging foreign participation in resource development and particularly in resource-based industrial development. Foreign participation will facilitate access to assured foreign markets and international loan capital raising, and encourage higher levels of productive efficiency. Interpreted flexibly, the foreign investment policies announced by the Australian government in April 1976 are consistent with these objectives.

An important characteristic of the trade in raw materials between Australia and Japan has been the relative absence of vertical integration from mining through to metal production. Although the Australian mining industry has relied heavily on foreign investment as a source of finance and expertise, this has mostly come from European and American companies who were not seeking to develop mineral resources as ‘captive’ sources of supply for their own metals production. Thus, the Australia-Japan trade in minerals has required the development of stable trade relations between independent producers and users. In this context, long-term contract arrangements have substituted for vertical integration as a means of safeguarding access to markets and supplies. The extent to which the relationship between Australian mining companies and Japanese metal manufacturers provides a satisfactory substitute for vertical integration is of fundamental importance for the future development of Australia-Japan trade relations. Increasingly, it will become more attractive for metals manufacture to be undertaken in Australia with Japan’s manufacturing industry providing the major market. The most likely way in which this change in production patterns can take place is through expanding the established relations between Australian and Japanese companies.

A more balanced approach to the role of foreign investment is desirable in both countries. On the one hand, the development of the resource trade between independent enterprises provides powerful evidence of the opportunities for profitable business and ownership risk diversification. On the other hand, the extreme policies pursued in some areas towards foreign investment, such as the use of a non-discriminatory export tax as a means of capturing excess profits earned by a particular coal exporter, have been demonstrably costly to Australian welfare. No government in Australia can afford to avoid scrutiny of activities involving foreign investment, but a less restrictive policy approach offers promise of advances towards higher levels of industrial activity and income. It is worth noting that the Australian government has continued to encourage Japanese investment in Australia despite
Long-Term Aspects of Interdependence

changes in its overall approach to foreign investment. As Japanese investment becomes more prominent it is important to try to minimize hostility by adapting liberal Japanese policies towards local equity, export franchises, local staffing, non-discriminatory sourcing and selling, and to provide open accounts as a safeguard against accusation of transfer pricing. Risks of ownership can be reduced by diversification of foreign ownership or consortia arrangements.

In brief, public concern over rents accruing to foreign investors in resource industries is a valid issue. But resource development involving foreign investment need not be forestalled on that account when there are mechanisms which can be used to tax profits effectively. Foreign investment can also play an important role in the development of intra-industry specialization and adjustment to new patterns of production and trade. This is true not only in manufacturing, but also in agriculture and commerce.

III Long-Term Social and Economic Objectives and the Australia-Japan Relationship

So long as the underlying complementarity between the Australian and Japanese economies persists and the Japanese economy continues to grow, free operation of market forces could be expected to produce growing trade intensity. Even though the composition of Japan's imports is likely to move away gradually from raw materials and fuels towards manufactures, in those materials which Australia exports to Japan, both the share of Australian exports going to Japan and the share of Japanese imports supplied by Australia could rise provided that Australian costs remain competitive. Japanese plans to import intermediate goods, if realized, would also mesh well with Australian wishes to export natural resources in more highly-processed form.

The projections set out in Table 6.2 provide some indication of the huge potential of the Australia-Japan trade relationship. These projections do not seek to forecast how important the relationship will be by 1895, but seek to define a relevant range of possibilities. The first set of possibilities in Table 6.2 projects past trends and established trade coefficients forward to measure the proportions and size of trade between the two countries ten years hence. The second set in Table 6.3 takes into account the possibility of shifts in trade structure that have been envisaged in our commentary and applies them to specifying the Australia-Japan relationship in a decade's time. Either way these projections demonstrate the significant potential
growth in trade between the two partners which needs to be secured in a strengthened partnership.

As both Australian and Japanese industry move away from labour-intensive manufactures, Australian imports of these commodities will tend to be diverted from Japan to developing countries. On the other hand, if Australia's development of resource-based industrialization proceeds smoothly increased demand for capital intensive imports and technology could well be filled by Japan.45

The extent to which this intensification of trade actually materializes, however, will depend on factors such as the following. First, risk and uncertainty of supply from Australia may lead Japan to diversify sources of supply to ensure continuity, reduce the risk of monopolistic pricing and possibly to increase total supply over the next decade or so. Second, Australia may aim to spread her risks by diversifying markets, although this presents considerable difficulties. Third, investment in extraction and processing of mineral resources is very lumpy and has a long gestation period. In a situation of uncertainty it may never take place at all. Fourth, growth and structural change interact so that each facilitates and reinforces the other. If, because of world conditions or any other reason either is inhibited, bilateral trade will not develop as expected. Among the other reasons, questions of security, including the threat of war or emergency, could affect trade. Conversely, a retreat from trade interdependence might have adverse repercussions on growth and structural change in each country.

There is clearly a potential for further complementarity between the Australian and Japanese economies. Although demand and supply forces generally will be dominant in determining the direction of economic activity, short-term market considerations in practice may not provide the best guidance for the dynamics of long-term development. Prospects for translating underlying complementarity into actual trade and development in terms of each country's own aims could be improved if economic decisions in each country could be made in the light of fairly firm expectations about developments in the other. This need not imply detailed or even indicative long-term economic planning. Interdependence in this sense might mean no more than not backing away from the natural development of a closer economic relationship. In other words, the definition of mutually agreed interdependence in broad terms is necessary to the extension of the relationship in this way. This would imply, at the minimum, a readiness to give and accept long-term assurances and a willingness to co-operate in considering ways of resolving the difficulties and conflicts inherent in any ongoing trading
### Table 6.2: Projections of Australia — Japan Trade, 1965-85\(^a\)

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<td>Japan</td>
<td>Per cent share in exports</td>
<td>3.74</td>
<td>3.06</td>
<td>3.60</td>
<td>3.26</td>
<td></td>
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<tr>
<td></td>
<td>Per cent share in imports</td>
<td>6.57</td>
<td>7.84</td>
<td>6.42</td>
<td>6.53</td>
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<tr>
<td></td>
<td>Export trade intensity</td>
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<td>2.00</td>
<td>2.60</td>
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<td></td>
<td>Export value US$m</td>
<td>313.6</td>
<td>589.2</td>
<td>1 997.9</td>
<td>3 602.0</td>
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<tr>
<td>Australia</td>
<td>Per cent share in exports</td>
<td>16.43</td>
<td>26.39</td>
<td>28.77</td>
<td>35.04</td>
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<td>Per cent share in imports</td>
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<td>12.72</td>
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<td>Export trade intensity</td>
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<td>4.55</td>
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<tr>
<td></td>
<td>Export value US$m</td>
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<td>1 334.0</td>
<td>3 452.1</td>
<td>7 218.0</td>
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### Table 6.3: Further Projections of Australia — Japan Trade, 1965-85

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<td>Japan</td>
<td>Per cent share in exports</td>
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<td>Per cent share in imports</td>
<td>6.57</td>
<td>7.84</td>
<td>6.42</td>
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<td></td>
<td>Export trade intensity</td>
<td>2.05</td>
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<tr>
<td></td>
<td>Export value US$m</td>
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<td>589.2</td>
<td>1 997.9</td>
<td>4 310.0</td>
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<tr>
<td>Australia</td>
<td>Per cent share in exports</td>
<td>16.43</td>
<td>26.39</td>
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<tr>
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<td>Per cent share in imports</td>
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<td>8 652.0</td>
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\(^a\) The value of trade in 1985 is measured in 1974 prices.

*Source:* Calculations based on data from International Monetary Fund and GATT in Peter Drysdale, *Australia-Japan Trade in 1985*, op. cit.

relationship and particularly in one that touches the long-term welfare of each country.

Continual redefining of what each country can expect from developments in the long-term relationship can be encouraged in a number of ways. First, there should certainly be continuing examination and research into problems associated with the growth and extension of the Australia-Japan relationship.\(^46\) Second, each country should take the other more explicitly into account in its official prognostications about long-term economic issues affected by the relationship, such as resource supply and industrial relocation programmes in Japan, and resource, trade, industrial and technology perspectives in Australia. This should include the development in each country of more official expertise about the other country. Third, there should be regular discussions among officials from both countries to compare notes on long-term aspects of the relationship and review emerging issues bilaterally and
An appropriate framework through which to develop a more comprehensive relationship has been laid down in the 'Basic Treaty of Friendship and Co-operation between Australia and Japan' which was concluded in June 1976. The two governments agreed that they 'shall endeavour to facilitate, strengthen and diversify mutual understanding and co-operation in such areas of mutual interest as the political, economic, labour relations, human rights, legal, scientific, technological, social, cultural, sporting and environmental fields. To this end, they shall hold consultations, whenever necessary, on matters in [these] fields...' (Article III). Specifically in the economic sphere it was agreed to 'promote the further strengthening and development of trade between the two countries on a fair and stable basis' (Article V). In addition, with minor exceptions outlined in the protocol, provision was made for 'most favoured nation' treatment regarding the movement of personnel (Article VIII) and business activity (Article IX). The success of this Treaty will depend on the extent to which both governments do negotiate and make arrangements on specific matters in accordance with the spirit of co-operation embodied within it.

Taking an extreme view, interdependence could imply the creation of a special relationship with Japan formed by tariff or monetary links or even an economic union. Economic interdependence reinforced by political and cultural solidarity so close as to be virtually indissoluble has, for some, a certain emotional appeal. Like the institution of marriage, however, it involves not only some loss of freedom and individuality but also an element of irreversibility that acts as a deterrent. Whether the suggestion of such a high degree of interdependenceconjures up a picture of something like the Economic Community, or whether it reminds Australia of her colonial past, it is certainly not an arrangement to be entered into lightly. Nor can it be expected to be entertained seriously by either government for a good while to come.

Thus, there are recognisable limits to interdependence that apply not just between Australia and Japan but between any two or more societies. The degree of interdependence that would be acceptable is a function of the mutual confidence of each side in the assurances of the other. Assurances are required on at least three points.

First, interdependence must be compatible with the long-term aims of each country. Interdependence is bound to lead to changes that would not otherwise have occurred. Each country needs to be assured that these changes will be in the direction in which it in any case wanted
to go. This will be difficult if there is no clear vision of desired development, and this may be an important obstacle in Australia's case.

Second, interdependence must be compatible with each country's approach to the rest of the world. The example of the United Kingdom and the Common Market demonstrates the reality of this limitation and illustrates the difficulty of reconciling bilateral interdependence with relationships with other countries. Japan's network of relationships may not be as complex as the United Kingdom's was, but it could become so. Australia too would not wish to cut itself off from other markets or to appear to be discriminating in giving access to its resources. These issues are taken up again in Chapters 8 and 9.

Third, the gains, both long- and short-term, from interdependence must be distributed equitably to the satisfaction of each side. From a short-term point of view, consideration will need to be given to ways of ensuring that difficulties inherent in a bilateral bargaining situation do not damage longer-term relations. This issue is discussed more fully in Chapter 7. In the long-term we need to consider ways of ensuring that structural change brings long-term growth and improvement of living standards in fair measure to each side. There may be doubts in both Australia and Japan about growing interdependence which, for instance, involved simply a Japanese movement towards capital and knowledge-intensive industries and a corresponding Australian movement towards land and natural resources-intensive industries. The dynamic growth of interdependence between Australia and Japan should promote the upgrading of both countries' industrial structures through more efficient intra-industry specialization. Australia's aims have to be recognized, in such a relationship, as involving much more than simply the supply of raw materials to a large industrial country partner. She will seek partners in trade and investment for resource-based and technology-based industrialization wherever possible.

It is worth emphasizing that all these caveats would apply equally between any two countries and are not specifically related to Japan and Australia. The limits to interdependence can be extended by mutual trust, and this kind of trust is something that is built out of experience over a period of time. It is being built up now and as it continues to grow so will interdependence.

NOTES

1. There are a number of comprehensive reviews of Japan's growth experience over the last decade or two and the changes in direction that may now take


5. Ibid., p. 30.


9. Ibid., Table III-19.

10. Ibid., Table VIII-4.

11. Crawford, Hemmi, et al., 'Australian Agriculture and Trade with Japan', Section III, Chapter 4, pp. 106-119.


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21. As practised extensively in Europe.

22. The most comprehensive proposal along these lines was made by Naohiro Amaya, 'Prospects for Japanese-Australian Economic Co-operation' [*Nichi-Gō keizai kyoryoku no kadai*], *Western Pacific Economic Research Report No. 1*, p. 53.


24. *Ibid.*, p. 117. The proportion of Asian and African migrants, a significant proportion of whom are non-Europeans, in the annual intake rose from 1.7 per cent in 1947-51 to 12.7 per cent in 1966-71 and 24.0 per cent in 1971-73. It is currently over one-quarter of total migrant intake. The proportion of East and South East Asian migration is currently about one-tenth of total migrant intake.

26. Industries Assistance Commission, *Annual Report, 1974-75*, Table 1.1.3.
29. Crawford, Hemmi, *et al.*, 'Australian Agriculture and Trade with Japan', Table III-23.
30. Committee to Advise on Policies for the Manufacturing Industry.
37. Much of the public concern in Australia and overseas over foreign investment in resource industries lies with the distribution of high profits captured by successful projects. National welfare is clearly increased by intercepting the largest feasible portion of excess profits from resource investments without deterring such investments, yet this cannot be done by an *ex ante* fixed levy or via conventional corporation income tax. The various royalties imposed by Australian state governments are also inadequate and their squeezing rents out in other ways, for example, through transport charges and public undertakings, potentially distorts mining investment decisions and the allocation of public revenues. Professor Caves suggests that the Garnaut and Clunies Ross Resource Rent Tax '... device appears administratively feasible and possesses several ancillary advantages ... it avoids many difficulties with other types of taxes by removing incentives for the firm to distort the distribution of its outlays and receipts over time ... This approach should do much to relieve the controversy over foreign investment in Australia's resource industries and straighten out their tangled relation to public finances.' There is no reason why this taxation scheme should not also be applied to domestic investment in the resource industries. Caves 'Policies Towards Australia's Resource Based Industries', pp. 21-2, and Garnaut and Clunies Ross, 'Taxing Natural Resource Projects', subsequently published in the *Economic Journal*, June 1975.

40. Arndt, ‘Resources Diplomacy’.


43. Ibid., pp. 15 ff.

44. Peter Drysdale, ‘Australia-Japan Trade in 1985’, *Australia-Japan Economic Relations Research Project, Research Paper*, Australian National University, Canberra, December 1975. This paper was based on work carried out with the co-operation of staff of the Australian Department of Overseas Trade and the Industries Assistance Commission.


46. The Australia-Japan Economic Relations Research Project in Canberra and the Japan-Australia Economic Relations Research Project in Tokyo, which together have fostered much of the detailed research on which this study rests, are continuing to facilitate further studies on hitherto unexplored aspects of the relationship.

47. The need for consultations on particular short-term problems has already been demonstrated above, p. 82.

A given level of economic interdependence and trade intensity in the short run may be associated with problems of vulnerability to external economic fluctuations in the way described in Chapter 5. The degree of interdependence itself is susceptible to change in the long run, and it has been noted that, even without special measures by governments, the underlying complementarity between Australia and Japan is likely to persist and lead to higher levels of interdependence in the future. Yet there are obviously very important links between the short- and long-term situation and the interaction between short- and long-term developments may be of great consequence in shaping the character of the evolving relationship. Two important aspects of the interaction between short- and long-term developments, namely problems of structural change and problems of bargaining in the resource trade, are the subject of this chapter.

I Problems of Structural Change and Industrial Relocation

Long-term structural change in both the Japanese and Australian economies is essential to the growth of mutually beneficial interdependence. Short-term aspects of interdependence interact most significantly with long-term aspects in problems associated with structural change. These problems usually appear in a more severe form in times of recessed demand and thus affect the prospects of achieving long-term policy objectives in complex ways. However, shortages induced by strong demand in boom periods, for example in the case of agricultural commodities, can also delay “adjustment programmes.

As we have seen, in Japan, the principal adjustment problems relate to restructuring manufacturing towards capital- and technology-intensive activities and the relocation of basic energy- and resource-intensive intermediate goods activities abroad, as well as to the problems of restructuring agriculture. In Australia, the corresponding problems of structural adjustment largely involve moving resources into natural resource-based, capital-intensive and knowledge-intensive industries and away from non-competitive labour-intensive manufacturing
activities. In this connection, increased intra-industry specialization has a role to play. At the same time, there should be in both countries a steady movement of labour and other resources into the production of public goods and services and expansion of the tertiary sector of the work force. This does not mean that the release of labour from less efficient industries, such as agricultural production or metal manufacture in Japan and textiles or miscellaneous manufactured goods in Australia, will always be accompanied by its easy absorption in expanding tradeable goods activities or the tertiary sector, but it does mean that both countries can in the longer run aim for a structure of skills and professional capacities in the work force that will make the transformation to a higher welfare society more readily achievable.

Structural adjustment policy includes a wide range of measures, such as retraining programmes, taxation concessions, and tariff or support value protection, and usually focuses on the contraction of old comparatively disadvantageous sectors of the economy. However, promoting the growth of new, comparatively advantageous or naturally protected sectors of the economy is equally important. Professor Johnson has suggested that:

Governments [in industrial countries] have been willing virtually to eliminate quotas and negotiate down tariff barriers on industrial products because they have increasingly realized that these methods of intervention are far less efficient and effective in securing the objectives of protection than more direct methods such as subsidization through tax relief or offsets of, for example, modernization of equipment, research and development expenditure and investment in depressed regions, or more generally through governmental provision of research and development as part of ‘science policy’.

Japan and Australia employ a whole range of adjustment assistance policies, industrial and commercial policies which implicitly or explicitly aim to direct the structure of economic activity and trade in desired ways.

Japan's structural adjustment policies have been comprehensively directed to fostering new activities in a period of high growth for the manufacturing sector and have been formulated in a long-term indicative planning frame. They have also included a range of special measures for declining industries. This has not been the approach in Australia where, until recently measures to assist declining industries have been concentrated in protection policy. The establishment of the
Industries Assistance Commission and the movement towards more comprehensive scrutiny of protectionist measures since the publication of the Vernon Report has encouraged a more coherent overview of structural adjustment policies in Australia.

Structural adjustment assistance for the gradual reallocation of productive resources from inefficient, declining industries to more competitive industries requires two kinds of measures. The first are measures designed to promote the running down of inefficient capacity and the transfer of labour and other resources to other industrial sectors. Public intra-structural investment, low-cost loans, investment grants and subsidies, tax benefits, and technical assistance and training programmes, should be undertaken in a much more systematic way for this purpose. Secondly, some safeguards are needed to ease the contraction of inefficient, protected industries as they are made more subject to international competition.

Safeguards against excessively rapid adjustment to changes in international competition should not be abused for protectionist purposes. Both countries have a strong interest in international agreement on adequate and adjustment-promoting safeguard measures as well as in the observance of principles that would govern such measures even prior to their international agreement. Thus, Article XIX of GATT should include obligations to implement structural adjustment and to specify the duration of safeguard measures. Australia has in the past made use of Article XIX of GATT and other articles providing for safeguard actions and imposed quantitative restrictions and temporary protection for textiles and other commodities. It has in the past observed present rules of GATT in this area, probably to a greater extent than some other developed countries, but it is important that the approach towards devising new safeguard measures be flexible and involve internationally agreed rules of behaviour on their application. Action on safeguards has been a source of friction between Australia and Japan, as in the case of temporary import quotas on assembled motor vehicles imposed by Australia in November 1974 and the imposition by Japan of beef import embargoes earlier the same year. The use of quantitative restrictions and 'temporary' protection measures of other kinds influences the long-term structure of protection and production if maintained beyond a year or two and their application should be allowed only for internationally agreed and specified periods.

Safeguard measures are presently the subject of negotiation within the multilateral trade negotiations under the auspices of GATT. In this
area, as in other areas, if there is slow or unsatisfactory progress within this round of negotiations, Australia and Japan should consider the application of more satisfactory safeguard arrangements and procedures bilaterally. Clearly, it is in neither country’s interest to act in this or other respects in a way which discriminates against third countries but, for some commodities such as beef and motor vehicles, each country is so dominant in the import supplies of the other that consultation, notification and agreed procedures of application, as suggested above, could usefully be invoked by bilateral agreement.

Nonetheless, some structural employment problems might persist for a very long time both in Japan and Australia. In Japan, there has been considerable rationalization of agricultural production, but the elderly farming community now cannot easily be relocated to new areas and move to new operations. Professor Hemmi has pointed out how the huge decline in that part of the Japanese work force gainfully occupied in agriculture over the last decade and a half has been associated with a much smaller decline in the number of farm households and a rapid aging of the agricultural work force. There are now considerably more farm workers in the over-60 age-group than in the 34 years and under age-group. In the course of the next ten years it is unlikely that more than a small proportion of the large numbers who leave agriculture will be replaced and, after a long period of slower change, structural adjustment could be very rapid. Also, some areas in Japan are specialized very heavily in the production of special goods for export: the production of cutlery, for example, is concentrated in the Tsubakuro district. In cases like this the process of labour retirement facilitates restructuring and can be hastened to some extent through the provision of early retirement pensions, but the adjustment will nevertheless tend to be slow.

In Australia, there are similar structural employment problems for inefficient manufacturing activities, some of which are located in smaller country cities for which they provide the life support. Moreover, inefficient manufacturing activities have many different characteristics from efficient natural resource-based industries in respect of labour requirements and location, and this presents special adjustment problems. The structure of skills and the sex ratio of the work force will continue to constrain the adjustment process in Australia. Protection or assistance for some uncompetitive activities may continue to be necessary but it should be directed towards the long-term objective of improving industrial efficiency all round and promoting harmonious interdependence. In reality, the mobility of labour in Australia, which
though geographically vast with isolated population centres is highly urbanized, has probably facilitated the significant structural changes in the economy that have occurred over the last two decades. Again, intra-industry reallocation and specialization within the manufacturing sector would minimise adjustment problems in the labour force.

Adjustments to structural change are undertaken most successfully in a dynamic and growing economy. In such an economy there will be expanding and efficient sectors the growth of which is rapid enough to absorb resources from contracting sectors or slow-growth sectors and the process of adjustment is likely to be relatively smooth. At the same time, the use of measures to offset unemployment and inflationary demand affects directly the degree of flexibility in, and cost of, industrial change and adjustment.

Long-term structural adjustment processes can be severely distorted and inhibited by short-term fluctuations in economic activity. These problems are usually more severe in times of recessed demand, but they can, as suggested above, be equally severe in times of inflated demand. Recession encourages the introduction of measures which may permanently affect the capacity for structural change, such as extended tariff protection or trade embargoes which become a permanent protective feature. On the other hand, inflationary pressures and excess demand also disturb long-term adjustment. Strong demand encourages inefficient areas of production to persist and expand. In addition, larger increases in capital inflow during boom periods may simply exacerbate inflationary pressures rather than encourage the development of resources and efficient industrial activities.

The effects of short-term demand pressures and commodity shortages have been prominent causes of the retreat from long-term structural adjustment objectives in policy in the last few years. The international commodity boom encouraged feelings of insecurity in Japan about imported commodity supply and gave strength to interests which were desirous of a retreat from international interdependence in agricultural and basic heavy industrial activities. Protective measures on the import or the export side deriving from short-term problems may permanently damage long-term aspirations for interdependence either because they become entrenched in the protective structure or because they shift the main burden of short-term instability on to trading partners.

There has been a high incidence of successful claims for protection by Australian manufacturing in times of recession. Although the development of temporary protection facilities has perhaps reduced the
tendency for protection introduced in periods of recession to remain permanent, the potential for recession-induced distortions in the development of the protective structure remains. The effective regulation of temporary measures need not await international agreement, although it would undoubtedly be encouraged by that or by bilateral understandings.

The problem of export instability is endemic in agricultural trade and is also widespread in trade in raw materials. The effective separation of the major part of temperate agricultural production from free international markets, has magnified instability and uncertainty in these markets and almost certainly led to under-investment and undersupply. These latter problems are not uncommon in raw materials markets. For agricultural importers, international supplies are residual supplies and market instability is shifted squarely, through the administration of agricultural trade and distribution policies, onto agricultural exporter nations. A principle, for example, that necessary adjustments by importers or exporters should be shared by domestic and foreign producers would, if accepted, substantially reduce instability resulting from government regulation of agriculture. If such a principle had been applied to the beef market by Japan and the European Community—as, in concept, it was applied by the United States—the devastating recession in the world beef market would have been less severe and less precipitate as well as have had less potential for disrupting seriously the expansion of production capacity in the long term.22

In these problems of an instability-induced retreat from long-term interdependence in key commodities Japan has special responsibilities. She is now such a large economy and has such influence in particular commodity markets that if her short-term adjustments are not wrought in ways which are sensitive to the impact which her economy has on the rest of the world, in the longer term there will be a retreat from international specialization which could be damaging to welfare everywhere. This problem has particular relevance to heavily export dependent developing economies and is considered further in Chapter 9.

Although overall demand control assumes a key role in efficient long-term economic transformation, the crucial task is to distinguish long-term movements from inevitably recurring short-term instability. In this regard, the financing of adjustment measures within the framework of an overall fund for adjustment assistance (although not necessarily through the one institutional channel) would be a helpful approach in both Japan and Australia. In general, structural adjustment funds should be managed counter-cyclically. An important component
in adjustment policies could be a new approach to industrial policy which involves more explicit consideration by both Australia and Japan of long-term developments in each other's economies and their relationship to developments in other parts of the world economy.

Foreign investment can be an efficient way of promoting structural change. Most obviously, investment from Japan and other industrial countries in Australia can play a role in accelerating the expansion of efficient industries in the host country and the contraction of inefficient industries in the investing country. Less obviously, too little has been made of the opportunities for Australian investment and market tie-ups in Japan. Earlier this was importantly a consequence of comprehensive capital inflow restrictions but these restrictions are now less of a barrier to the expansion of market and production outlets. The rate of desired capital inflows needs control in relation to inflationary or recessionary influences as well as balance of payments pressures in both the host and investing countries. Direct investment usually has a long lead time in the areas of relevance to Australia and Japan and the foreign investment climate needs to be long-sighted. Foreign investment decisions frequently aggravate rather than mitigate cyclical problems and frequent or needless changes in foreign investment policies in host or investing countries will exacerbate this tendency. The counter-cyclical management of investment flows could prove partially successful.

The principal danger, then, is not that there are short-term external disturbances through trade but that arbitrary, abrupt and ill-considered actions by either government are likely to shift the burden of short-term instability onto one or the other economic partner. In the long term, because of the enshrining of temporary measures into permanent features of the protective system or because the costs of instability induce a retreat from trade and interdependence, there is also a danger that the capacity for economic adjustment and advancement will be impaired. Such government actions are likely to be important in reducing confidence and the desire to co-operate and grow in the long term through mutual interdependence.

These problems underline the need for consultation procedures on at least two levels. First, there should be regular consultation involving assessment of developments in particular industrial sectors of significance. Second, there should be consultation in the application of temporary protection measures which particularly affect the other partner. There are provisions for consultation bilaterally within the framework of the Agreement on Commerce of 1957. These provisions
need reactivating, and perhaps, defining in a way which will more specifically meet the problems outlined in the preceding paragraphs. Alongside consultation, the development and application of agreed safeguard rules would assist considerably. Key policy makers in both countries need to develop soundly-based good judgment on these short- and long-term policy issues. The recent initiative of the Japanese Ministry of International Trade and Industry and the Australian Departments of Overseas Trade, Manufacturing Industry and Agriculture in their institution of regular official discussions at a high level could well be followed by other economic ministries and departments as well as the central banks.

This discussion has suggested ways in which short-term instability in trade and the withdrawal of market access or supplies which frequently accompanies such instability can have serious long-term consequences for the growth of beneficial interdependence. In both Australia and Japan there appears to be considerable confusion regarding the distinctions between short- and long-term policy measures and also weakness in the level of communication between both countries. This may be because of the influence of narrow political interests in each country, but it is also no doubt because, especially in the Australian context, long-term perspectives are insufficiently discussed and developed, and also because, perhaps quite significantly, the various branches of economic policy administration have been too specialised, independent or competitive in their approach to economic management.

II The Problem of Market Horizons in the Resource Goods Trade

The pricing of traded commodities, especially those sold under long-term contracts such as minerals and energy goods, is also closely related to the problems of market access and supply and is another area in which the interaction between short- and long-term aspects of interdependence is considerable.

The resource goods trade will remain a major element in the Australia-Japan economic relationship. Suitable long-term arrangements for this trade can create a stable environment which is favourable to economic growth in both countries. Japanese industry needs to avoid uncertainty of supply of its essential raw materials; at the same time assured markets for Australian production allow capital to be channelled into a steady development of the country's natural resource potential.

As noted above, there is a strong mutual interest in stable long-term
arrangements between Australia and Japan in the minerals trade, and
the high premiums placed on these arrangements constrain both
countries from easily switching to alternative trade partners. These
arrangements, as well as the other resistances which inhibit alternative
trade patterns and encourage a large bilateral trade, define the short-
term bargaining situation between trading partners in setting price.

At any one time, a substantial part of the existing supplier-purchaser
relations in the world minerals trade may be relatively fixed. Much of
world trade is conducted under long-term arrangements between
independent producers and consumers within multinational enterprises,
and some part of the pattern of trade is influenced by political ties and
by discriminatory trade policies. For example, over 65 per cent of the
world’s production of bauxite, 80 per cent of alumina, and 72 per cent
of aluminium, was vertically integrated within the six leading multi-
national companies in 1972. In some cases, notably with bauxite,
there is a strong interdependence between user technology and the
particular source of supply. Although this inhibits Japanese buyers
from switching to alternative sources of supply, it similarly inhibits
Australian producers from easily finding alternative markets. The
extent to which forward supplies of key Japanese raw material imports
are tied up in long-term contractual arrangements is set out in Table
7.1. In consequence of these factors, in the short term there may be
only a relatively small ‘free’ market to which either Australia or Japan
would have immediate access, so that they would be able to divert trade
from each other only under very adverse terms.

The lack of alternative trade options may create a substantial degree
of potential monopoly power in short-term trade relations. Moreover, it
is likely that, at any given time, one of the trading partners will be
hampered more than the other by lack of access to alternative markets.
Where the free market is only a small part of the total market, and
given that it has to absorb all short-term fluctuations in supply and
demand, the free market price is likely to be fairly unstable. This
pattern is common in agricultural commodity trade for partly the same
reason as pointed out above. At times when the price is exceptionally
high, Australia may relatively easily be able to divert supplies to the
free market. At times when price is depressed, Japan may relatively
easily be able to switch to importing from the free market.

It needs stressing that such disparities in bargaining power are of
an essentially short-term character. In the long term not even political
ties and discriminatory trade arrangements are immutable in the face of
market pressures. Thus, an attempt by either country fully to exploit
Table 7.1 Contract Status of Australian Mineral Exports to Japan ('000 tonnes)

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<td>70 333</td>
<td>66 777</td>
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Economic Interdependence in the Western Pacific

Table 7.1 (continued)

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**Notes:**

(a) Total export figure. Iron ore sold to countries other than Japan is almost all sold on short term (2-3 year) contracts.

(b) This figure is based on the information available from Tex, *Iron Ore Manual*, Tex Report Co. Ltd, Tokyo, weekly, and does not take account of any continuations of short term contracts.


(d) Includes estimates of reasonably likely developments in steaming coal.

(e) Information from Tex, *1974 Coking Coal Manual*, The Tex Report Co. Ltd, Tokyo, which covers contracts signed for the year shown only.

(f) Includes estimates kindly provided by the Australian Department of Mines and Energy, Canberra, October 1975.

(g) Information from Tex, *1974 Coking Coal Manual*, op. cit. In 1974 the difference between the “Total long term contracts” figure and the “Total contracts” figure is accounted for by a large difference in the United States long term contracts covering 1974 (three major brands plus blends) and the total contracted position for United States coal in 1974. The remainder is a similar, small difference for Australia plus the amounts supplied by Poland, South Africa, Mozambique and West Germany. The total contracts position in 1980 is calculated simply by assuming that that difference will be constant.

(h) The actual import figure for 1974 is from Bank of Japan, *op. cit.* Forecast imports from Japan Economic Research Center, *op. cit.* It should be noted that the Japan Economic Research Center forecasts steel production as 160 million metric tons in 1980 although the consumption of coking coal forecast implies production of over 190 million tons. The Industrial Structure Council forecast of 151 million tonnes of steel production in 1980 implies consumption of 82 million tonnes of coking coal, or imports of approximately 72 million tonnes.

(i) Calculated on the basis of a total level of contracts of 40.3 million tonnes in 1975 and the assumption that contracted levels to countries other than Japan will remain constant over the period.

(j) From information kindly provided by the companies.


(l) Estimated by one of the major exporting companies on the basis of alumina production:

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(m) Rough estimate based on actual imports to September 1975 of 3 595.

**Sources:**

short-term monopoly power is likely to result in a longer-term shift in trade relations which freezes that country out of important markets or sources of supply.

Hence, as Smith has observed, each country's assessment of the bargaining limits and of its own bargaining strength should be carefully related to the time horizon with which it is concerned.

Substantial short-term resistances may diminish considerably or be relatively cheaply overcome in the longer term. Thus, long-term bargaining limits may be very much narrower, and less weighted in favour of one of the countries than would be suggested by a casual inspection of each country's immediate trade options. If the two countries are concerned to maintain a stable, long-term trade relationship, perceptions of bargaining limits should be based on assessments of long-term trade resistances. Full exploitation of the monopoly power provided by short-term resistances is likely to be rational only for a country which, for whatever reason, does not wish to continue an otherwise profitable trade relationship beyond the short or medium term.28

In the longer term the resistance which most dictates a large bilateral resource trade between Australia and Japan is less subject to erosion, namely transport-cost differences. For some commodities, especially coal, iron ore and bauxite, there are substantial transport-cost advantages in bilateral trade as compared to trade with other countries. At current prices, Australia's transport-cost advantage over the major alternative supplier of coal to Japan is around five per cent of the f.o.b. price, whilst Japan's transport-cost advantage over alternative major markets for Australian coal is probably about ten per cent of the f.o.b. price.29 These margins are likely to lead to different approaches towards pricing by Japanese purchasers and Australian suppliers of raw materials. Japanese purchasers will be inclined to expect Australian suppliers to supply at the same f.o.b. price to every purchaser, a price which covers total costs plus some equal percentage mark-up divided by sales volume. Australian suppliers will be inclined to differentiate the f.o.b. price as between different importers so that landed price is equal in all markets. These alternative approaches imply a bargaining margin which should be shared as equitably as possible between both countries and provide a favourable incentive to trade expansion.30

Although the margins to be shared from the advantages of proximity may be quite small alongside the overall gains from trade to each party,
government intervention in the resource trade is sometimes justified on the grounds that fragmentation on one side or the other will lead to an unfair distribution of these benefits.31 It is difficult to make general judgments about this issue since each commodity market has its own distinctive character in respect of number and size of buyers and sellers, ownership ties, market links and other factors which will influence bargaining advantage. But there should probably rarely be need for direct government intervention in negotiations on either side unless the industry involved is particularly new or weak.32 It is likely to be less disruptive of long-term advantage if each government assists with the provision of information that will set the contours for commercial bargaining rather than become involved in the bargaining process itself.

Where public agencies do intervene or act as a channel through which transactions have to take place, as for example they do in the marketing of both Australian wheat and sugar, they should not be so remote from the activities of the producers and exporters that they are unable to make reasonable judgments of appropriate strategies. This applies equally to consumer-country agencies. The necessary expertise in understanding the situations of individual traders in both countries, and in anticipating likely future market developments, is unlikely to be found among bureaucrats and politicians. The success of any public agency, then, is likely to depend on the nature of its staffing and on its degree of independence from outside political or bureaucratic control. An inadequately informed, ideologically-motivated, or electorally-sensitive central agency may approach trade bargaining in a manner which bears little relation to real bargaining limits.

The viewpoint set out by Smith33 and Caves34 is particularly relevant in this context. The structure of the minerals-consuming industries in Japan and major mineral resource industries in Australia make it likely that for all industries except perhaps coal there will be a substantial degree of co-ordination in pricing. Industries in both countries also work within a framework of policy control and advice. It is important to establish a framework within which these negotiations, covering trade over long periods and involving large flows of commodities and financial resources of such importance to the welfare of the people of both countries, can be undertaken without recourse to short-term political rhetoric by politicians or by industry leaders. The dangers inherent in excessive politicization of resource-trade negotiations derive from the likely overplaying of short-term bargaining power and from the creation of widespread uncertainty as to future policies.
Both factors will provide a strong incentive for the trading partner to diversify its trade pattern, and will lead to a long-term weakening in the bilateral trade relationship. The costs of this might be very much greater than the short-term costs resulting from a possible failure of private traders to exploit this full bargaining power.

A burning issue over the past few years has been the Australian government's revived use of export controls to influence the conduct of minerals trade. This issue is complex. Along with Canada, Australia strongly resisted the ban on export controls announced by the OECD in June 1974. This stance carried forebodings for resource importers, such as Japan, but perhaps forebodings were based in part on ignorance of the special circumstances of national resources policy management in the two federal nations. In part Australia's stance was an attempt to strengthen the bargaining position of her resource producers, but, more significantly still, it was concerned with the national co-ordination of resources development by means of the exercise of federal power over matters of trade. Export controls may be applied to achieve a number of objectives: to influence domestic prices; to conserve national resources; to exploit bargaining power; to contribute to government revenue; and to achieve policy objectives for a federal government which lacks the constitutional power to control directly activities it wishes to regulate. The Australian-Canadian stance on export controls needs to be seen in these terms. Other aspects are discussed more fully in Chapter 8.

The short-term pressures on the development of long-term trade relationships in resources were introduced in Chapter 5. Where the world market is characterized by excess demand for many commodities, as has recently been the case, Australia is less constrained by lack of access to alternative markets than Japan, so that this confers some short-term bargaining strength on Australian suppliers in bilateral trade. On the other hand, subsequent recessionary conditions have favoured the bargaining power of Japanese purchasers. Uncertainties as to future rates of inflation, exchange rate changes, and trends in world prices produce a situation in which there can be substantial differences in expectations. In the setting of long-term contracts there is, then, scope for bargaining in the resolution of these differences. In determining policy towards pricing for long-term contracts, the relevant consideration is not what has happened to world prices in the recent past, but what is a reasonable expectation for the trend in real world prices over the periods of the contracts. The history of a cycle of boom and depression in world commodity markets should warn policy makers
against using simple extrapolations of price movements in recent years as their guide to future market conditions.

Procedures were suggested above\(^36\) to insulate long-term mineral contractual relationships from the uncertainties as to future rates of inflation and exchange rates. The nature of the contractual arrangements in respect of allowances for quantity variations permits insulation against normal cyclical instability. The determination of a relatively fixed real price over a five-to-seven year contract period will encourage careful assessment of long-term trends in commodity markets and step-by-step adjustment of real prices appropriately. If real prices do not move consistently with market trends in the long term, there will be a gradual withdrawal of supplies or markets. If short-term advantages are exploited by one party or the other, adjustments contrary to long-term trading interests will be set in train and potentially lead to withdrawal from interdependence.

To recapitulate, all of these factors contribute, in some measure, to the creation of a potential bargaining situation for Australia-Japan trade in resource goods. There is no single price at which trade will take place and outside which one country or the other will choose instantly to redirect its trade. However, the existence of the bargaining situation is no more than a reflection of the substantial advantages which flow from bilateral trade in resource goods. Bargaining should be concerned with the reasonable distribution of these gains, but should be structured so that short-term trade restriction and a long-term breakdown of the bilateral trade relationship are never necessary consequences of the bargaining process.

It should be noted that, for the most part, the factors specified earlier as contributing to the bargaining margins are of short- or medium-term importance. Over the long term many of these resistances and rigidities in trade patterns will disappear or can be broken down. The mutual interest in maintaining a long-term bilateral trade relationship requires that both parties should recognise the much narrower bargaining margins which will prevail over the long term.

It should be added that, with one possible exception\(^37\) long-term contract arrangements between Australia and Japan have been characterized by a readiness on both sides to accommodate each other's problems as far as possible through informal negotiations. Thus, in general, situations in which either side is greatly disadvantaged by rigid adherence to the contract terms have been avoided. So far as quantity specifications are concerned, problems can arise on both sides so that neither party is placed in the position of being the permanent
supplicant. Pricing problems are much more one-sided, since the escalation in inflation rates has steadily eroded the value of fixed prices to Australian exporters. Thus, there is now a common interest among Australian exporters in seeking more frequent and more open-ended price negotiations and/or in building more effective currency protection and inflation cover into contract terms. For the reasons spelled out here and above, the latter approach would seem to have considerable advantages.

The interaction between short- and long-term aspects of interdependence is of crucial importance in the export pricing question. With the other country effectively tied to it as a trading partner in the short term, the country favoured by current trends in world markets may be able to bargain effectively for a much larger share of the gains from bilateral trade. In the long term, however, this may be expected to provide an incentive for the trading partner to seek alternative and more satisfactory trade arrangements. If the advantages of a stable long-term relationship are to be realized, the short-term competitive urge in bargaining over export prices needs to be tempered by a clear assessment of both countries' long-term trade options and a co-operative attitude towards contemporary problems faced by the opposing party.

In addition to the strong interaction between short- and long-term considerations in the pricing of particular commodities, there is a clear interaction between policies pursued in resource-goods trade and the general development of bilateral trade relations. Australia has a substantial interest in gaining greater and more assured access to Japanese markets for various agricultural and resource commodities, while Japan has a similar interest with respect to trade in manufactured goods between the two countries. Movement towards these objectives can only be assisted by the establishment of equitable and co-operative stable long-term trade relations in the resource-goods trade.

An important difference between Australia-Japan trade in minerals and in some agricultural commodities, such as wool, is the much greater freedom of access to well-developed short-term markets for agricultural goods. However, for many agricultural commodities too, the 'free' market is very limited and long-term undertakings in respect of agricultural trade appear increasingly attractive in view of the need to provide food security and in view of the nature of agricultural protectionist systems. Long-term contract arrangements for agricultural commodities can also aim to achieve market stabilization. Unless buyers have relatively stable and controlled markets for their products, they will rarely be interested in long-term contracting. Also,
where Australian production is relatively unstable, long-term contract sales may impose heavy stock-holding costs on suppliers.

In sugar, where Australian production is moderately stable, long-term contract sales have proved an attractive means of securing reliable market access. During 1974, Australia concluded five-year contracts to supply sugar to a number of countries in the region, including Japan. The substantial purchaser-country interest in contracts was, in large measure, an over-reaction to the high sugar price and uncertain world supply conditions at that time. In the event, the contract price accepted by Japan has exceeded the world price consistently since contract deliveries began in early 1975. Although Japan has several times sought to have the contract price revised, Australia has stood firm on the issue. This experience may create difficulties for the future renewal of sugar contracts, and is likely to militate against the adoption of contractual arrangements for other agricultural commodities in the near future. However, in the longer term it may prove desirable for both countries that the export of beef from Australia to Japan should be conducted under long-term contract arrangements.40

NOTES

1. See above pp. 88-93. For further comment on these issues in Japan see Nobuyoshi Namiki, 'The Japanese Economy'; and Allen, 'Japanese Agricultural Policy'.
2. James, 'The Assessment of Adjustment Problems in Australian Trade'.
3. See above p. 102.
11. See Ibid., Appendix I, for a review of various assistance measures used in Australia. There is no readily available overview of the measures used in Japan. But see Kiyoshi Kojima (ed.), Non-Tariff Barriers in Japan's Trade, Japan Economic Research Center, December 1971, and, for a review of measures affecting agricultural adjustment, Crawford, Hemmi, et al., 'Australian Agriculture and Trade with Japan'; Hemmi, 'Structural Adjustment', and Allen, 'Japanese Agricultural Policy'.
14. See Jan Tumlir, 'Emergency Protection Against Sharp Increases in Imports', in Corbet and Jackson (eds.), In Search of a New World Economic Order, for a full discussion of the issues surrounding safeguard measures.
15. See above p. 73.
17. Crawford, Hemmi, et al., 'Australian Agriculture and Trade with Japan', Chapter III.
18. See Namiki, 'The Japanese Economy', for many examples of successful as well as examples of unsuccessful structural adjustment in Japanese manufacturing and service industries.
24. See for example, Nihon Keizai Shimbun, 14 October 1975.
25. See above, pp. 105-6 and 107.
28. Ibid., p. 3-4. Smith notes that, in a slightly different context, an example of this is provided by the differing interests of members of the OPEC group. The relatively short life of Iranian oil reserves has led Iran to play a large part in the initiation and attempted maintenance of a policy of maximising short-term monopoly profit rates, while countries with reserves of longer life expectancy have become increasingly aware of the longer term dangers of such a policy.
29. Estimates provided by company sources.
32. As was the case in the early phase of wood-chip exporting from Australia.
33. Smith, 'Export Price Bargaining', pp. 30-34.
under the Japanese government's banner has basis in fact, and some observers believe that the independence of Australian sellers may have cost them a slice of the bargaining margin. However, that slice may be negligible in many instances. If Japanese buyers collude, so do most countries' sellers, and it is not clear that Australia's are an exception. And collusion among Japanese businesses, although often supported by the government, is neither enforced by public authority nor adhered to perfectly by Japanese businesses'.

35. Lloyd, 'Japan and Australia', p. 10.
38. See p. 110 above.
39. Harris and Hooton, 'International Market Stabilisation', p. 16.
There are a number of issues deriving from the strains which have appeared in the world economy over the last decade or so.\(^1\) One which has latterly become prominent, and which has considerable implications for the conduct of the Australia-Japan relationship, is that of claims for a new world economic order. Such claims have been associated with rapidly escalating oil prices, the commodity shortages of 1973 followed by the sharp recession of 1974, and the question of bargaining power between the resource-rich developing countries and the resource-importing developed countries. This has given rise to attempts at cartelization of trade in key resource commodities; the development of new channels of finance between countries within the developing world based on oil funds; and the spread of policies of so-called ‘economic nationalism’ which aim to limit the operations of foreign investment and impose controls on trade among resource-rich and resource-poor developing countries alike. Independently of this issue, however, there has been a questioning of the fundamental structure of the international economy including the important continuing problems surrounding the reform of the international monetary system and trading system made necessary by the huge changes which have taken place in the structure of world trade and payments in the post war years and which accelerated throughout the 1960s (see Table 4.8). These changes led to the international monetary and commercial policy initiatives of the early seventies which have been described above.\(^2\) All of these factors bear heavily on Japan and Australia separately as well as on the multilateral and regional aspects of the Australia-Japan relationship.\(^3\)

**I Multilateral Aspects**

Feelings among an influential group of developing countries that the developing world is disadvantaged in the operation of the established international economic order result partly from the fact that developing-country trade growth has been slower than trade growth among industrial countries. Developing countries have benefited from the post war world economic order but they have certainly not benefited so much
Economic Interdependence in the Western Pacific

as industrial countries in terms of trade expansion, income growth and social and economic diversification. Primary producers in particular, including developed-country producers such as Australia, were disadvantaged by the international trade rules instituted under the GATT exceptions provisions, which permitted the easy maintenance of agricultural protectionism in industrial countries. The frustrations of developing-country exporters have led to calls for drastic changes in the structure of the international economic system and, in recent times, focused on attempts at assertion of bargaining power in the resource-goods trade.

Moves towards cartelization of resource supplies and commodity arrangements designed to transfer resources from rich nations to poor nations gathered strength with the success of the OPEC group of oil exporters in raising oil revenues from 1971, and especially after 1973. These developments caused extreme uncertainty in industrial consumer nations, especially in Japan. Professor Ichimura characterized the rapid development of resources supply pessimism in Japan as follows:

Two recent bestsellers in Japan have predicted glory on the one hand, and doom on the other. Herman Kahn's *Emerging Japanese Superstate, Challenge and Response* was at the top of the lists in 1971, to be followed a year or so later by the Japanese novel, *Nihon Chinbotsu [The Submerging of Japan]*, by Sakyō Komatsu. Many Japanese believe Kahn's flattering but facile prediction that the '21st century will be Japan's century'. Now, however, even more well-informed people are expressing rather serious concern that the nation is going under, if not literally sinking into, the sea. During the last few years, the subject of Japan's future has precipitated intense, sometimes radically polarized, feeling. Former exultation over miraculous growth rates is seldom seen, as a dour pessimism about an economic future devoid of natural resources has crept in. Increasing numbers of specialists are trying to draw attention to the vulnerable structure of the economy almost totally dependent on the natural resources of foreign nations. The same people believe that the rate of economic growth should be slowed down to 4 or 5 per cent annually in the next five or six years.

The coincidence of the energy crisis with world food shortages had a profound effect on the Japanese outlook towards resource and food security. Throughout the 1960s Japan had profited from the generally favourable situation in the global supply of natural resources in a
The price of crude oil actually fell between 1948 and 1970 and Japan's heavy industrialization programme was favoured by cheap energy supplies. By the end of the 1960s, the basic change which was taking place in the world supply and demand equation had become evident and the spectacular increase in world demand for raw materials around this time threatened future scarcities. There were those who anticipated the requirements of these changes for Japanese raw material import policy:

... Japan's dependence on imports of raw materials, energy and food is so complete that policies attempting self-sufficiency in any of the key items appear unrealistic. Diversifying sources of supply, economizing on the use of raw materials and energy, stepping up efforts for increased production from indigenous resources, and building up emergency stocks of energy and food — all these are feasible and should be pursued with seriousness. But the basic character of heavy dependence for key items from overseas resources will not change.

The Ministry of International Trade and Industry held the view that the promotion of development-import of overseas resources would be the central focus for future resources development policy. Japanese firms were encouraged to seek more actively ownership and involvement in the development of foreign resources for supply to Japan. The Club of Rome forecasts of long-term resource scarcity made these early concerns about resource shortage in Japan doubly plausible.

Specific concerns about security of supply emerged first with food, particularly following the United States export controls on soya beans in order to avoid 'unacceptable' domestic price rises. Subsequently the OPEC arrangements for oil, the use of the oil embargo for purposes of political bargaining, and the expressed desires of other countries to move in the same direction dramatized the world's raw materials interdependence. The industrial countries, and particularly Japan, were faced with a high degree of uncertainty about their access to raw material supplies for the first time in twenty years.

Australia's position as a developed resource exporter remained ambivalent throughout the period of most intense resources diplomacy. While trying to maintain her own trading interests, and to introduce new national resources policies in respect of foreign ownership requirements, she was at the same time anxious to establish some identity of interest with developing countries in this as on some other issues.
described above, she therefore associated herself with producer cartels but was careful to adopt a moderating stance and to give assurances on the question of supply. Primary objectives in her resources policy were to pursue national ownership aspirations, however difficult this proved in fact, and to insure against falling real prices for resource exports in the face of currency re-alignments and rapid inflation. All three strands at times became confused in the articulation of policy.

There were two main complementary threats in the uncertainties that built up around the resource trade at the beginning of the seventies. On the one hand, it was feared that resource producers' attempts at cartelization would seriously restrict trade and security of supplies and, on the other, that these moves would encourage consumers increasingly to tie up resources supply through tight bilateral agreements and special government-to-government arrangements in order to protect themselves. In either event, both Australia and Japan would eventually suffer. The economic institutions of the post war period were designed to avoid a recurrence of disruptions such as the economic blocs, the cartels of the interwar period, the consequences of narrow bilateralism, restrictive international trade and payments practices and other manifestations of economic nationalism.

Nonetheless, the determination of 'reasonable' commodity prices for mineral and agricultural commodities must remain a continuing theme in relations between a major supplier such as Australia and a purchaser like Japan. For her part Japan will continue to be concerned about security and stability of supplies, perhaps more than with price. For some resources there are technical reasons why bilateral arrangements covering fairly long periods cannot be avoided. Also joint management of resource developments encourages a sense of security where purchases are too large to handle efficiently through spot markets. For these and other reasons it is important that both partners' access to and links with the world market be preserved and that there be a great deal of give and take in handling short-term difficulties in trade.

The objective of market diversification in Japan and Australia should be assessed in this context. Japan may be prepared to pay a unit price for purchases of a commodity from one country or supplier which is higher than the unit price of supplies available at the same time from a second supplier in order to reduce the risks of supply interruption. Japan has already indicated that one of the strategies it will adopt in response to 'resource nationalism' is to diversify its sources of supply:

... stable supplies of essential resources must be secured. In order
to do this, it is probably necessary for Japan first of all actively to pursue the maintenance of orderly imports and the diversification of her import markets. The world's resources distribution is very uneven and hence there are many difficulties in market diversification of imports depending on the circumstances of individual resources. But it may be necessary for Japan to avoid concentrating her imports in some specific markets, while at the same time to deepen her interchanges with the Communist bloc, Latin America, Africa and other regions where so far her relationship with respect to her dependence on primary product imports has been relatively weak.14

In practice the extent to which Japan will spread her sources of supply beyond the market diversification which would minimize the expected costs of importing the desired quantity of some product will depend chiefly on assessment of the risks of supply failure from each supplier, and on the extent to which such cost minimizing purchases would be concentrated on one or a few suppliers. The urge to reduce the share of a supplier will be greatest in the case of a dominant supplier for whom the Japanese estimates of supply failure are higher than those of other potential suppliers.

There is no doubt that the real long-term interests of both Japan and Australia lie in arrangements which ensure a steady and uninterrupted expansion of bilateral trade. By reducing the risks of supply interruption, this will leave Australia free to compete in terms of the advantages of cost of production, transport and supply stability which it enjoys.15 This point was elaborated in Chapter 7. Both countries will lose if mutually profitable trade is foregone because of misunderstandings.

Countries have the right to regulate their export of raw materials in the interests of the orderly marketing and development of their resource potential, but there are clear dangers in the use of export controls as a naked bargaining weapon. There is a strong case for the establishment of more effective international rules and guide-lines 'for avoiding where possible, and resolving where necessary, trade policy conflicts over the management of commodities in short supply'.16 Without international agreement regulating such controls, the possibility exists of multilateral trade restrictions being imposed in attempts by countries to enhance their bargaining positions. Australia as well as Japan would stand to benefit from international surveillance under GATT of export controls which still allowed Australia, for example, the right to regulate its export trade subject to agreed rules of
Multilateral negotiations should take seriously the possibility that the success under GATT of several rounds of talks in reducing import restrictions may be rapidly eroded by a proliferation of export restrictions. Agreements regulating the use of export controls are, in the first instance, clearly in the interests of primary product importers such as Japan. But the development of such rules will need to meet the needs of exporters as well as importers—"to ensure that the hewers of wood and drawers of water are so for efficient resource allocation reasons and not because of unequal bargaining power". In the longer term it is in the interests of exporting countries like Australia that relatively stable trade arrangements should be maintained and that access to markets should remain open. From an economic viewpoint, the negotiation of such rules should ensure that the commitment is not one-sided by seeking stronger adherence to rules on access to markets, especially for agricultural commodities. Indeed, resource producers and agricultural suppliers are unlikely to agree to international guidelines without some offsetting benefits in terms of assured and predictable access or in some other form.

International agreement on export control of resources and their use are subject to negotiation under the current round of multilateral trade negotiations, following from the Tokyo Declaration of September 1973. There are other important areas in which these negotiations could promote the interests of Australia and Japan, either directly or by producing agreed international standards for policy behaviour which is a source of conflict in the bilateral trade relationship.

To the extent that the commitment to undertake multilateral trade negotiations has restrained countries from reacting to the problems caused by the oil crisis and rising unemployment by resort to increased trade restrictions, the multilateral negotiations have already served a valuable purpose.

Australia and Japan have both made significant unilateral reductions in tariffs in recent years, and both countries regard these concessions as part of their contribution for the current round of negotiations. Thus, they both argue that the basis for calculating tariff reductions under the negotiations should be the level of tariffs prevailing after the Kennedy Round, rather than those which now exist. Outside this mutual interest in formulation, however, the main objectives of Australia and Japan in the multilateral negotiations tend to reflect areas of conflict in bilateral trade relations.

One area in which there is potentially a common interest is in the
reduction of tariffs on processed minerals. In general, tariff levels on these products are low in the industrial countries but, because the raw-material costs are frequently a substantial proportion of the value of the processed product, the levels of effective protection to processing are often substantially higher than the tariffs alone would suggest. The effect is that there is a significant barrier placed on development of processing facilities in, and export of processed goods from, the raw material producing countries. Clearly, Australia and many developing countries would like to see reductions in the tariffs on processed products. At the same time, there has been increasing recognition in Japan of the desirability of shifting resources out of processing activities, both because of the pollution-intensive nature of these activities and because they are increasingly uneconomic in an economy with high energy costs. Despite this recognition there has so far been limited real movement of processing facilities out of Japan. However, it may be expected that resistance to tariff reductions on the part of Japanese industry can be reduced if there are opportunities for Japanese processing firms to have a stake in some of the processing activities to be set up in the materials producing countries. To that extent, a mutual interest in the multilateral negotiations could be facilitated by bilateral discussions at both governmental and private levels as to future patterns of trade and ownership in resource-goods activities.

A principal objective of Japan in the multilateral trade negotiations is to obtain clearer guide-lines on the use of anti-dumping and safeguard measures in manufactured goods trade. Australia has expressed a willingness to discuss these issues together with the problems of regulating non-tariff barriers. Clearer guide-lines in anti-dumping and safeguard measures could do much to smooth over conflicts in the bilateral trade relationship, where Australia has frequently had recourse to such measures in response to penetration of the Australian market by Japanese goods.

Perhaps the most serious conflict of interest between Japan and Australia lies in trade in agricultural commodities. In the multilateral trade negotiations, Australia will argue strongly that concessions on manufactured goods should be matched by concessions on agricultural trade. Thus, it will be unwilling to reduce tariff levels on manufactures without some reciprocal arrangement whereby it can obtain greater, and more stable, access to markets for its agricultural exports. Japan, on the other hand, has taken the view that agricultural trade should be regarded separately from trade in manufactures: that there should not
be reciprocity between the two areas and that the rules governing non-tariff barriers and safeguards for manufactures should not apply equally to agricultural commodities.

Given that the Japanese view is closely aligned with that of the EEC, there is little real prospect that the current round of multilateral negotiations will be able to advance far in the field of agriculture. In this respect, the pattern is likely to be the same as for previous rounds. Although it may be argued that the Australian view could be given more force in agricultural trade discussions by a greater willingness to bring her tariffs into line with those of other developed countries and to assume the full obligations of a major trading nation, the small size of the Australian market inevitably reduces the importance of such concessions.

It may be that the conflict of interests between Australia and Japan on agricultural trade is more likely to be resolved outside the multilateral negotiations. In bilateral trade relations the bargaining power of the two countries may be more equal and the areas of mutual interest will, over time, allow a degree of stability and confidence within which Japan's objective of stable agricultural supplies can be met by Australian exports rather than through self-sufficiency.

In the event that the progress within the multilateral trade negotiations on these issues is slow and peripheral to both countries' major bilateral interests, there is certainly scope for pushing ahead towards their satisfactory resolution bilaterally but consistently with multilateral obligations under GATT. A revision of the Agreement on Commerce could proceed on a number of fronts already mentioned: tariff concessions involving minerals processing by Japan and entry to specific Australian manufactured goods markets for Japan; long-term agricultural supply arrangements; understandings on the use of export controls; and understandings on the application of safeguard arrangements for specific commodities such as beef and motor vehicles.

II Regional Aspects

In general, regional restrictions on trade, including discriminatory trade arrangements or regional free trade areas, limit market opportunities and encourage a larger degree of monopoly or monopsony power in key commodity markets. Yet because of the geographic concentration in economic relations (particularly in trade and commodities) there are opportunities for promising regional policies which can be pursued within the framework of global commitments to non-discriminatory trade and other transactions.
The most important areas of Western-Pacific regional interest lie in agricultural trade, resource goods trade, the treatment and behaviour of foreign investment, the treatment of technology transfer and industrial relocation. First, functional economic co-operation in these areas has to proceed most effectively on an *ad hoc* basis. But more recently such approaches are yielding less and less satisfactory solutions to problems of the kind presented by the current recession or the shift around in the resource trade.

Provision for more extensive government-to-government consultations and negotiations on regional interests could be useful in this context. Although such consultation could conceivably take place within the framework of the OECD, Japan, Australia, Canada and the United States — the four largest economies in the Pacific area — are the only non-European nations out of a total membership of twenty-four. Thus there would appear to be considerable advantages in a smaller-scale regional Organisation for Pacific Trade, Aid and Development with Asian developing country participation, which could aim at regional solutions to some of the important foreign economic policy problems.

Indeed, a major aspect of developments in the regional economy is the relationship between the larger advanced economies and the smaller developing economies. Trade, economic relations and political relations with Asian developing countries are of considerable importance to the advanced countries of the Pacific region, especially to Australia and Japan. Many of the special problems associated with large-scale trade, investment and aid relations between the advanced Pacific economies and developing countries in the Western Pacific are dealt with inadequately in multilateral forums. Although the OECD's Development Assistance Committee provides a useful advanced country discipline on development assistance policies, that function is limited to developed countries and its principal focus is in any case on Africa, the Middle East and South Asia.

Developing country claims for a new international economic order have in recent years appeared to focus on the newly-perceived bargaining power of the resource producers among them, but this is only one element among many more important elements of concern to them. More persistent difficulties result from: limitations of access to developed country markets for agricultural and manufactured goods; the behaviour of foreign investors; limited success in mobilising the gains from foreign trade, especially those generated by investment from abroad, through the taxation of export activities and the diffusion of
skills and technology; and the quality and structure of foreign aid. These issues face Australia and Japan in their approach to fostering constructive relationships with the developing countries of the Western Pacific. Some, such as approaches to aid policy in parts or all of the region, the definition of codes of investment behaviour, and understandings on taxation of foreign investment, should be susceptible to regional discussion and solution.

There are a large number of issues which now require regular discussion, consultation and resolution among the advanced economies in the Pacific area, including Australia, Canada, Japan, New Zealand and the United States of America. Besides the long-term issues mentioned above there is also regional interest in discussion of short-term economic changes. In future there must be exploration of means whereby bilateral official level meetings among these countries can be reorganized on a regional basis, and there must be a move towards the reorganization of Ministerial level talks in the same way.

Another question of special regional interest is the emergence of China and the development of her relations with Asian-Pacific countries over the long term. Trade with China is likely to become a bigger factor in the economic and political calculations of the smaller countries of the Western Pacific and East Asia. However, even if China achieves very remarkable rates of income growth and trade growth she is likely to remain a relatively small factor in commerce alongside the established economic relations of the larger economies for some decades. Nevertheless, the opening up of economic relations with China and other communist countries in South East Asia must encourage the extension of state trading, new forms of capital and technology transfer and new approaches to development assistance by both Japan and Australia. The emerging relationship with China and her interests in regional arrangements, alongside those of the Soviet Union, are important subjects for further study.

NOTES

1. See above pp. 75-80
2. See above p. 80
3. For a Japanese review of these issues see Kojima, Japan and a New World Economic Order, especially Chapters 1-3; see also Arndt, ‘Resources Diplomacy’, and Lloyd, ‘Japan and Australia’.

5. The formation of CIPEC (Copper Exporters Association), the Iron Ore Producers' Association, the International Bauxite Association, claims over seabed resources, and the Lome Convention, all bear this stamp.


7. George, 'Japan's Oil Import Policies', pp. 27-62; Kojima, Japan and a New World Economic Order, Chapter 3.


11. This latter element in Australia's foreign economic policy approach is discussed further in Chapter 9.

12. The then Australian Prime Minister stated that 'We are particularly conscious of the problems of Japan, our major market for minerals. Her vast industries are especially dependent on imports for their energy needs and raw materials. It is not, and I must insist on this, our purpose to try to exploit that dependence. But we believe it would be in the interests of both Japan and ourselves to work together more closely—to secure for Japan a more reliable source of supply and to secure for Australian exporters more reasonable prices. Neither of these aims is likely to be fully achieved if trading arrangements are left almost entirely to private commercial negotiations', E. G. Whitlam, 'Minerals Policy' Press Statement, Speech to the Australian Mining Industry Council, 19 March 1973, reprinted in Australian Government Digest, 1, i, pp. 326-31; see also p. 80 above.

13. Lloyd, 'Japan and Australia', p. 16.


18. Kojima, Japan and a New World Economic Order, Chapter 2.

19. See pp. 197-8 below.

20. The institution of regular official-level talks between the advanced economies in the region must be considered in conjunction with consultations between the advanced and the developing which are argued for in Chapter 9, See pp. 197-8.

21. There already exists a South East Asian Ministerial conference on Economic Development but within that body the developing countries are very suspicious of the operations of the more industrialized nations.
The Australia-Japan relationship is now a key factor in relations among all the countries of the Western Pacific region, presenting challenges and problems that will require positive and sensitive policy responses from both partners. The issue of short-term vulnerabilities to heavy intra-regional interdependence and doubts about the desirability of the present structure or level of interdependence confront the developed countries of the region in their approach to aid, trade and investment relations with their developing economic partners.

Both Australia and Japan in recent years have sought to implement policies directed at closer relations with the developing countries that lie between them. In both countries there have been important gaps between policy and performance, and also some retreat from the internationalist policies that were in ascendance before the 1974-75 recession. However, the region remains very important to both countries and economic and policy developments in Japan are of major significance to development and welfare throughout the region. This will be one factor in determining whether a framework for security and progress can be built among the diverse societies and peoples of the region without retreat to the destructive divisions and animosities that have been too often characteristic of the past.

The sheer size of the relationships and level of interdependence is noteworthy. In 1974, Japan conducted almost 30 per cent of her export trade and 22 per cent of her import trade with the Western Pacific region (see Tables 4.12 and 4.13). The trade shares for Australia were 20 and 11 per cent respectively (see Tables 4.10 and 4.11). Significantly, Japan looms very large in the external transactions of almost all developing countries in the area. Almost 30 per cent of the developing Western Pacific's export trade, and almost 30 per cent of its import trade was with Japan during 1974, although there were considerable variations in trade shares and trade balance by country and by sub-region. Shares for Australia are predictably much smaller, at about 3 per cent for both exports and imports.

The resource endowments of Australia and many Western-Pacific countries other than those in East Asia, being heavily concentrated in
agriculture and minerals, have very similar characteristics. In broad terms, both Australia and these countries export in large measure the same kind of resource-intensive commodities and it might be imagined that there was very little scope for trade among them. In fact, throughout the 1960s and onwards, the intensity of trade between Australia and the larger South East Asian economies, Singapore, Indonesia, Thailand and Malaysia, and between Australia and the nearer economies of the South Pacific has been extremely high. Australia exports more intensively to these countries than she imports from them. For Thailand, the Philippines and Singapore, Australia's import-trade intensity was markedly lower. (See Table 9.1.)

The reasons for this high trade intensity have not been due to any basic complementarity between the economies. Some tropical foodstuffs and labour-intensive manufactures have been exchanged for the temperate agricultural goods, mineral resources (particularly iron) and manufactured goods in which Australia has an advantage. More importantly, geographic proximity has meant that Australia's impact on the economies of the Western Pacific is much larger than her role in world trade would suggest.

The structural change in commodity trade which took place between 1967 and 1974 was considerably greater than might have been foreseen at that time. In 1967 foodstuffs and raw materials were 27.7 per cent of Australian imports from South East Asia and manufactured goods were 4.8 per cent. Mineral fuels, dominated by Indonesia's oil exports, were 67.1 per cent. By 1973-74 semi-processed and labour-intensive products were more important. From Indonesia, tea and timber products were 60.8 per cent of Australia's imports from that country; from Thailand, timber, textiles, and jute were 50.7 per cent; from the Philippines, timber, coconut products, textiles and clothing were 68.3 per cent.

The special relationship which exists between Australia and Papua New Guinea is also reflected in extremely high trade intensity. That relationship and its institutionalization in the form of non-reciprocated tariff preferences favouring Papua New Guinea's exports to Australia, has in fact been responsible for some reduction in trade with other countries in the area (see Table 9.1). Trade in coconut products during the 1960s and more recently in vegetable oils has been almost completely diverted to Papua New Guinea by these preferential arrangements.

Indonesia, geographically the closest of the larger developing economies, has shown much higher trade intensity in Australian
imports than other South East Asian countries and rapidly rising intensity in Australian exports. This has been partly due to the rising complementarity in trade flows with large increases in Australia’s exports of flour, rice and cereal preparations to Indonesia. In 1970 imports fell considerably as a result of the increase in Australia of domestic petroleum production, previously a large import item (see Table 9.1).5

Japan’s economic relations with Western Pacific countries are, of course, an extremely important factor in the region. During the 1960s when countries exporting primary products faced increasing trade deficits, growth of trade with Japan offered new export opportunities. For South East Asian countries alone exports to Japan between 1960 and 1967 grew at 10.6 per cent per annum while total export earnings for all developing countries grew at only 6.1 per cent. Table 4.11 reveals that during the seventies growth of exports from the developing Western Pacific to Japan was 36.1 per cent compared with 26.2 per cent growth of all exports.

The strengthening of Japanese import specialization in non-ferrous metal ores, timber and mineral fuels at a time when Japan was providing a major impetus to total world-trade growth had dramatic effects on the countries of the region.6 Japan accounted for more than one-quarter of the expansion in world petroleum imports in the late 1960s and early 1970s, and over half the growth in timber and non-ferrous metals and ores. The growth of the Japanese economy over the past two decades has reshaped the economic opportunities of many developing countries. Developments in the Japanese economy now exert massive influence on the world’s commodity and capital markets and on the economic fortunes of neighbouring developing countries.7 Japan has become by far the world’s largest importer of industrial raw materials. Large-scale, long-distance trade in many raw materials, including iron ore, coal, non-ferrous metal ores and logs and wood chips, underwent technological transformation or was pioneered on the demands of the Japanese market. The export specialization of developing countries in the Western Pacific has been transformed by the demands of the Japanese market: in all these countries export specialization has increased in precisely those commodities in which Japanese import specialization is strongest. In particular, Japanese economic growth has had especially important effects on those developing countries that are richly endowed with the natural resources necessary to produce non-agricultural raw materials.

The structural change in commodity trade which had occurred in the
Table 9.1 Concentration in Western Pacific Countries (a) Trade Flows 1965-74

<table>
<thead>
<tr>
<th>Partner region</th>
<th>Japan (b)</th>
<th>Australia</th>
<th>Indonesia</th>
<th>South-East Asia</th>
<th>East Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per cent share in export</td>
<td>2.88</td>
<td>2.37</td>
<td>0.00</td>
<td>3.74</td>
<td>3.06</td>
</tr>
<tr>
<td>Per cent share in import</td>
<td>3.21</td>
<td>2.62</td>
<td>0.00</td>
<td>6.57</td>
<td>7.84</td>
</tr>
<tr>
<td>Import trade intensity (c)</td>
<td>0.66</td>
<td>0.39</td>
<td>0.00</td>
<td>3.62</td>
<td>4.36</td>
</tr>
<tr>
<td>Per cent share in export</td>
<td>16.43</td>
<td>26.39</td>
<td>28.77</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Per cent share in import</td>
<td>9.74</td>
<td>12.72</td>
<td>18.43</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Import trade intensity</td>
<td>2.00</td>
<td>2.00</td>
<td>2.60</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Notes:
(a) Areas included: Japan, Australia, Indonesia, South-East Asia, East Asia, China, Papua New Guinea, Pacific and Oceania, New Zealand.
(b) Including Ryukyu.
(c) Japan's index of import trade intensity with Australia, for example, is measured by Australia's share of total Japanese imports divided by Australia's share in world exports. This is equivalent to an index of Australia's export trade intensity with Japan, that is, Japan's share in Australia's total exports divided by Japan's share in world imports.

Source: Calculation by the Australian Department of Overseas Trade, based on International Monetary Fund, Direction of Trade (various issues).
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Economic Interdependence in the Western Pacific

Table 9.1
China

1965

1970

(continued)

Papua New Guinea

1974

1965

1970

1974

Pacific and Oceania

1965

1970

1974

New Zealand

1965

1970

Western Pacific

1974

1965

1970

1974

W o rld ( US %m )

1965

1970

1974

0.1 1

0 .1 9

0 .1 4

4 .5 5

4 .4 3

0 .7 2

0 .5 9

0 .8 7

3 4 .8 1

3 4 .4 4

3 4 .0 9

8 5 4 0 .2

19 4 2 9 .7

5 5 5 1 3 .1

2 .6 7

1 .3 1

2 10

0 .0 2

0 .0 8

0 .4 7

0 .4 6

0 .6 8

0 .2 9

0 .7 3

0 .8 1

0 65

2 7 .1 9

2 6 34

29 06

8 4 1 0 .5

19 3 6 3 . 9

6 2 0 6 2 .4

3 .5 7

2 .0 1

3 .5 1

0 .8 7

3 .0 2

6 .1 4

0 .4 0

1 .0 6

1 .5 7

1 .7 3

2 .1 7

1 .8 1

1 .7 5

2 .8 7

2 .9 3

3 .5 7

3 .3 2

0 .7 3

0 .7 9

5 .4 6

2 .7 0

2 90

2 .5 3

3 .7 8

2 17

2 .4 0

2 .4 9

2 .7 1

6 .2 5

5 36

6 62

4 1 .0 3

5 1 .2 3

5 5 .4 0

3 0 1 3 .9

4 7 8 7 .9

11 0 8 8 . 5

0 .7 9

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1 .0 9

0 63

0 .5 4

0 .5 3

1.11

2 .1 6

1 .4 9

1.51

2 .3 6

2 .3 4

19 0 0

2 3 .0 5

3 2 .0 6

4 9 9 3 .5

4 9 9 3 .5

12 2 8 7 .1

1 .0 3

1 .3 2

1 .9 2

2 3 .7 9

2 1 .0 9

7 .2 1

1 .8 3

2 .6 3

2 .2 2

2 .2 6

4 .7 6

6 .6 0

1 .5 6

565

1 .6 6

2 .0 6

0 .0 0

0 .0 0

0 .0 0

4 5 .1 6

7 0 .7 0

6 6 .9 6

7 0 7 .7

1 160 7

7 4 4 9 .7

1 4 .2 2

3 .2 8

4 .1 4

0 .0 0

0 .0 0

0 .0 0

1 .4 4

1 .9 1

1 .9 1

0 .0 0

0 .0 0

0 .0 0

5 5 .2 9

5 2 .9 1

5 9 .0 0

6 9 4 .6

1 0 0 1 .5

3 7 5 4 .1

1 8 .7 1

5 .5 8

7 .3 7

0 .0 0

0 .0 0

0 .0 0

2 .4 2

2 .3 5

2 .8 5

0 .0 0

0 .0 0

0 .0 0

4 .6 2

3 .8 5

3 .8 2

0 .7 5

0 .8 5

0 .6 9

0 .0 5

0 .1 3

0 .0 1

0 .1 1

0 .3 0

0 .1 0

0 .4 0

0 .3 5

0 .9 1

4 1 .0 6

5 2 .0 1

55 64

3 1 8 5 .8

5 5 8 0 .2

1 4 5 5 2 .1

1 .0 2

2 .8 4

1 .2 3

0 11

0 .0 1

0 .0 0

0 .1 9

0 .3 1

0 .3 7

0 .3 2

0 .5 4

4 .7 7

4 2 .8 9

5 1 .3 1

5 4 .7 9

4 2 6 1 .8

7 3 0 4 .6

18 0 8 6 .4

0 .0 0

0 .0 0

0 .0 0

0 .1 3

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1 .3 2

4 .7 8

2 .1 7

0 .4 0

0 .2 2

0 .0 3

0 .3 1

0 .3 7

0 .5 5

0 .4 7

1 .0 9

2 .1 6

3 .5 1

3 .6 6

3 .5 4

0 .6 9

0 .2 1

0 .3 6

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0 .1 2

0 .0 9

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4 0 .8 8

3 3 .6 1

3 8 .2 6

1 8 1 1 .7

4 9 3 1 .7

16 2 3 2 .6

2 6 7 7 .6

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21 3 3 4 .1

1 5 .8 7

7 .4 0

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1 8 9 6 .3

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0 .1 9

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9 0 .9 0

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3 0 2 .0

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1 7 .3 2

2 9 .5 7

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3 3 .8 2

3 5 .4 0

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2 3 7 6 .8

4 8 0 0 .0

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4 287 1

1 0 1 2 9 .9

3 0 .1 2

1 0 0 2 .1

1 2 1 1 .2

2 4 3 5 .4

4 3 .5 8

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1 245 5

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2 .8 3

1 66

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1 .2 8

3 6 .1 4

3 9 .0 2

37 44

2 0 3 4 1 .4

41 2 5 3 .1

1 1 6 6 5 1 .1

3 .3 1

1 .8 6

2 .2 1

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3 5 .2 6

3 8 .7 0

2 4 8 5 7 .0

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Approaches to Developing Countries

pattern of Japan's trade with the region has been responsible for additional growth. Estimates of South East Asia's exports to Japan made in the 1970s\(^8\) gave 1975 exports at a level of US$2.6 billion fob. Considerably more growth has taken place and one reason for this may be seen as the changed commodity mix.

Between the late 1960s and the middle 1970s a significant shift has taken place away from foodstuffs and agricultural products towards metal ores and other resource goods and light manufactures. The boost to export growth from these faster-growing commodity groups and from the maintenance of a good commodity match between exports and Japan's imports as the developing countries moved from strategies of import substitution to export promotion, should not be ignored. Over a similar period (1968 to 1973) Japan's total imports of food grew at 26.2 per cent annually while metals grew at 19.6 per cent, mineral fuels, lubricants and related materials at 25.5 per cent and other raw materials at 21.7 per cent. It is significant that while all imports grew at 24.2 per cent, manufactures grew at 26.9 per cent. At the same time imports from ASEAN countries showed only a 28.1 per cent growth rate for resource-intensive goods and a staggering 94.6 per cent growth rate for labour-intensive goods. Capital-intensive goods imports grew at 52.7 per cent per annum.\(^9\)

The process of growing regional trade has been strengthened by the isolation of Japan and the region from other major centres of world trade and, increasingly, by the advantages of their close, established ties for trade expansion. In addition, a growing trade in bulky products has enhanced the transport advantage to the nearby regional producers. Japanese strategies to diversify sources for many of the raw materials which now loom so large in regional trade have also shifted demand away from traditional suppliers. The shift in timber trade from the United States and Canada to the Western Pacific timber growers is a case in point.

Exports from the industrializing countries of East Asia have enjoyed rapid growth. The role of direct Japanese investment in Taiwan, Korea and Hong Kong has been an important factor in transforming the structure of these countries' trade relations with Japan. Exports of labour-intensive manufactured goods became a larger element in their exports to Japan, where higher wage costs rendered import-competing light-manufacturing industries increasingly uncompetitive. The success with which capital, technology and management were transferred to newly competitive export industries in East Asia is noteworthy.

The strengthening of Japanese import specialization in the resource-
based commodities and the resulting developments in the Australia-Japan bilateral relationship have been well documented. The implications of those developments for the regional relationships have been much less clearly spelled out. One reason for this is that the recent economic growth and structural change in Japan have been so rapid that the extent of Japan’s influence on the prosperity of other countries is still not widely appreciated.

Some of the facts about the impact of developments in Japan on some developing countries are surprising even to those who know the Japanese economy well. The ‘oil crisis’ that was precipitated by the actions of the OPEC cartel, and its severe effects on Japanese prosperity are well known. The ‘copper crisis’ in at least six developing countries, precipitated mainly by reduction in Japanese copper consumption during the 1974 recession, is less well known. And yet for all of these countries the effect of the ‘copper crisis’ on the balance of payments, incomes and government budgets was many times more severe than the effect of the ‘oil crisis’ in Japan.

The copper industry is by far the most important source of domestic revenue in Papua New Guinea, Chile, Zambia, Zaire and Peru, and an important source in other developing countries. The copper industry of Papua New Guinea developed on a world market buoyed by rapid Japanese growth; the industry in other countries prospered exceptionally in these same circumstances in 1973 and early 1974. Most government revenues are proportional to or progressive with profits in the copper industry and vary much more than proportionately with sales proceeds. Total government revenue from all domestic sources in Papua New Guinea was reduced by more than one-third when the copper industry moved from the circumstances of early 1974 to those of 1975. The greatly reduced fortunes of international copper producers in 1975 were a deterrent to new investment in the industry. This has emphasised the costs of interdependence. The building of very large stocks in Japan, financed either privately or publicly, would have avoided the need to reduce export shipments and would have made some contribution to the maintenance of world prices. The cost to Japan of this response would have been modest in relation to the benefits accruing to several developing countries. Unfortunately, the ‘copper crisis’ provides a further example of responses to short-term crises damaging the emergence of confidence in international interdependence. Other commodity markets have shown similar effects with varying degrees of severity depending on their position in the domestic economy. Most of the abrupt shifts in these markets can be traced to
changes in the level of Japanese economic activity.\textsuperscript{10}

As with Australia, many of the resource developments in the area have been premised on continuing demand from the Japanese market. The commercial form for this trade relationship most common in the Australian case is a quasi-vertical integration relationship in which independent firms enter long-term contractual arrangements for the stable supply of resource goods to independent Japanese purchasers. More commonly in the foreign investment relationships between developing Western Pacific countries and advanced countries, including Japan, there is direct vertical integration. But quasi-vertical integration also plays its role. Japanese firms have sought also to secure buyer-supplier associations through non equity capital participation in resource developments. It is difficult to evaluate the benefits of alternative approaches to resource-trade development in this context but it is a subject which deserves high-level regional policy review with the object of working towards the definition of acceptable and mutually beneficial codes of investment behaviour. However, in whatever arrangements, it is essential to recognise the importance to the smaller economies of trade and investment stability. The huge turn-around in investment flows over the last couple of years has been extremely damaging to economic welfare and corrosive of long-term development goals (see Tables 9.2 and 9.3).

While the impact of Japan on regional stability has been great, Australia's role is not insignificant. Specifically, the policy responses which derived from the recent recession have paid too little regard to regional problems. In spite of the continuing commitment to its tariff preference scheme for developing countries, Australia imposed a range of export-restraint agreements on textile trade from Singapore, the Philippines, Thailand, the Republic of Korea and Taiwan between September 1974 and July 1975.\textsuperscript{11}

Problems arising from instability in trade have damaging effects on the domestic economies of the developing countries in the region and discourage their long-term planning for trade and income growth. The recession of 1974-75 has also unfortunately been the occasion of a significant cutback in development assistance programmes. Total financial flows from Japan in 1974 were only half those in 1973 and, in particular, there was a huge decline in private investment flows. These short-term pressures on regional trading partners cannot fail to damage trade and growth prospects for the long term.

The growth of the developed Pacific countries involves structural change. An important problem for the developing countries in the
Table 9.2 Transfer of Resources from Countries within OECD Development Assistance Committee to Less-Developed Countries and Multinational Agencies ($million and per cent) 1965-74

<table>
<thead>
<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Net flow of Resources from DAC countries to LDC's and Multilateral agencies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total DAC countries (US$ millions)</td>
<td>10 319.7</td>
<td>10 401.3</td>
<td>11 451.4</td>
<td>13 420.7</td>
<td>13 800.4</td>
<td>15 704.7</td>
<td>17 942.7</td>
<td>19 733.2</td>
<td>24 281.4</td>
<td>26 699.0</td>
</tr>
<tr>
<td>Japan (US$ millions)</td>
<td>485.5</td>
<td>627.1</td>
<td>798.5</td>
<td>1 049.5</td>
<td>1 263.1</td>
<td>1 824.0</td>
<td>2 140.5</td>
<td>2 725.4</td>
<td>5 844.2</td>
<td>2 962.3</td>
</tr>
<tr>
<td>Australia (US$ millions)</td>
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<td>150.5</td>
<td>193.7</td>
<td>205.5</td>
<td>232.1</td>
<td>394.5</td>
<td>530.2</td>
<td>445.3</td>
<td>354.1</td>
<td>543.8</td>
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<td>4.7</td>
<td>6.03</td>
<td>6.89</td>
<td>7.8</td>
<td>9.15</td>
<td>11.61</td>
<td>11.93</td>
<td>13.81</td>
<td>24.07</td>
<td>11.1</td>
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<td>Australia's share DAC total (per cent)</td>
<td>1.4</td>
<td>1.45</td>
<td>1.69</td>
<td>1.53</td>
<td>1.68</td>
<td>2.51</td>
<td>2.95</td>
<td>2.26</td>
<td>1.46</td>
<td>2.04</td>
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<td>173.5</td>
<td>16.3</td>
<td>12.75</td>
<td>56.25</td>
<td>29.45</td>
<td>14.14</td>
<td>32.67</td>
<td>68.57</td>
<td>-119.2</td>
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<tr>
<td>Australia's share annual increase in DAC total (per cent)</td>
<td>3.81</td>
<td>7.35</td>
<td>4.11</td>
<td>0.6</td>
<td>7.01</td>
<td>8.53</td>
<td>6.06</td>
<td>-4.74</td>
<td>-2.01</td>
<td>7.85</td>
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<tr>
<td>Japan's share total net ODA (per cent)</td>
<td>4.13</td>
<td>4.76</td>
<td>5.88</td>
<td>5.64</td>
<td>6.57</td>
<td>6.72</td>
<td>6.64</td>
<td>7.16</td>
<td>10.78</td>
<td>9.96</td>
</tr>
<tr>
<td>Australia's share total net ODA (per cent)</td>
<td>2.01</td>
<td>2.1</td>
<td>2.4</td>
<td>2.53</td>
<td>2.63</td>
<td>2.97</td>
<td>2.63</td>
<td>3.13</td>
<td>3.05</td>
<td>3.81</td>
</tr>
<tr>
<td>Japan's share annual increase in net ODA (per cent)</td>
<td>(a)</td>
<td>41.48</td>
<td>17.97</td>
<td>12.48</td>
<td>125.38</td>
<td>12.53</td>
<td>5.99</td>
<td>11.84</td>
<td>47.74</td>
<td>5.96</td>
</tr>
<tr>
<td>Australia's share annual increase in net ODA (per cent)</td>
<td>(a)</td>
<td>7.48</td>
<td>5.61</td>
<td>(a)</td>
<td>4.74</td>
<td>15.55</td>
<td>-0.02</td>
<td>7.63</td>
<td>2.27</td>
<td>7.49</td>
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<tr>
<td><strong>Net Flow of Resources in relation to gross national product</strong></td>
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</tr>
<tr>
<td>Total DAC countries (per cent)</td>
<td>0.77</td>
<td>0.71</td>
<td>0.73</td>
<td>0.79</td>
<td>0.74</td>
<td>0.78</td>
<td>0.81</td>
<td>0.77</td>
<td>0.78</td>
<td>0.78</td>
</tr>
<tr>
<td>Japan (per cent)</td>
<td>0.55</td>
<td>0.61</td>
<td>0.66</td>
<td>0.73</td>
<td>0.75</td>
<td>0.92</td>
<td>0.95</td>
<td>0.93</td>
<td>1.44</td>
<td>0.65</td>
</tr>
<tr>
<td>Australia (per cent)</td>
<td>0.64</td>
<td>0.63</td>
<td>0.74</td>
<td>0.73</td>
<td>0.74</td>
<td>1.15</td>
<td>1.38</td>
<td>0.98</td>
<td>0.55</td>
<td>0.69</td>
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<tr>
<td><strong>Official Development Assistance net in relation to GNP</strong></td>
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<td></td>
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<td></td>
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<td>Total DAC Countries (per cent)</td>
<td>0.44</td>
<td>0.41</td>
<td>0.42</td>
<td>0.37</td>
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<td>0.35</td>
<td>0.33</td>
<td>0.30</td>
<td>0.33</td>
</tr>
<tr>
<td>Japan (per cent)</td>
<td>0.27</td>
<td>0.28</td>
<td>0.32</td>
<td>0.25</td>
<td>0.26</td>
<td>0.23</td>
<td>0.23</td>
<td>0.21</td>
<td>0.25</td>
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</tr>
<tr>
<td>Australia (per cent)</td>
<td>0.53</td>
<td>0.53</td>
<td>0.60</td>
<td>0.57</td>
<td>0.56</td>
<td>0.59</td>
<td>0.53</td>
<td>0.59</td>
<td>0.44</td>
<td>0.55</td>
</tr>
</tbody>
</table>
Table 9.2 (continued)

*Net other official flows to LDC's and multilateral agencies in relation to GNP*

| Total DAC countries (per cent) | 0.02 | 0.03 | 0.03 | 0.04 | 0.04 | 0.06 | 0.06 | 0.06 | 0.08 |
| Japan (per cent)               | 0.12 | 0.18 | 0.16 | 0.21 | 0.22 | 0.35 | 0.29 | 0.29 | 0.29 |
| Australia (per cent)           | 0.01 | 0.01 | 0.04 | --0.01| --0.01| 0.02 | 0.03 | 0.01 |     |

*Net flow of private capital in relation to GNP*

| Total DAC countries (per cent) | 0.31 | 0.27 | 0.28 | 0.38 | 0.36 | 0.38 | 0.41 | 0.38 | 0.40 |
| Japan (per cent)               | 0.15 | 0.16 | 0.18 | 0.27 | 0.27 | 0.34 | 0.43 | 0.43 | 0.59 |
| Australia (per cent)           | 0.10 | 0.09 | 0.10 | 0.17 | 0.18 | 0.54 | 0.83 | 0.38 | 0.10 |

*Net transfer of official development assistance in relation to GNP* *(b)*

| Total DAC countries (per cent) | 0.42 | 0.39 | 0.40 | 0.35 | 0.34 | 0.32 | 0.33 | 0.32 | 0.28 | 0.31 |
| Total Japan (per cent)         | 0.26 | 0.26 | 0.30 | 0.22 | 0.24 | 0.21 | 0.20 | 0.18 | 0.22 | 0.23 |
| Total Australia (per cent)     | 0.53 | 0.53 | 0.60 | 0.57 | 0.56 | 0.59 | 0.53 | 0.59 | 0.44 | 0.55 |

--- denotes the contribution of a decline in individual donor performance to an overall decline in performance.

(a) denotes donor performance improved while collective donor performance declined, i.e. individual donor increased contribution to ODA while total ODA decreased.

(b) Official Development Assistance less amortisation and interest.

Table 9.3 Transfer of Resources from Japan and Australia to the Western Pacific\(^{(a)}\) 1965 — 1975 (US$m)

<table>
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<tr>
<td>— Japan</td>
<td>107.22</td>
<td>118.92</td>
<td>236.80</td>
<td>165.48</td>
<td>253.49</td>
<td>267.44</td>
<td>318.71</td>
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<tr>
<td>— Australia</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>158.49</td>
<td>169.22</td>
<td>200.02</td>
<td>120.89</td>
<td>150.42</td>
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<tr>
<td>OOF(^{(b)})</td>
<td>—</td>
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</tr>
<tr>
<td>— Australia(^{(c)})</td>
<td>91.42</td>
<td>101.97</td>
<td>113.58</td>
<td>131.61</td>
<td>150.25</td>
<td>172.73</td>
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<td>203.34</td>
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<td>287.43</td>
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<tr>
<td>— Japan</td>
<td>27.72</td>
<td>22.65</td>
<td>19.79</td>
<td>28.68</td>
<td>68.98</td>
<td>175.99</td>
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<td>945.92</td>
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<td>— Australia</td>
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<td>24.19</td>
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<td>Portfolio and other Bilateral Lending</td>
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<tr>
<td>— Japan</td>
<td>75.15</td>
<td>136.23</td>
<td>61.87</td>
<td>139.58</td>
<td>—</td>
<td>3.50</td>
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<td>56.52</td>
<td>8.19</td>
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<td>—</td>
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<td>2.44</td>
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<td>Guaranteed Private Export Credit</td>
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<tr>
<td>— Japan</td>
<td>67.64</td>
<td>121.23</td>
<td>52.09</td>
<td>123.88</td>
<td>188.87</td>
<td>221.37</td>
<td>224.61</td>
<td>116.16</td>
<td>195.97</td>
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<td>47.31</td>
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<tr>
<td>— Australia</td>
<td>—</td>
<td>0.50</td>
<td>0.16</td>
<td>0.95</td>
<td>3.55</td>
<td>25.42</td>
<td>4.84</td>
<td>11.15</td>
<td>11.72</td>
<td>3.70</td>
<td></td>
</tr>
</tbody>
</table>

Notes:  
(a) Countries included in the Western Pacific: Brunei, Hong Kong, Indonesia, Khmer Republic, Republic of Korea, Laos, Malaysia, Philippines, Singapore, Thailand, Democratic Republic of Vietnam, British Solomon Islands, Cook Islands, Fiji, Gilbert and Ellice Islands, Nauru, New Caledonia, New Hebrides, Niue, Papua New Guinea, Tonga, Western Samoa.  
(b) Other Official Flows.  
(c) Net Transfer of Official Development Assistance.  
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Western Pacific is how to adapt to that structural change in developing their trade and external economic relationships. In particular, the impact of Japan's growth and structural change will be great. It will create greater problems for developing countries than will Australia's growth because the economic and political significance of Japan's external trade and foreign investment activity is so much more obvious in the small modern sectors of developing economies.

This presents an important problem in the perception of the benefits from trade by the less developed countries. It also presents a very real problem for the future position of these resource exporters in an era when Japan is trying to scale down consumption of resources. Even without suggesting that this will occur quickly or that Japan will ever reduce all her demands for all resources, there is an obvious problem for these economies unless they too can be fitted into regional progress towards intra-industry specialisation and more balanced economic development than many have enjoyed in the past.\(^\text{12}\)

If such plans go ahead, and it seems that in some degree they must, the impact on the region will have another dimension. There will develop a much greater vertical trade than now exists between the resource-producing developing countries and the manufactured-goods-producing countries. How existing institutional arrangements cope with such an intra-area structural change will have an important bearing on the relations between the developing and the developed countries in the area. They will also have a bearing on the important issue of a new international economic order.

There may be opportunities for further diversification of developing countries' industrial structures through developing their capacity to meet regional demands for labour-intensive goods such as textiles and for industrial goods such as aluminium metal. Foreign investment has a role to play in this industrial relocation. This would present the developing countries of the region with the possibility of larger production and trade in manufactured goods in their exchange with Japan and Australia. The same principles apply in this context as in the advocacy of intra-industry trade specialisation between Japan and Australia.\(^\text{13}\)

The size and structure of financial flows from the developed to the less developed countries have a profound effect on the shape and success of economic development programmes. Japan is commonly the largest or second largest supplier of external loans and direct private investment as well as a significant donor of technical assistance to many Western Pacific developing countries. Fear that they are being dominated in their economic relations with Japan has been the source
of much criticism and discussion in these countries, notably in Thailand and Indonesia, and also in Japan itself. This fear is partly a consequence of sheer size but it is also a product of the structure and quality of the development assistance relationship to which policy attention must be directed.

There are similar problems in Australia's economic relations with Western-Pacific developing countries, but her lack of prominence in most recipient countries, as well as the fact that most of her development assistance takes the form of grants have mollified criticisms. (See Table 9.3).

The emergence of Japan as a major source of financial resources for developing countries contributed to rapid income growth, especially in those Western-Pacific economies with an abundance of natural resources, and also in East Asia. The net outflow of all financial resources to developing countries (as shown in Table 9.2) was US$1.3 billion in 1969 and US$5.8 billion in 1973 although it fell away substantially in 1974. Private capital flows comprise the greater part of the flow of financial resources from Japan to the developing countries. The industrial composition of Japanese direct foreign investment is, however, very different from that of other industrial countries. In particular, mining activity has been very important, accounting for 29.8 per cent of the cumulative total of private capital outflow to March 1974. Manufacturing activities accounted for 31.7 per cent. A high proportion of manufacturing investment is in resource processing. Almost one-quarter comprised investments in neighbouring Asian countries, with Indonesia being the biggest single recipient. Investment in mining, agriculture, forests and fishing has been very important in the resource-rich countries of Indonesia, Malaysia and the Philippines, but manufacturing investment was most important in Asia as a whole. In total, developing countries accounted for almost three-fifths of Japan's direct foreign investment, almost twice the proportion in United States and United Kingdom investments abroad.

It is not clear in any measurable terms whether Japan represents a significantly larger share of investment in the region than that from other major investors (except Thailand where it accounted for 73 per cent of wholly-owned subsidiaries). It may be that unfavourable reactions to Japanese investment are disproportionate to its importance but this must certainly reflect its nature or concentration or both.

Unfortunately, there have been marked weaknesses in the structure and quality of this large volume of resource transfers and in their value to less developed countries. These weaknesses are currently the subject...
of policy attention in Japan as well as in developing countries in the region. Official Development Assistance has ranged around one-fifth to one-quarter per cent of Japan's gross national product—much below the international target to which Japan is committed and well below the average for DAC countries. Only 39.9 per cent of Japanese Official Development Assistance took the form of grants. The grant equivalent of Japan's Official Development Assistance to less developed countries in 1973 was only 0.22 per cent of GNP compared with the DAC average of 0.37 per cent and Australia's 0.55 per cent. The proportion of tied assistance in total development assistance, at 60.6 per cent, was higher for Japan than for any other member of the Development Assistance Committee. The tied element in Australia's overseas aid was as low as 19.2 per cent but the average performance hides extensive aid tying to all bilateral aid recipients other than Papua New Guinea.20

Unlike Japan's, Australia's perception of the importance of its role in the Western-Pacific region does not derive fundamentally from the importance of trading and investment relations with these countries. These aspects are of secondary importance to Australia's concept of her political role, both bilaterally and at a regional level.

The concern with regional relationships was intensified in the period following the rise to power of the Suharto Government in Indonesia and the strengthening of the ASEAN political association. Traditional Australian concerns with its security and a sense of geographical and political isolation from its traditional allies, the United Kingdom and the United States, have been reinforced by a belief that Australia needs to play a responsible, generous and active regional role to further both its political and economic interests in the region.

This stance is in sharp contrast to the priorities of Japan in the region and is illustrated quite readily by the example of Australian aid. Here it is important to distinguish, at the outset, between Australian aid to South-East Asian countries and to Papua New Guinea. Australian aid to South-East Asian countries has played an important political role in Australia's bilateral relationships. Unlike trading relationships, which until recently have not been vigorously fostered by the government, and unlike Australian direct investment which was actively discouraged until the mid sixties, Australian aid, though relatively small in volume in comparison with that of other donors, has had a disproportionate importance for Australians, and in some cases has had effects disproportionate to its size. The political importance of aid is seen in the role Australia played in the founding of the Colombo Plan scheme, in its
advocacy of constructive arrangements for Indonesia's debt problems in the Paris Club of lenders and its continuing role in the Inter-Governmental Group for Indonesia, and more recently in aiding collectively the ASEAN countries.

This concentration on the ASEAN region, both in the geographical distribution of Australian aid and in aid diplomacy, has been matched with an important emphasis on reinforcing bilateral political relationships through aid. The case of Australian aid to Indonesia is a good example. Australian aid to Indonesia continued through the strained years of the 1950s and 1960s (the West Irian issue and confrontation) and served to maintain a frayed political relationship. Since that time, although Australia supplied only some four per cent of Indonesia's total aid inflows, this aid role has been quite influential. Aid to Indonesia, like all Australian aid, is grant aid and, in direct contrast to Japanese aid, gains kudos from this. The aid is also largely concentrated in major public works infrastructure projects—telecommunications systems, roads, bridges and the like—which have proved a reasonably acceptable and reliable means of assisting the Indonesian government in its development priorities. Such projects, together with fluctuating amounts of food aid, have formed the bulk of Australian aid to Indonesia which will in 1975-76 approach some US$41 million.

Indonesia has also received a considerable amount of direct foreign investment from Australia. That investment has increased rapidly since it resumed in 1968 and covers a range of manufacturing activities from metal and glass products, through prefabricated building materials, to food processing. It seems still to hold true, as it did in the late 1960s, that Australia is regarded as a less aggressive investment source than other large investors. This may result from the fact that the average size of Australian-associated establishments is fairly small by international standards.

Australian aid to Indonesia and other South East Asian countries is not 'disinterested' aid, but except in the case of tying of procurement to Australia, and a couple of examples in the past when aid was used directly to promote Australian trade (for example under the DK Scheme) it is not directly and importantly related to the furthering of Australian commercial interests: it is related rather to the enhancement of Australian regional and bilateral political interests.

It is this difference in perception of interests that distinguishes Japanese aid from Australian aid, and leads to the contrast in image that each country presents to the South East Asian region. Australia would like to encourage the Japanese to play a more involved political
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role, and a less stridently commercial role in the region. However, it is important to recognise that there are greater possibilities for government control in the Australian relationship where the relatively small size of the aid and political objectives have made a more circumspect approach necessary and possible since the relations are essentially on a government-to-government basis. In the Japanese case there is an obvious difficulty in the divergence between private and government approaches in aid and investment. These difficulties have underlain the interest which has been shown by some Japanese in enlisting Australia's co-operation in aid relations with South East Asian countries.

Australian opinions about the qualities, purposes and style of aid have tended to differ markedly from those of Japan. Until recently the latter saw the commercial linkage as the main purpose of her aid in South East Asia.21 Under pressure from recipients and from the DAC, and because of the improved balance of payments situation since the late 1960s, the character of Japanese aid is changing. Whether these changes presage a more co-operative aid relationship between Australia and Japan is difficult to forecast, but it would seem that the hangover of image problems and the difference in scale and interests would militate on both sides against significant bilateral co-operation.

For Australia, there are several foreseeable problems on its aid horizons in South East Asia. The recent reassessment of Australian aid policy, in terms of a new emphasis on rural development and equitable distribution objectives, presents problems in coming to terms with developing countries in the region. On both sides of the relationship these objectives have become part of conventional wisdom, but there will be difficulties in coming to mutually acceptable practical arrangements to give them substance. For Australia it will be important to avoid, as far as possible, such strains spilling over into its political relationship. On the other hand, if Australia's aid volume grows rapidly to meet the ODA/GNP target of 0.7 per cent of GNP and remains importantly concentrated in the South East Asian region, it will gain in importance to some of these countries. This will offer new opportunities for escaping the constraints of traditional aid programmes and for funding through multilateral programmes in which Japan is also potentially an important partner.22

Australia has also to come to terms with balancing its aid between the ASEAN countries and the newly emerged states of Indo-China. For Australian policy makers the primary factor here is likely to be the political one. However, the adjustment of these future relationships, together with the roles played by the United States, the Soviet Union
and China, are the most important problems of the South East Asia region and on their positive resolution depend the future political and economic relations of all states in the region.

Australia's relationship with Papua New Guinea, in its aid, economic and political aspects, presents a completely different order of problems from those encountered by Australia in South East Asia generally. In each of these aspects the relationship bears the deep marks of the past. Australia is the predominant donor in Papua New Guinea: its aid ($A210 million in 1975-76 including colonial administrators' pensions, or $A160 million excluding them) makes up some 40 per cent of the gap between Papua New Guinea's expenditure and its domestic revenue. Australian aid to Papua New Guinea also puts its stamp on the whole Australian aid programme, taking up some 55 per cent of its value in 1975-76. On the basis of these figures alone, the aid relationship is clearly crucial to both countries, especially to the newly independent Papua New Guinea. As Garnaut observed:

If mechanisms are not found by Australia to deliver large levels of grant aid without distorting Papua New Guinea development priorities, and without undermining support in Papua New Guinea or Australia for the continuation of the present scale of aid into the eighties, there is no hope for effective, independent administration. But the successful management of large scale grant aid to Papua New Guinea programmes until such time as new resource revenues can finance administration and development would validate the bold judgment of recent Australian governments and of Mr Somare's government [in Papua New Guinea].

For Papua New Guinea, the problem consists in an orderly, planned transition from severe dependence on Australian aid to a situation where domestic generation of revenue from resource exploitation can partially replace foreign aid flows. This will clearly take a number of years, and the strategy will be subject not only to the vagaries of international prices for resources, but to the political and economic fortunes of individuals and groups with Papua New Guinea. The strategy depends for its fulfilment on Australia understanding it, endorsing its objectives and having the patience, in the face of competing claims for the resources now being directed to Papua New Guinea, to persevere with its progress.

Papua New Guinea and Australian interests coincide in that both countries wish to reduce Papua New Guinea's relative dependence on
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Australian aid. At present there is a need to reach agreement on the timing of this reduction in dependence and on the stages through which it will be reached. A clear understanding must be reached on a long-term aid basis, a fact that is only now being fully recognised by Australia.

The success of Papua New Guinea's strategy for financial self-reliance will depend firstly on its capacity for sound long-term economic programming, secondly on its capacity to maintain a constructive aid relationship with Australia which preserves the established independence in economic programming, and thirdly on its ability to attract the foreign investment flows it requires for the exploitation of its resources. These three aspects will need to be handled in a co-operative relationship with two main countries: with Australia as a source of aid and investment and with Japan in a similar role, though on a different scale. Australia will remain the predominant aid donor in Papua New Guinea for some time to come, but it is in both Australia's and Papua New Guinea's interests to encourage other donors, including Japan, to assist Papua New Guinea on the right terms. This is desirable so as to offset the implications of dominance and to allow Papua New Guinea more room to manoeuvre. In the investment field, Japan will have a major interest in resources exploitation — in hydro-electric power, in mining, oil and gas, timber and fish. Papua New Guinea has already moved, through legislation and administrative controls, to guard against features of foreign investment that have caused problems in South East Asian countries. Investment in Papua New Guinea is at present largely undertaken by Australian companies, although Japanese investment is now growing rapidly. In co-ordinating the three aspects of its economic policies it will be important for Papua New Guinea to ensure that the terms of its aid from Australia, Japan and others are not downgraded, and that the new foreign investment avoids the economic and political costs experienced by other host countries. One thing is very clear: Papua New Guinea is not likely to be willing for any long period to compromise the favourable terms of its aid relationship with Australia, which is so crucial to the pursuit of its overall social and economic development objectives, by courting aid or investment from other countries, including Japan, on terms which are less favourable than those granted by Australia. 24

For these problems to be handled effectively, it is necessary that inter-governmental consultation and co-operation take place at a very high level, whether formally or informally. Because of Australia's important bilateral relationships with both Japan and Papua New
Guinea, it is in its interests to influence constructively the development of the Papua New Guinea-Japan relationships. The advantages of a long-term view of relationships with Papua New Guinea for both Australia and Japan are sufficiently self-evident to make this an important option for Australia.

Some signs of a co-operative trilateral relationship are emerging already. Papua New Guinea was represented at the first two rounds of ministerial talks between Australia and Japan and set out to define its development and foreign relations objectives at those talks very effectively. Papua New Guinea, Japan and Australia have also joined to fund a feasibility study of the potential of a possible Purari hydro-electric power scheme. Despite problems this augurs well for the future and may point the way to the possibility of co-operation in other spheres.

To summarize, the development-assistance interests of both countries in the Western Pacific region overlap most importantly in Indonesia and Papua New Guinea. Both Australia and Japan are members of IGGI and both have complex political, economic and aid relations with Indonesia. The emphasis and perspectives which each brings to bear on the relationship with Indonesia are very different. Papua New Guinea's aid and political relationship with Australia is deep and complex. Papua New Guinea will certainly be looking towards Japan for improved access for its exports, for investment funds and aid resources, although there is a delicate balance of pressures which cautions against uncontrolled development of the relationship. Government-to-government understanding will be essential to the successful resolution of these various interests. In the case of Papua New Guinea, Japan, like Australia, would be wise to recognize the important dichotomy between trade-oriented resource development and social welfare or internal market-oriented improvement, eschewing policies which concentrate exclusively on private development assistance requirements and working towards a balanced official development assistance package. Each country needs the other's understanding in its approach to assisting the development of Western Pacific countries and a regular process of consultation on aid matters, in addition to that provided through DAC, is essential to that understanding.

Both Japan and Australia have large responsibilities towards the developing world and especially towards the Western-Pacific developing countries with whom their trade, investment, aid and political relations are closest. They must take account of the increasingly strong and legitimate claims being made for more opportunities in trade, for
controlled foreign investment activity, and for softer and more flexible aid terms. Recent developments in both countries’ approaches to development assistance, although they start from a very different base, are encouraging in this respect. However, there is still too much short-term volatility in trade access and development-assistance resource flows.

The very different structure and direction of each country’s aid flow limits the scope for joint development-assistance activities under country-to-country programmes but both countries need to play a more active role in multilateral and regional official development-assistance efforts at a time when such leadership is sorely needed. There has been little progress towards meeting international aid commitments. The extent of both countries’ aid tying, project-aid orientation and offshore cost financing all limit the effectiveness of aid in assisting development in recipient countries.

If economic co-operation between the newly-emerged communist states of South East Asia and the advanced Pacific economies is to be expanded, the terms and conditions on which development assistance is offered will have to change considerably, both because the recipient governments are unlikely to accept willingly assistance which significantly restricts their freedom in economic planning, and because of competition with untied grant or soft loan resources from the larger and richer communist states. Indeed, trends in this direction are likely to be of benefit to recipient and donor countries alike. It is significant that, among all South East Asian countries, Japan has enjoyed more harmonious relations with Burma, perhaps because of, rather than despite, that country’s strict stance on development-assistance matters. The character of relations with communist developing countries, not only in respect of development assistance but also in respect of the extension of state trading operations, will inevitably affect the character of relations with non-communist countries in the region and give rise to new patterns of economic co-operation between all developed and developing countries in the Western Pacific.

Problems which are a consequence of the very large trade, investment and development-assistance relations between advanced and developing countries in the Pacific also increasingly require regular consultation and co-ordination. Interdependence of the scale and character which already exists between these countries cannot easily be sustained without friction unless the bigger partners, including Australia, are sensitive to the colossal impact that their actions and policies have in the smaller and weaker developing countries. Functional regional
co-operation in the Asian-Pacific region must therefore encompass the realities of both the established interdependence amongst the few advanced countries in the region and the sometimes lopsided relations between these countries and their developing country neighbours.

Government-to-government consultations and negotiations within the framework of an Organization for Pacific Trade Aid and Development could appropriately be built upon constructive intergovernmental attempts to define codes of behaviour and objectives for foreign investment, aid and technology-transfer activities as well as regular discussion of trade problems and problems deriving from trade instability.

It is worth stressing again in this context that reactions in Australia, Japan and other rich countries of the region to recent developments in the world economy have been too insensitive to their effects on developing-country confidence in the international economic system. For example, the Japanese reductions of some raw-material imports below contracted levels and withdrawal from investment commitments will introduce a further element of uncertainty into all future mining investments. Australian policies which encourage the extravagant use of labour and other resources slow down adjustments that are necessary for maintaining regional prosperity in the long term.

There is a tendency to overlook the co-operative element in resource trade and trade in labour-intensive manufactured goods between developed and developing countries with the region. The developing countries are potentially the major losers from uncertainty related to resource trade and investment and the emergence of protectionism in advanced country markets for labour-intensive manufactured goods. Australia, Japan and developing countries in the Western-Pacific region have powerful mutual interests in extending co-operative economic relations in ways which prevent difficult problems of adjustment to new patterns of trade and production from defeating the opportunities they provide for income growth in poorer countries.

NOTES


5. See H. W. Arndt, 'Trade Relations Between Australia and Indonesia', Economic Record, June 1968, for an earlier account.
6. For an early discussion of the potential impact of Japan's growth in the region see Okita, Kojima and Drysdale, 'Foreign Economic Relations'. There have been criticisms that this treatment was focused excessively on solving Japan's resource supply bottlenecks and too little on Asian development problems, although it seemed to the authors at the time that to draw attention to the international opportunities for development through the expansion of trade in resource goods, processed goods and specialized manufactures was a useful focus. Cf. Wolfgang Kasper, Malaysia — A Study in Successful Economic Development, Foreign Affairs Study 12, The American Enterprise Institute for Public Policy Research, Washington, September 1974.
10. See Corbett and Garnaut, 'Japan and the Resource Rich Developing Countries'.
15. Ibid.; Murakami, 'Japanese Foreign Investment'.


22. Viviani, 'Australia and Japan', passim.


26. These consultations should be undertaken in conjunction with those which were argued for above involving only the advanced economies in the region.

27. This proposal appears already to have a measure of bipartisan political support in Australia and was recommended strongly by the Australian Senate's Standing Committee on Foreign Affairs and Defence in its Report, Japan, pp. 69-70 and 81. There is now a considerable body of academic literature arguing the proposal. See the Conference Communiciqué in First Pacific Trade and Development Conference Papers and Proceedings, (ed. Kiyoshi Kojima), Japan Economic Research Center, Tokyo, 1968; Drysdale, 'Australia, Japan, New Zealand'; Peter Drysdale, 'An Approach to the Formation of an Organisation for Pacific Trade Aid and Development', Journal of World Trade Law (forthcoming). There has also been support for the proposal from the Australia-Japan Business Co-operation Committee.
PART III  TRADE IN RAW MATERIALS
I. Introduction

Over the last decade trade with Japan has become an extremely important part of Australian economic activity. For example, in each of the years 1972/3 and 1973/4 Japan bought 31 per cent of Australian exports and supplied 18 per cent of Australian imports.\(^1\) Trade with Japan has brought many benefits to the Australian economy and increased Australian national income. It has also, of course, increased the extent to which the Australian economy depends on that of Japan. Recently it has been argued that any further increase in this degree of dependence is likely to be costly to Australia, and that even the dependence which now exists makes the Australian economy unduly vulnerable to problems caused by fluctuations in the Japanese economy, which in turn is sensitive to changes in the world economy because of the Japanese dependence on exports and on imports of raw materials and fuels. An extreme example of this view can be seen in the recent statement by a Japanese economist that,

An important indirect effect of the oil crisis upon Australia has registered itself via Japan in the reduction of Australia's exports to Japan of wool and meat, and it is not inconceivable that, if the effect of the oil crisis upon Japan should become more severe, up to half Australia's exports of iron ore and coal to Japan would disappear.\(^2\)

Discussions of the costs of any increase in the dependence of the Australian economy upon Japan must, to some extent, be speculative. However, the speculative element is less if the discussion is based on careful interpretation of the past and the present. This paper seeks to provide some basis for such discussion by estimating the present

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effects of economic fluctuations in Japan on variables such as unemployment in Australia and the Australian balance of payments.\(^3\)

**II Japanese Imports from Australia**

There are two stages in tracing out the effects on the Australian economy of changes in the level of economic activity in Japan. The first is to estimate the effects of changes in the level of economic activity in Japan on Japanese imports from Australia. The second is to estimate the effects on the Australian economy of the resulting change in Australian exports.

The income elasticity of Japanese imports from Australia was estimated by incorporating equations for Japanese imports from Australia into an existing eighty equation model of the Japanese economy.\(^4\) A brief description of these import equations follows, and the equations are shown in detail in the Appendix. There are separate equations for food, wool, coal, iron ore and manufacturing imports. The eighty equation model of the Japanese economy has an equation for total Japanese imports of food. The proportion of these imports coming from Australia is assumed to change with changes in the level of real income per head in Japan, since the type of food imported from Australia has a higher income elasticity than that for Japanese food imports in general. The equation also has a dummy variable to allow the effects of Australian droughts.

Coal imports are assumed to be determined by the level of industrial production in Japan and by the cost of coal relative to steel. Iron ore imports also depend on the level of industrial production in Japan and in addition on the price of Australian iron ore compared with the price of steel in Japan.

Manufacturing imports from Australia are assumed to grow with Japanese consumption (slightly more than proportionately) and also they vary with changes in the rate of exchange. While this formulation is not theoretically ideal, the total value of Japanese manufacturing imports from Australia is not great. In order to cover remaining imports from Australia, the imports of fuels other than coal are assumed to move in relation to coal imports. Similarly scrap and metal ore imports other than iron ore are assumed to be related to imports of iron ore, and imports of other raw materials to imports of food, wool, coal and metal.

A slump in world trade is simulated by assuming that the total imports of each region with which Japan trades are ten per cent below the actual level. Exports represent approximately ten per cent of
Japanese gross national product, and a ten per cent decline in exports will normally cause a decline of little over two per cent in Japanese gross national product and imports. The assumed ten per cent slump in world trade causes a slightly more than proportionate decline in Japanese exports, which have a high income elasticity of demand. They also have a high price elasticity, and the decline in Japanese exports would be greater if it were not for the effects on prices of the slackening in the Japanese domestic market caused by the decline in exports. The net result of these forces is that Japanese exports are reduced by a little over ten per cent, and as a consequence real gross national product in Japan falls steadily below the level it actually reached in the absence of our assumed slump in world trade. Industrial production and imports are both affected more than is gross national product, and imports from Australia are affected more than imports in general. Nevertheless, after three years, Japanese imports from Australia are still a little less than four per cent below their actual level.

Two conclusions follow from this and other similar simulation studies. First, assuming a time horizon of three to four years or the length of a typical recent business cycle when there is a drop in world trade, Japanese imports from Australia decline by only half as much as the drop in world trade. This result need not follow if there are special factors depressing gross national product in Japan in addition to the general decline in world trade; but it does suggest that, for Australia the dependence on the Japanese market may be no worse, and could even be better, than a dependence on exports which are distributed equally among overseas countries.

Second, when the value of Japanese imports fluctuates due to changes in the Japanese economy, imports from Australia fluctuate more than proportionately. Nevertheless, when there is a downward shock to Japanese gross national product lasting for, say, three years, the resulting decline in Japanese imports from Australia can be expected to be no more, in percentage terms, than one and a half times the fall in real Japanese gross national product. Thus if Japanese gross national product falls ten per cent below its normal growth path one can be confident that Japanese imports from Australia will not fall further than fifteen per cent below their normal growth path. Since Japan takes approximately thirty per cent of Australian exports, this represents a decline of about 4.5 per cent in Australian exports. Again the effects on individual industries, especially iron ore, may be greater, but in aggregate a four-and-half per cent decline in exports, though serious, should not be disastrous to Australia.
III Australian Exports

The figures for Japanese imports from Australia are transformed into figures for Australian exports to Japan by a series of identities. For each commodity group, or equation, the value of Japanese imports is divided by the rate of exchange and the appropriate c.i.f./f.o.b. ratio to give the value of Australian exports to Japan.

In estimating the effects on the Australian economy of fluctuations in exports to Japan a further assumption is made, namely that when there is a fall in exports to Japan this is not offset by a rise in sales to other overseas markets. In other words, the pessimistic assumption is made that, if Australian exports to Japan decline, total Australian exports decline by an equal amount. Although pessimistic, this is a fairly realistic assumption in the short-run stabilization context, particularly if the increasing synchronization of business cycles around the world, that has been observed in recent years, continues.

IV Economic Activity and Unemployment in Australia

In order to trace out the macro-effects of a fall in Australian exports to Japan a twenty-one equation model of the Australian economy was constructed. The effects in Australia of a fall in exports to Japan are felt primarily through the mineral sector and the farm sector. A fall in mineral exports will affect company income, but the major impact on the Australian economy will be through the effects on investment. Unfortunately, it is impossible to measure these effects in the mineral sector by econometric analysis. Over the period for which we have data, mineral exports and mineral investment both increased very strongly. An equation can be estimated which fits the data very well, but this equation merely measures the correlation between the pronounced upward trends in the two series, and gives no indication of what will happen to investment when mineral exports cease to rise or fall. In the simulation studies it is assumed, arbitrarily, that when there is a strong check in the growth of mineral exports, mineral investment in Australia falls by fifty per cent. This is consistent with the preliminary data on what occurred in 1973-4. The effects of falls of one-third and two-thirds in mineral investment are also shown.

Farm exports affect farm income. It is assumed that consumption by Australian farmers is determined by their permanent income and is largely uninfluenced by cyclical fluctuations in farm income. These fluctuations are, however, assumed to affect farm investment. The current money value of this is sensitive, for tax and other reasons, to changes in the current money value of farm income. The actual
equations for the farm sector are shown in the appendix along with the other equations in the model of the Australian economy.

The remainder of the model is a fairly standard Keynesian model of the Australian economy. The expenditure equations are all in deflated terms. Consumption of non-durables depends on disposable income and the lagged value of consumption on non-durables. Consumption on durables depends on disposable income and on the stock of consumer durables. Similarly, investment on dwellings depends on disposable income and the stock of dwellings. The increase in the real volume of money is included as a proxy for monetary policy in both the equation for non-durable consumption and that for investment in dwellings. These are the only places explicit monetary variables appear in the model. Investment in fixed capital equipment in industries other than farming and mining depends on company income after tax. The increase in the real volume of money was also tried in this equation, but its coefficient was both insignificant and negative.

Inventory investment is assumed to be determined by a capital stock adjustment process. There is an equation for imports, in which imports depend on certain components of gross national expenditure and also on the relationship between the actual level of gross national expenditure and its trend level. Equations for the gross operating surplus of companies, personal income-tax receipts, receipts of indirect taxes, dividends received by persons, depreciation allowances of unincorporated enterprises and the implicit GNE deflator complete the model, along with the usual national accounting identities. All equations are set out in the appendix.

As was previously stated, a fall in Australian exports to Japan will cause a fall in mineral investment and in farm investment. The fall in mineral investment may be lagged, but that in farm investment can be expected to take place the same year as the fall in farm exports. Any decline in exports or investment has multiplier effects on gross national product, but these effects are not large, as all the relevant multipliers are found to be less than one and a half. Any fall in Australian national income or more particularly any fall in non-farm national product will affect investment generally in the following year and this in turn will have further multiplier effects on the economy, but again the relevant multipliers are smaller than one and a half.

We have already seen that if there is a decline in world trade, Australian exports to Japan will decline by much less than world trade in general. How the decline in world trade will affect the Australian economy will depend on how Australian exports to countries other
than Japan are affected, and is outside the scope of this study. More interesting, from the point of view of this paper, is to see what happens if the Japanese economy is affected by special factors so that Japanese gross national product and imports from Australia fall while Australian exports to other countries are unaffected. We can study this by assuming that for three years (starting in 1969-70) special factors reduced real Japanese gross national product to levels ten per cent below the levels that actually occurred. As a result Australian exports to Japan would be approximately ten per cent below their actual level in the first year, 12.5 per cent in the second, and fifteen per cent in the third year.

To trace out the effects of this on the Australian economy one needs, in addition to the model set out in the appendix, an assumption about the effects on mineral investment. As stated earlier we make the assumption that (after a lag of one year) mineral investment is reduced to a level only fifty per cent of its actual level. This assumption is deliberately on the pessimistic side, so that any bias will be towards overstating the effects on the Australian economy of a decline in the rate of growth of the Japanese economy.

In the first year of our assumed slump in the Japanese economy, Australian farm exports to Japan do not decline greatly, but mineral exports are significantly below their actual values. From the point of view of employment in Australia non-farm national product is the key variable. In the first year of our three-year period this was very little (approximately 0.5 per cent) below its actual value.

In the second year of the three-year period, the Australian economy fared rather worse. Farm exports to Japan were also significantly below their actual levels causing a small drop in farm investment. According to our assumption, mineral investment fell precipitously and investment in general was slightly affected by the events of the previous year. Non-farm national product was nearly 2.5 per cent below its actual level. Since, at the margin, a change of one per cent in non-farm national product causes a change of 0.2 percentage points in the level of unemployment, the assumed slump in the Japanese economy has caused unemployment to be 0.5 percentage points higher than it otherwise would have been (or actually was).

In the third year things are slightly, but not much, worse in the Australian economy. Exports to Japan are slightly further below their actual levels, but the major difference is that there is now a significant reduction in investment in general, brought about by the reduction in the previous year in non-farm national product. However, the level of
non-farm national product is still only about 2.5 per cent below its actual level.

The assumption that real Japanese gross national product was ten per cent below its actual level represents a large slump in the Japanese economy, but not an unbelievably large one. Similarly, the assumption that with the severe check on the rate of growth of mineral exports, mineral investment is fifty per cent below the actual (boom) levels is a pessimistic assumption, but not an unbelievable one. However, even with these fairly gloomy assumptions the effects of the Japanese slump on the Australian economy are not unmanageably large. Even if the slump continued unabated in Japan for three years and if nothing was done in Australia to offset its effects, after three years non-farm national product is only about 2.5 per cent below the level at which it would otherwise have been and unemployment is about half a percentage point greater than it otherwise would have been. Over half of these changes in non-farm national product and unemployment are due to the direct and indirect effects of the decline in mineral investment. If one assumes that mineral investment only declines by one-third, after three years non-farm national product is only two per cent below the level it otherwise would have been. If one makes the extremely pessimistic assumption that mineral investment declines by two-thirds, non-farm national product is about three per cent below the level it would otherwise have reached. In this extreme case unemployment is increased by less than 0.7 of a percentage point above the level that actually occurred (in the absence of the severe Japanese slump).

V The Australian Balance of Payments

If the Australian authorities do nothing to offset the effects on Australian national income of the Japanese slump, the fall in exports produces no balance of payments problems for Australia. The balance of payments on current account is actually improved somewhat as with the decline in national income and gross national expenditure imports fall more than exports. The more pessimistic the assumption that is made about mineral investment the more gross national expenditure and hence imports decline and the more the balance of payments on current account improves. Even with the relatively optimistic assumption that mineral investment only falls by a third there is a slight improvement in the balance of payments on current account.

When one takes into account that capital inflow may be affected by the decline in mineral investment the picture changes somewhat, but not enough to cause serious balance of payments problems for Australia.
Assume that fifty per cent of mineral investment is directly financed by capital inflow, so that, with a decline in mineral investment, capital inflow falls by an amount equal to half the fall in mineral investment. Now, with a slump in Japan, the fall in Australian exports and capital inflow is greater than the fall in Australian imports. However, the difference is not very much. If the Japanese slump is the same as that assumed in the previous section, over the whole three-year period the difference is between A$100 million and A$300 million depending on the assumption made about mineral investment. Again the more pessimistic the assumption about mineral investment the better the balance of payments outcome, but now the difference between the effects of optimistic and pessimistic assumptions on the balance of payments outcome is slight.

A more serious situation, from the Australian balance of payments point of view, is when the authorities are successful in offsetting any potential fall in economic activity and employment in Australia, due to the decline in exports to Japan, so that Australian imports do not decline. In this case, assuming real Japanese gross national product is ten per cent below its actual level for three years, by the third year total Australian exports would be 4.5 per cent below their actual level and capital inflow may also be down by an amount equal to 3.5 per cent of the total value of exports. Thus the loss of foreign exchange is equal to eight per cent of export income or between ten and twenty-five per cent of likely Australian foreign exchange reserves (depending, of course, on the balance of payments history of the previous few years).

The most likely situation is one somewhere between the two extreme cases we have described. If Australian economic policy offsets some, but not all, the effects of a Japanese slump on Australian economic activity and employment, there will be a loss of foreign exchange somewhat less than eight per cent of the value of exports. While such a loss may be important, in normal circumstances it should not be disastrous to Australia. It is presumably to cover eventualities like this that Australia maintains foreign reserves.

VI Conclusion
This paper has attempted to provide a basis for discussing the future costs of dependence on Japan by examining the effects on Australian economic variables of a slump in Japan, given the degree of dependence that existed in the early 1970s. At the macro-economic level at least, the main cost of Australia's present relatively close integration with the Japanese economy appears to be in the need to keep adequate
Effects of Economic Fluctuations in Japan on Australia

foreign exchange reserves (given the present government policy of fixed exchange rates). This is a cost that must be borne by any open economy and there is no evidence that it is greater for Australia because of the interdependence of the Australian and Japanese economies.

The effects on unemployment in Australia of a slump in Japan are not great. Even a severe and prolonged slump in Japan does not increase unemployment in Australia by one percentage point. Domestic factors often increase unemployment in Australia by more than this.

The paper only deals with those macro-economic relations which are relatively easy to quantify. Many things are not taken into account — for example the possibility of a slump in Japan causing a Japanese export drive, and the consequent increases in Australian imports causing a change towards economic nationalism and protection in Australian economic policy. Nor does this paper deal with adjustment problems in individual industries which may be more substantially affected by a Japanese recession. Nevertheless, the paper does suggest that at the level of macro-economic management and stabilization policy, the present degree of Australian dependence on Japan is not likely to cause great problems. There is no reason to think that, if the dependence of Australian exports on the Japanese economy increased moderately, the relationship analysed in this paper would change. The effects of Japanese fluctuations would almost certainly be the same though, of course, they would be somewhat greater.

NOTES

1. The importance of the Japanese market is even greater for some individual Australian industries, but this paper is confined to a macro-economic analysis and will not consider implications for particular industries.


3. The concentration in this paper on the costs of Australian dependence on the Japanese economy does not imply that there are no possible costs to Japan in increasing interdependence. The interdependence of the two economies does create costs, and benefits, for the Japanese economy as well as for the Australian. However the costs are of a different kind. The effects of cyclical fluctuations in the Australian economy on the larger Japanese economy are likely to be very small, and are not considered in this paper.

4. The model is described in A. Amano, K. Ban and C. Moriguchi 'A Quarterly Forecasting Model of Japan' Discussion Paper No. 081, Kyoto Institute of Economic Research.

5. This section implicitly assumes that the rate of exchange between the Australian dollar and the yen does not change as a result of a decline in Japanese gross national product and the consequent effects on the Australian economy.
Appendix

Part I  Model of the Australian Economy

Note: An asterisk over a variable denotes that that variable has been deflated by the implicit gross national expenditure deflator (figures under the coefficients are their standard errors).

Expenditure Equations

\[
E = C^0 + C^d + I^h + I^{nmf} + I^m + I^f + I^g + I^fs + I^{nfs} + G'
\]

\[
X = X^{nmf} + X^m + X^f
\]

\[
C^0 = Y^{cb} + 696.8 + 0.363(Y^{nfd} - Y^{cb}) + 0.456(C^0 - Y^{cb}) - 1
\]

\[
R^2 = 0.981 \quad \text{d.w.} = 1.77
\]

\[
C^d = 194.7 + 0.277(Y^{nfd} - Y^{cb}) - 0.246(Y^{nfd} - Y^{cb}) + 0.590C^d - 1 + 372.5(m3 - 0.89m3)
\]

\[
R^2 = 0.981 \quad \text{d.w.} = 2.53
\]

\[
I^h = -463.0 + 0.144(Y^{nfd} - Y^{cb}) - 0.025K^h + 303.9m3
\]

\[
R^2 = 0.982 \quad \text{d.w.} = 1.61
\]

\[
I^{nmf} = 278.6 + 0.719Y^{cat} + 124IAN
\]

\[
R^2 = 0.982 \quad \text{d.w.} = 1.7
\]

\[
I^f = 183.5 + 0.128Y^f + 142IAF
\]

\[
R^2 = 0.926 \quad \text{d.w.} = 1.3
\]

\[
I^{nfs} = -1891.5 + 0.240(C^0 + C^d + I^h + I^{nmf} + I^m + I^f + I^g) - 0.770K^{nts}
\]

\[
R^2 = 0.682 \quad \text{d.w.} = 2.18
\]

\[
M = M^d - 40 + 0.208(E - G - I^h) + 0.249(E - E^t)
\]

\[
R^2 = 0.971 \quad \text{d.w.} = 1.7
\]
Income Equations

\[ Y_{\text{nf}} = E + X - M - T^{\text{ci}} - Y^f + M^d \]
\[ Y_{\text{nf}}^P = Y_{\text{nf}} + Y_{\text{cb}} - Y_{\text{osc}} - Y_{\text{osc}} - D_{\text{nf}} - Y_{\text{osn}} + Y^d + Y^a \]
\[ Y_{\text{nf}}^f = Y_{\text{nf}}^P - T^{\text{np}} \]
\[ Y_{\text{cat}} = Y_{\text{osc}} - T^{\text{cc}} \]

\[ Y^f = 137 + 0.794 X^f - 11.9t \]
\[ R^2 = 0.719 \quad \text{d.w.} = 3.0 \]

\[ Y_{\text{osc}} = -129.25 + 0.253(Y_{\text{nf}} - G^t - I^G) + 0.314(Y_{\text{nf}} - P Y_{\text{nf}}^t) \]
\[ R^2 = 0.990 \quad \text{d.w.} = 0.71 \]

\[ Y^d = 106.7 + 0.069 Y_{\text{cat}} + 0.412 Y^d \]
\[ R^2 = 0.953 \quad \text{d.w.} = 0.47 \]

\[ D_{\text{nf}} = 78.1 + 12.04t \]
\[ 7.2 \quad 0.67 \]
\[ R^2 = 0.953 \quad \text{d.w.} = 0.47 \]

Tax Equations

\[ T^{\text{ci}} = \alpha (213.8 + 0.114 (C^0 + C^d)) \]
\[ 22.9 \quad 0.002 \]
\[ R^2 = 0.996 \quad \text{d.w.} = 0.89 \]

\[ T^{\text{np}} = \lambda (Y_{\text{nf}}^P - Y_{\text{cb}}) \]
\[ \lambda = \frac{\beta}{100} (-2.20 + 12.5P) \]
\[ 100 \quad 0.39 \quad 0.3 \]
\[ R^2 = 0.988 \quad \text{d.w.} = 0.81 \]

Note: In the simulation studies it was assumed that \( \Delta T^{\text{cc}} = \lambda \Delta Y_{\text{osc}} \) where \( \Delta \) indicates the difference between the actual level and that in the simulation situation and \( \lambda \) is the rate of tax applicable to public companies.
Trade in Raw Materials

Price Equation

\[ \frac{\Delta P}{P_{-1}} = 0.002 + 0.523 \theta + 0.274 w + 0.099 \bar{\theta} + 0.210 + 0.017 n + 0.213 \left( \frac{Y_{nft} - Y_{nft}^*}{Y_{nft}} \right)^{-1} \]

\[ R^2 = 0.960 \quad \text{d.w.} = 2.08 \]

List of Symbols

\( \alpha \) index of the level of Commonwealth indirect tax rates
\( \beta \) index of the level of personal income tax rates
\( \lambda \) average rate of income tax on non-farm personal income
\( \theta \) proportional rate of growth of \( \alpha \)
\( C^d \) expenditure on durable consumer goods (total household durables plus purchases of motor vehicles by consumers)
\( C^o \) expenditure on all other consumer goods and services except imputed rent
\( D_{nfu} \) depreciation allowances of non-farm unincorporated enterprises
\( E \) gross national expenditure excluding imputed rent and military imports
\( E^t \) trend value of deflated gross national expenditure excluding imputed rent and military imports
\( G \) current expenditure on goods and services by public authorities
\( G' \) \( G \) less military imports
\( I_{AF} \) dummy variable for farm investment allowances
\( I_{AN} \) dummy variable for non-farm investment allowances
\( I^f \) gross fixed farm capital expenditure
\( I^{fs} \) investment in farm stocks
\( I^g \) gross fixed capital expenditure by public authorities and public enterprises
\( I^h \) private capital expenditure on dwellings
\( I^m \) gross fixed capital expenditure in the mineral sector
\( I^{nfs} \) investment in non-farm stocks
\( I^{nmf} \) gross fixed capital expenditure in sectors other than mineral and farm
\( K^h \) the stock of housing valued in 1959-60 dollars
\( K^{nfs} \) non-farm stocks values in 1959-60 dollars
\( M \) imports
\( M^d \) military imports
\( m \) proportional rate of growth of the import price index
\( m3 \) proportional rate of growth of the real stock of money
Effects of Economic Fluctuations in Japan on Australia

n  rate of growth of the export price index meats section
P  implicit deflator for gross national expenditure mfg,A
Pe  expected rate of growth of prices
t  time (with 1953-54 = 0  1954-55 = 1 etc)
Tci  Commonwealth indirect taxes
Tcc  corporate income tax
Tnp  non-farm personal income tax
Ts  state and local government indirect taxes and rates
w  proportional rate of change of index of award wages
X  exports
Xf  farm exports
Xm  mineral exports
Xnmf  other exports (not mineral not farm)
Ya  personal income received from abroad
Ycat  gross operating surplus of companies less corporation income tax
Ycb  cash benefits to persons
Yd  dividends received by persons
Yf  unincorporated farm income including farm depreciation allowances
Ynf  non-farm national product at factor cost excluding imputed rent,
      but including farm wages and gross operating surplus of companies
      engaged in farming
Ynft  trend value of deflated non-farm national product at factor cost as
      defined above
Ynfd  non-farm disposable income excluding imputed rent
Ynp  non-farm personal income excluding imputed rent
Yosc  gross operating surplus of companies
Yosgc  gross operating surplus of Commonwealth public enterprises
Yosgs  gross operating surplus of state and local public enterprises
Yosn  gross operating surplus of nominal industry and financial enterprises

Part II Equations for Japanese Imports from Australia (figures under coefficients are standard errors)

Food

\[
\frac{M_{\text{food},A}}{M_{\text{food},W}} = 0.00071 + 0.0075681^{Yd/Pc} + 0.4151 \cdot \frac{M_{\text{food},A}}{M_{\text{food},W}} + 0.0292Q_3 + 0.0238Q_4
\]

\[
- 0.0131Q_{\text{drought}}
\]

\[
\bar{R}^2 = 0.6304
\]

d.w. = 1.710
Trade in Raw Materials

Coal

\[ \log \frac{M_{\text{coal},A}}{P_{m \text{ coal},A}} = -7.432 + 1.6543 \log 0 - 0.5538 \log \sum \left( \frac{P_{m \text{ coal},A}}{P_{\text{steel},A}} \right)^3 + 0.135Q661 \]

\[ \bar{R}^2 = 0.9408 \quad \text{d.w.} = 0.828 \]

Wool

\[ \frac{M_{\text{wool},A}}{P_{m \text{ wool},A}} = 0.00013847C + 0.2071 \left( \frac{M_{\text{wool},A}}{P_{m \text{ wool},A}} \right) + 0.2722 + 0.038Q_2 - 0.015Q_3 - 0.012Q_4 - 0.02056Q_{\text{drought}} \]

\[ \bar{R}^2 = 0.694 \quad \text{d.w.} = 1.031 \]

Iron ore

\[ \log \frac{M_{\text{iron},A}}{P_{m \text{ iron},A}} = -13.75 + 3.004 \log 0 + 1.099 \log \sum \left( \frac{P_{\text{steel},A}}{P_{m \text{ iron},A}} \right)^3 \]

Total metal ores and scrap

\[ \log (M_{\text{metal},A} - M_{\text{iron},A}) = 2.3097 + 0.2438 \log M_{\text{iron},A} \]

\[ \bar{R}^2 = 0.672 \quad \text{d.w.} = 0.602 \]

Fuel

\[ \log \frac{M_{\text{fuel},A}}{P_{m \text{ fuel},A}} = -0.038806 + 1.0208 \log M_{\text{coal},A} \]

\[ \bar{R}^2 = 0.9935 \quad \text{d.w.} = 2.108 \]

Other raw materials

\[ \log \frac{M_{\text{ORM},A}}{P_{m \text{ food},A} + M_{\text{wool},A} + M_{\text{coal},A} + M_{\text{metal},A}} = -5.9239 + 1.4372 \log (M_{\text{food},A} + M_{\text{wool},A} + M_{\text{coal},A} + M_{\text{metal},A}) \]

\[ \bar{R}^2 = 0.8349 \quad \text{d.w.} = 0.686 \]

Manufacturing imports

\[ \log \frac{M_{\text{mfg},A}}{P_{m \text{ mfg},A} \ast \text{REX}} = -15.75 + 1.3718 \log C \]

\[ \bar{R}^2 = 0.842 \quad \text{d.w.} = 1.301 \]
List of Symbols

$C_{cloth}$ personal consumption expenditure on clothing in Japan

$LF$ Japanese labour force

$M_{coal,A}$ value of imports of coal from Australia

$M_{food,A}$ value of imports of food from Australia

$M_{food,W}$ value of imports of food from the world

$M_{fuel,A}$ value of imports of fuel from Australia

$M_{iron,A}$ value of imports of iron ore from Australia

$M_{metal,A}$ value of imports of metal ore and scrap from Australia

$M_{mfg,A}$ value of manufactured imports from Australia

$M_{ORM,A}$ value of imports of other raw materials from Australia

$M_{wool,A}$ value of imports of wool from Australia

$O$ index of Japanese industrial production

$P_{m_coal}$ price index for coal imports from Australia

$P_{m_coal,A}$ price index for coal imports from Australia

$P_{m_iron,A}$ price index for iron ore imports from Australia

$P_{m_wool,A}$ price index for wool imports from Australia

$P_{steel}$ index of Japanese steel prices

$P_{x_mfg,A}$ price index of Australian manufacturing exports

$Q_1, Q_2, Q_3, Q_4$ seasonal dummy variables

$Q_{661}$ dummy variable, $= 1$ before 1st quarter 1966

$Q_{drought}$ dummy variable, $= 1$ when serious drought occurs

$Yd$ Japanese personal disposable income
JAPAN'S HIGH DEPENDENCE ON IMPORTS OF RAW MATERIALS*

Saburo Okita

I Oil

The current oil crisis has once again demonstrated to Japan its high dependency upon supplies of natural resources from abroad. When these supplies of foreign resources are obtained smoothly, the Japanese economy progresses favourably; once imports are interrupted, however, the impact on the Japanese economy is immediate and severe. According to the statistics, oil accounted for 74.9 per cent of Japanese primary energy supply in fiscal 1972,1 of which 99.7 per cent was imported, and only the remaining 0.3 per cent produced domestically. Of this imported oil, 80 per cent came from the Middle East—43 per cent from Arab oil-exporting countries and 37 per cent from Iran alone.

In November 1973, it was announced that the oil supply from the Arab nations to Japan was to be reduced by 25 per cent from the supply level in September 1973. As a result projections were made that even if the oil supply from other areas remained unchanged the total volume of oil imports would be reduced by about 10 per cent in 1974 and that the growth rate of GNP in 1974 would be negative. The real growth rate of the Japanese economy in the past decade has averaged 10 per cent per year, and even in ‘recession’ years has been 4 or 5 per cent. Negative growth, a real recession, has never been experienced since the end of World War II. Naturally, the immediate reaction to this projection was that Japan would be very seriously affected indeed.

Summarizing the energy picture in fiscal 1972, we note that nearly three quarters of Japan’s primary energy was supplied by oil, and the rest by coal (16.6 per cent), hydro-electric power (6.3), natural gas (0.8), atomic energy (0.7) and other sources (0.8). Since two thirds of coal is imported, the degree of dependence on imported energy was 86 per cent, and the domestic supply of energy was only 14 per cent.

* Paper first published April 1975 under the direction of the Australian Committee of the Australia-Japan Economic Relations Research Project under the title ‘Japan’s High Dependence on Natural Resource Imports and its Policy Implications’.
The experience of other countries shows that the level of economic activity is closely related to the supply of energy. With most of the energy supply dependent upon imported oil, a slowdown in all economic activities in Japan is an inevitable result of restricted oil supply.

In the United States, the share of oil in primary energy consumption is about 45 per cent, of which 26 per cent was imported in 1972. Arab nations supplied only a little over one-fifth of this imported oil. Thus, only 5.7 per cent of the total primary energy requirement was supplied by oil from Arab countries. Clearly, the relative importance of Arab oil to the United States economy is marginal.

From the viewpoint of self-sufficiency in resources, it is very apparent that there is a big difference in the basic conditions between Japan and the United States. In the United States a policy of self-sufficiency like 'Project Independence' could be contemplated, whereas in Japan attaining self-sufficiency in energy would mean a drastic reduction in the level of economic activity as well as in the standard of living.

Japan’s energy supply before World War II depended mainly on domestic coal and hydro-electric power. In 1935, primary energy supply consisted of 62 per cent from coal, 19 per cent from hydro power, 9 per cent from oil and 10 per cent from other sources. Oil imports came mainly from the United States and the Dutch East Indies in those days. Oil was a key resource for the military, and a large portion of oil imports was earmarked for military use. The total volume of imported oil in 1935 was 4.2 million kilolitres* (26 million barrels), of which crude oil was 1.3 million kilolitres and oil products 2.9 million kilolitres. In 1973, by contrast, imported oil amounted to 306 million kilolitres, of which crude oil was 286 million kilolitres and fuel oil products 20 million kilolitres. The ratio of the domestic to foreign supply of energy was still relatively high until the mid-1950s, but the high rate of economic growth sustained since that time has caused the volume of energy demanded in Japan to far outgrow the supply capability of domestic resources. This has produced the extremely high rate of import dependence which exists today.

II Food

Until recently Japan was relatively self-sufficient in food. However, dependence upon imported food has increased recently as the quality of the Japanese diet has been upgraded. Consumption of livestock

* One barrel equals 0.159 kilolitres.
products especially has increased with the rising level of personal incomes. Backed by domestic price-support policies, rice, which is the staple food in Japan, has been produced with enough abundance to attain self-sufficiency and even surpluses. Other food crops are, however, in short supply. The ratio of self-sufficiency in wheat for domestic consumption was 5.3 per cent in 1972, but 40.6 per cent in 1955. As for soya beans, which are also indispensable to the Japanese diet, the degree of self-sufficiency was reduced to 3.6 per cent in 1972 from 41.1 per cent in 1955. Incidentally the memory of the so-called 'soy-bean shock' caused by the United States government embargo on soya bean exports in 1973 is still fresh. Fortunately, this embargo was lifted after only a short duration and since then shipments have been uninterrupted. This experience, however, once again reminded the Japanese people of their heavy dependency for daily life on imported foodstuffs.

The Japanese diet in recent years has improved remarkably as the following table illustrates:

Table 11.1 Per Capita Food Intake per Day in Japan

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</tr>
</thead>
<tbody>
<tr>
<td>Calories</td>
<td>2217</td>
<td>2290</td>
<td>2408</td>
<td>2471</td>
<td>2516</td>
</tr>
<tr>
<td>Protein (gram)</td>
<td>65.7</td>
<td>69.5</td>
<td>73.7</td>
<td>76.9</td>
<td>78.2</td>
</tr>
<tr>
<td>(animal protein)</td>
<td>(16.9)</td>
<td>(21.2)</td>
<td>(26.8)</td>
<td>(31.8)</td>
<td>(33.5)</td>
</tr>
<tr>
<td>Fat (gram)</td>
<td>22.2</td>
<td>29.1</td>
<td>40.2</td>
<td>51.9</td>
<td>56.5</td>
</tr>
</tbody>
</table>

Source: The Ministry of Agriculture and Forestry.

As a result of this improvement in nutrition, life expectancy has lengthened to the level of the Scandinavian countries and infant mortality has been reduced to the lowest level in the world. Diseases due to malnutrition like tuberculosis have nearly disappeared.

Diet upgrading was partly supported by the growing consumption of livestock products in Japan. For example, per capita consumption of milk and milk products and meat—beef, pork and chicken—per year has risen dramatically.

On the other hand, feed grains needed for the production of these livestock products such as maize, kaoliang and sorghum depended upon imports. In 1973, the import volume of feeding maize was 5.8 million metric tons which was about 20 times that of 1955 and kaoliang and
Japan's High Dependence on Imports of Raw Materials

Table 11.2 Yearly per Capita Consumption of Dairy and Meat Products

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>(Kilograms)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milk and milk products</td>
<td>12.1</td>
<td>22.3</td>
<td>37.4</td>
<td>50.1</td>
<td>51.8</td>
</tr>
<tr>
<td>Meat*</td>
<td>3.2</td>
<td>5.0</td>
<td>8.8</td>
<td>13.1</td>
<td>15.4</td>
</tr>
<tr>
<td>Beef</td>
<td>1.1</td>
<td>1.1</td>
<td>1.4</td>
<td>2.0</td>
<td>2.4</td>
</tr>
<tr>
<td>Pork</td>
<td>0.7</td>
<td>1.1</td>
<td>2.7</td>
<td>4.7</td>
<td>5.6</td>
</tr>
<tr>
<td>Chicken</td>
<td>0.3</td>
<td>0.8</td>
<td>1.9</td>
<td>3.8</td>
<td>4.7</td>
</tr>
</tbody>
</table>

* Including other meat such as mutton and whale but not including fish.
Source: The Ministry of Agriculture and Forestry.

sorghum 3.3 million metric tons which was over 100 times that of 1955.

According to the Ministry of Agriculture and Forestry in Japan, the rate of self-sufficiency measured by original calories, that is, converting calories of livestock products into calories of animal feed needed for the production of livestock, was 53 per cent in 1972.

Total import volumes of major agricultural commodities, wheat, soyabean, maize, kaoliang and sorghum amounted to 18.1 million metric tons in 1973, well above the total domestic production of rice (12.1 million metric tons) in the same year. Imports of these major agricultural commodities are heavily dependent on the supplies from the United States, the United States share being 67 per cent for wheat, 88 per cent for soya beans, 92 per cent for maize and 75 per cent for kaoliang and sorghum. In total, Japan depends for 81 per cent of these items on supplies from the United States.

As Lyle P. Shertz has stated,³ 'While population growth has obviously been a significant factor in increasing world food demand, an even more striking feature of the demand situation has been the sharp recent increases in cereal consumption per capita in developed countries where population has not been growing rapidly'. This is because diet upgrading in developed countries goes along with growing consumption of livestock products which in turn requires increases in the supply of feed grains. Japan is a typical example of this process. In addition, the present levels of consumption of livestock products in Japan, in spite of remarkable improvements in the past, are still substantially lower than that of the United States. An average individual in Japan consumes a sixth of the volume of meat and one-fifth the volume of milk and milk products compared with a person in the United States. Clearly, there is
still room for increased food consumption in Japan in the future. After experiencing the 'soybean shock' and observing the worldwide food shortages over the past two years some opinion makers believe that Japan should become more self-sufficient in food. According to an international comparison made in a recent government report on agriculture the ratio of self-sufficiency in cereals was over 100 per cent in the case of the United States, Canada and France and 70-80 per cent in the case of Italy and West Germany. The United Kingdom, known for its high dependency on food imports, has succeeded in raising its level of self-sufficiency from 55 per cent to 65 per cent over the past ten years. Compared with these figures Japan's record of 53 per cent is the lowest among major industrial countries. It is, however, extremely difficult to increase self-sufficiency in view of the mountainous topography. Only 16 per cent of the total land area is able to be cultivated. According to an estimate recently made by the Ministry of Agriculture and Forestry twice the currently available cultivated land area is needed to become self-sufficient in food and maintain the present level of nutrition. A more realistic goal is to prevent further declines in the self-sufficiency ratio for food.

In addition to major agricultural commodities, dependency upon imported but supplemental foods is also increasing rapidly. The import value of shrimp, lobster and prawn, which the Japanese greatly favour, amounted to more than US$320 million in 1972. Imports accounted for 85 per cent of total consumption in Japan. Supplying countries included Indonesia, Thailand, Mexico and some African countries.

Similar trends can be observed in timber resources in Japan. Through the 1950s self-sufficiency in timber resources was nearly 100 per cent; in 1972, 58 per cent of total timber consumption was imported. Rapidly increasing consumption and fluctuations of demand growth following the business cycle in Japan have frequently caused economic problems in timber exporting countries. In 1972 the major sources of timber supplies included the United States (36.7 per cent), Indonesia (15.3), the USSR (13.1), Malaysia (12.2), the Philippines (9.7) and Canada (4.2).

III Minerals and Metals

Japan's iron and steel industry has expanded rapidly since World War II. Japanese crude steel output in 1973 totalled 119 million metric tons nearly equal to the level of production in the United States and USSR (136 million and 131 million metric tons, respectively). Again, internal supply capabilities for raw materials for steel production are extremely
Japan's High Dependence on Imports of Raw Materials

limited. Most raw material used by the steel industry, especially iron ore (92 per cent), and coking and bituminous coal (59 per cent) depend upon imports. In the pre-war period, iron ore was imported from neighbouring countries in Asia such as Korea and China, and during the early post-war years iron ore was imported mainly from Malaysia and India.

Now the main supplier of iron ore to Japan is Australia which accounted for 43.3 per cent in 1972. India with 16.1 per cent and Brazil with 8.4 per cent follow, and supply sources are now global not regional. Japan's imports of iron ore, amounting to 111 million tons, accounted for 42 per cent of the total world trade in iron ore in 1972. Coal for the iron and steel industry comes mainly from the United States and Australia. The iron and steel industry of today is a typical example of a processing industry founded on ready access and completely dependent upon imported raw material.

Bauxite which is the principal raw material for aluminium is not produced in Japan at all and its supply depends entirely on imports from abroad. Japanese aluminium output in 1972 totalled 1,009 thousand metric tons, one quarter of the total output of the United States. Bauxite imports in 1972 came from Australia (60.2 per cent), Indonesia (21.5) and Malaysia (16.4).

Japan was once a copper-exporting country; this is no longer true. Owing to the high rate of economic growth, copper consumption has increased and 72.8 per cent of newly-produced copper in 1972 depended upon imported ore. Including imported copper ingots, about 84 per cent of total copper consumption is import-dependent. Major ore-supplying countries are Canada (37.5 per cent), the Philippines (32.9) and Australia (7.5). Supplies from Africa and Latin America are expected to increase in future.

To support the economic activities and the living standards of the people, various kinds of natural resources must be imported in large quantities and from countries all over the world. Moreover, the rate of dependence on imports of these resources has already reached a remarkably high level and is likely to increase still more in future. When the world-resources trade is a buyer's market and one can buy resources on favourable terms, this kind of structure and characteristic of the Japanese economy has been considered advantageous. Moreover, the development of marine transportation, especially of large tankers and ore carriers, has greatly reduced the cost of long-distance transportation. Thus it has been possible to produce and profit by importing raw materials and processing them in factories in the industrial centres located on the sea coast of Japan.
The world economy must now face changes such as the increased bargaining power of the resource-exporting countries, the intensification of the so-called 'Resource Nationalism' and limits in world resource supplies.

IV Economic Policies

Under the circumstances outlined above what are the proper economic policies for Japan to pursue?

First, the diversification of resource supply is necessary. Regarding oil resources, it is desirable that the present high dependence on Middle Eastern oil should be reduced. Japan will have to promote co-operation with oil-producing countries and regions such as Siberia in the USSR, Alaska in the United States and Indonesia. It is nearly impossible, however, to reduce substantially the dependence on the Middle East because of the existing oil reserves and development potential. With regard to co-operative development of resources in Siberia, a complementary relationship between Japan and the USSR does exist. A few years ago in Moscow, when the author had a chance to talk with Professor Nikolai Neklassov, Chairman of the Council for Research in Production Power, he said that although a large quantity of various natural resources had been found in Siberia, this region, especially its eastern part, did not have projects to utilize these resources. When he visited Japan, however, he found that there was a country, east of Siberia which needed resources in large quantities. He noted that the development of the huge resources in Siberia to meet Japan's growing resource requirements was a mutually-beneficial relationship for both parties. In view of the importance to the Japanese economy of imported resources, the development of resources in Siberia such as oil, coal, natural gas and timber is considered an attractive proposal. The supply volume of these resources, however, is expected to be relatively modest compared to Japan's total requirements for these raw materials. Basically, Japan will continue to remain dependent for its resources on world-wide supplies.

Second, Japan may co-operate with resource-exporting countries, to establish processing industries in these countries and gradually convert its imports of raw materials into imports of processed goods. For example, Japan's aluminium industry is importing bauxite and consuming a large amount of electric power generated by burning imported oil in order to produce aluminium. Instead, Japan may import aluminium while co-operating in the establishment of aluminium industries in energy-rich countries. A similar formula may be applicable
for other industries such as the petro-chemical, iron and steel, non-ferrous metals and pulp and paper industries. The development of processing industries in countries rich in resources implies that these countries will export processed goods in addition to raw materials, so that if Japan increases imports of these goods, responding to their need for markets for their new products, benefits will accrue to both parties. Moreover, in constructing these industries, there is an opportunity for co-operation in supplying technology and capital goods from Japan. Negotiations are occurring concerning the construction of such industries as oil refineries, petro-chemicals, fertilizers, aluminium, steel, etc. based on energy resources, with Middle East countries; power development and construction of aluminium industries in areas rich in hydro-electric power such as Sumatra in Indonesia, Papua New Guinea and New Zealand; and the building of pulp and paper industries in forest resource-rich countries such as Indonesia, Brazil and the USSR.

Third, Japan may modify her industrial structure into one which consumes less energy. The report, *Trade and Industrial Policy in the 1970s*, published in 1971 by the Council for Industrial Structure, the advisory body of the Ministry of International Trade and Industry, already recommended policies for developing energy-saving and knowledge-intensive industries in the future.

As there is a high standard of education and technology in Japan, it should be possible to reduce the component of imported raw materials per unit cost of the products by way of promoting growth in the technology-intensive industries. Science and technology development which can substitute for the shortage of resources is indispensable for the future of Japan. As for energy, it is necessary to promote research in atomic energy, solar heat, subterranean heat and others. Regarding food, development of the technology to produce single-cell protein using oil or methanol and to use this, at least for livestock feed, needs to be secured. It is also necessary to develop industries which do not consume large amounts of energy and raw materials and to produce goods with a higher profit margin by promoting further development of such industries as electronics, precision machinery and fine chemicals.

Fourth, it is necessary to encourage a resource-saving way of life amongst the people of Japan. If greater importance is placed on the further development of mass transportation, savings of both energy and raw materials are possible by avoiding an excessive reliance on motor cars. In the diet of the Japanese, it may be desirable to discourage the increasing consumption of livestock products in excess of nutritional requirements to maintain the health standards of the people.
improve the quality of life it may be desirable to emphasize a pattern of life which does not require the consumption of large quantities of material resources. Policies to encourage the recycling of material, the reduction of waste, the supply of durable products, etc. are also necessary for Japan.

Finally, the possibility of slowing down the rate of economic growth should be considered. It may be unreasonable to expect a rapidly increasing supply of energy in future, particularly in imported oil and oil products which expanded at a rate of 16.4 per cent per year during the period from 1968 to 1973. Although the elasticity of imported oil to the growth rate of GNP is gradually being reduced, it is realistic to assume it to be unity for several years to come even if policies for economizing energy consumption are implemented.

Energy other than oil, atomic energy for example, accounted for only 0.7 per cent of the total energy supply in 1972. According to a government plan, however, the electric power capacity of atomic energy will amount to around 30 million kilowatts (KW) in 1985. About ten per cent of the total energy is expected to be supplied by atomic energy in 1985. It will take a long period of time and it will require a huge amount of investment before substitute energy resources come to play a significant part in the total energy supply. Even if the technical feasibility of other energy sources such as solar energy and subterranean heat is demonstrated, twenty or thirty years may be needed until these newly developed energy sources will have significance in the total energy supply. The major supply source of energy will continue to be oil for many years to come, especially for Japan whose alternative sources of energy are very limited. On the above premises, if foreign oil supplies to Japan grow at a rate of six or seven per cent per annum, economic growth will be nearly the same. This implies that it is not likely that Japan will maintain its ten per cent rate of growth in the future. In a sense this is even desirable because a slower rate of growth will enable Japan to avoid frictions caused by rapidly expanding its share in world markets, to solve domestic environmental problems and to provide time for the people to adapt themselves to the rapidly changing social and economic conditions.

V Diplomatic Policies

With respect to the international aspects, what are the proper diplomatic policies for Japan to pursue?

In Japanese kendo (fencing) terminology there is a posture called happo-yabure implying 'defenceless on all sides'. As described earlier
in this article Japan's dependence on imports of raw material, energy and food is so complete that policies attempting self-sufficiency in any of the key items appear unrealistic. Policies such as diversifying sources of supply, economizing on the use of raw materials and energy, stepping up efforts for increased production from indigenous resources, and building up emergency stocks of energy and food are feasible and should be pursued with seriousness. But the basic character of the heavy dependence for key items on overseas resources will not change.

One of the policy directions stemming from this fundamental condition is the pursuit of a diplomatic policy of being friendly with everybody, or, at least, not making serious enemies anywhere. Takeo Miki, Deputy Prime Minister, visited New York and Washington shortly after his visit to the Middle East last December. Recently, Shigeo Nagano, Chairman of the Japan Chamber of Commerce and a dynamic business leader, went to the United States to attend a US-Europe-Japan business consultation meeting. He also visited Peking to talk with government leaders there and flew to Moscow to discuss Siberian development with Soviet leaders. Such journeys may be interpreted as lacking principle, but under the circumstances Japan is now facing, particularly regarding the supply of essential commodities from abroad, a policy of 'friends with everyone' may be justified as the basic principle of Japan's diplomacy in the present and future decades.

In this same context, a view often expressed by foreign observers that Japan will eventually build up military strength to match the size of her Gross National Product, may be considered a fallacy. In order to make *happo-yabure* an effective diplomatic policy Japan must avoid becoming a danger to any other country in the world. If Japan started to build up military strength then at least some other country would interpret this as a dangerous sign and in turn fortify its military strength *vis-à-vis* Japan. This may touch off repercussions, e.g. an arms race, and this is inconsistent with the basic vulnerability of Japan's resources base. Just before the outbreak of the Pacific War in 1941 petroleum stockpiled for military purposes was only 3 million kilolitres or 19 million barrels which is just three-days' consumption in 1973 Japan.

The post-war Japanese economy has outgrown the domestic raw material and energy base; it has also outgrown the Asian base of supply. For major commodities, supplies from the East (including China) and South East Asia as a percentage of total imports into Japan in 1972 were: petroleum, 15.2; coal, 0.3; bauxite, 37.9; iron ore, 3.3; copper ore, 33.3; natural rubber, 97.1; maize, 20.4; soya beans, 7.7. The old concept of the 'Greater East Asian Co-Prosperity Sphere' is no longer
valid at least as far as the physical basis of supply is concerned. The history of the 1930s when Japan embarked upon military adventures disregarding rational economic calculations is not very likely to re-occur in view of the basic transformation as mentioned earlier in this article.

There are a few additional fundamental considerations. First, detente among the major powers and an absence of serious confrontations among countries of the world will enable Japan to avoid facing very serious and embarrassing choices. Second, to enable Japan to maintain exports of manufactured goods in order to earn the necessary foreign exchange to finance imports, a market-oriented, open and outward-looking economic system is preferred to a straight-jacketed, planned economy. Third, world trade and monetary systems which allow for free flows of commodities are essential for Japan's economic survival. These factors will necessitate that Japan follows a policy of internationalism rather than nationalism.

NOTES

1. The Japanese Government's fiscal year starts on 1 April and ends on 31 March.
2. The average life expectancy in Japan was 70.5 years for males and 75.9 years for females in 1972 which is about 25 years longer than it was in the 1930s.
5. For example, the proposed supply of 25 million tons per annum of oil from Siberia will account for only 5 per cent of Japan's total oil consumption in 1985.
LONG-TERM CONTRACTS FOR THE SUPPLY OF RAW MATERIALS*

Ben Smith

This is the second of three papers by the same author dealing with aspects of the Australia-Japan trade in primary commodities, with particular reference to minerals and energy goods. Here, the focus of attention is on the role of long-term contracts in this trade relationship.

The paper is concerned with the value of long-term contracts in promoting stable trade relations, and in creating an environment within which rational decisions as to the pattern of trade specialization may be made. In this context, the paper considers the advantages and disadvantages of long-term contracts, the objectives which contracts should be designed to achieve and the appropriate contractual arrangements under alternative market conditions. An important issue is the extent to which either the objectives or the terms of the sorts of contracts drawn up in the 1960s may be inappropriate to the changed economic conditions of the mid-1970s.

Section I of the paper provides a brief, introductory outline of the past and potential future development of Australia's trade in minerals products with Japan, indicating the importance of long-term contracts in that trade relationship.

Section II is concerned with analysis of the advantages and disadvantages of rigid contractual arrangements and attempts to draw conclusions about the appropriate nature of contracts in the minerals trade. The analysis is conducted under the assumptions of zero inflation and fixed exchange rates—conditions approximating to those prevailing when initial contracts were drawn up.

In the light of the analysis of the preceding section, Section III presents a detailed examination of the nature and importance of long-term contracts in the trade in four major minerals products—iron ore, coal, nickel concentrates/matte, and bauxite/alumina. In considering the appropriate objectives and terms for contracts, it is important to identify the sort of problems which have arisen from contractual

* Paper first published January 1976 under the direction of the Australian Committee of the Australia-Japan Economic Relations Research Project under the title 'Long Term Contracts in the Resource Goods Trade'.

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arrangements, the manner in which such problems have been dealt with, and their impact on attitudes towards long-term trade arrangements.

The concluding section is concerned with the problems of inflation and exchange rate variations. It is suggested that contracts should be designed to provide automatic proof against inflation and currency parity changes, and a formula is proposed as being the most appropriate means of providing such cover.

Whilst the body of the paper is concerned with the minerals trade, the analysis of Section II is relevant to trade in any commodity. Partly by way of contrast with the minerals case, the Appendix provides a brief discussion of the marketing arrangements for three major Australian exports—sugar, wheat and wool—in the light of that analysis.

I The Australia-Japan Minerals Trade

In 1973/4, Australia's exports of minerals products were valued at $A1,421 million, representing 20.6 per cent of the total value of Australia's exports for that year. The products to which special attention is paid in Section III accounted for over 70 per cent of minerals export earnings. Tables 12.1 and 12.2 indicate the growth in Australia's total exports and Japan's total imports of these products since 1964 and demonstrate the importance to both countries of the strong bilateral trade relationship.

Australia's rapid growth as a minerals producer began in the early 1960s and was heavily dependent on the availability of export sales, at a time when there were no expectations of any world shortage of mineral resources. Access to the large North-American and European markets was limited by a number of factors:

1. For a number of commodities a large proportion of the demand for minerals had been satisfied through the discovery and exploitation of 'captive' mineral deposits by metals manufacturers themselves. The effect of this vertical integration from ore to metal clearly limits the market opportunities for independent ore producers.
2. Where minerals users purchased from independent suppliers, a large proportion of this trade was conducted under long-term contracts which effectively limited short- to medium-term access for new suppliers.
3. Because of the relatively slow growth of production in North America and Europe, the total demand for minerals was not expanding significantly in relation to the capacity of established suppliers of
Long-Term Contracts for the Supply of Raw Materials

minerals.

4. In the, generally small, 'free' market there was strong competition from established suppliers who enjoyed a competitive advantage over potential Australian suppliers both because of their established relations with minerals users, and because the distance of Australia from the market imposed a transport cost disadvantage on Australian producers.

Although, in some instances, mineral deposits have been developed along with processing activities to manufacture metals, the domestic market for the resulting metals production has been much too small to support the scale of minerals extraction necessary for efficiency. At the time of the initial expansion of minerals production, Australian metals manufacture was generally too expensive to compete in international markets, or was precluded from exporting by transport-cost disadvantages or the high effective protection provided for overseas metals manufacturers. In sum, then, the development of Australia's mineral resources has depended very largely on the ability to sell mineral ores and concentrates to Japan.

The rapid growth in Japan's industrial production required a guaranteed access to large supplies of minerals. The extent to which established minerals production was tied to the North American and European markets, and the distance of Japan from established minerals sources, provided a clear incentive to seek stable sources of supply within the Asian-Pacific region. The existence of large deposits of key minerals, and the economic and political stability of Australia, made Australia a natural source of raw materials for Japan.

An important characteristic of Japan's purchases of raw materials, and of Australia's sales of those materials, has been the relative absence of vertical integration from mining through to metals production. Although Australian minerals production has relied heavily on foreign investment as a source of finance and expertise, this has come mostly from European or American companies who were not seeking to develop mineral resources as 'captive' sources of supply for their own metals production. At the same time, Japanese companies have notably not sought to ensure access to supplies of raw materials through direct investment in minerals extraction. Thus, the Australia-Japan trade in minerals has required the development of stable trade relations between independent producers and users.

In this situation, long-term contracts have substituted for vertical integration as a means of safeguarding access to markets and supplies.
Table 12.1: Australian Exports of Key Commodities

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Notes: (a) Country of consignment not available after 1964-65. For nickel Japan’s share is virtually 100 per cent. For alumina Japan’s share is probably about 20 per cent.
(b) Non-ferrous metals nei — almost wholly bauxite and nickel.
(c) Non-ferrous metals nei — almost wholly bauxite.
(d) Private estimates.

Table 12.2: Japanese Imports of Key Commodities

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The particular advantages of guaranteed market access which long-term contracts provide in the minerals trade are further discussed in the following sections of the paper.

Whilst the rapid growth of Australia as a supplier of primary raw materials to Japan has depended on the guarantees of market access provided by contracts, development of a more complex pattern of trade in minerals-related products may depend on the extent to which initial contractual ties lead to inter-company relationships providing a more general ‘proxy’ for vertical integration.

Increasingly, it will become attractive for metals manufacture to be undertaken outside Japan, both for reasons of pollution and because of Japan’s changing comparative advantage position vis-à-vis other countries in the region. If metals manufacture and mining of raw materials lay in the hands of vertically-integrated Japanese companies, one might envisage their profit-maximizing strategy as being gradually to shift basic metals production to Australia, from where they could export to their established markets in Japan. To the extent that the established relations between Australian and Japanese companies provide a good vertical integration ‘proxy’, it may be reasonable to expect a similar shift in production patterns, on a joint-venture basis, resulting from rational decisions as to the best ways to improve ‘joint’ profitabilities. Indeed, the existence of independent companies at the raw materials production stage may lead to a faster transfer of processing facilities, since pressure from these companies will tend to offset the natural conservatism of processors accustomed to operating in the Japanese environment.6

As is indicated in Section III, some of the sorts of changes in the minerals trade outlined above have already begun to occur. However, there remains enormous potential for continuing developments in that direction. Crucially, the realization of that potential depends on the extent to which the initial trade link—the sale of primary raw materials—is conducted in an atmosphere of partnership. An important aspect of the discussion of alternative approaches to long-term trade arrangements, then, is their impact on the development of inter-company relationships.

The above introductory discussion serves to provide a backdrop and frame of reference for the more specific discussions of the following sections.

II Advantages and Disadvantages of Long-Term Contracts

Long-term contracts between exporters and importers can vary
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considerably in the extent to which contracts are formally specified and in the degree of flexibility in the arrangements made. As a starting point, however, it is useful to restrict the discussion to the case of rigid (and enforceable) contracts, where the period of the contract, the quantity to be traded in each year, and the US$ price are exactly specified, and fixed for the duration of the contract. For the purposes of this section, it is also assumed that there is a world-wide zero rate of inflation and that exchange rates are fixed. Both exporters and importers, then, face the choice of trading in short-term markets or trading under rigid long-term arrangements with complete stability of real export receipts and import costs.

Given this polarization of the alternatives, the following paragraphs consider the advantages and problems, both for importers and exporters, of opting to trade under long-term contracts. For some sorts of market situations, it is seen that the disadvantages of contract arrangements outweigh the advantages. Of more interest, in the minerals case, is to consider how the principal advantages of contractual arrangements can be captured, and the disadvantages minimized, by the introduction of elements of flexibility into the specification of contract terms.

(a) Information and Transaction Costs

Where a commodity has a well-developed and efficient short-term international market, spot sales or purchases impose relatively small transactions costs. The less well-developed, less integrated and more secret are short-term trade arrangements, the greater will be the costs to buyers and sellers of searching each other out and assessing the alternatives open to them.

Because of their long-term nature, contractual trade arrangements reduce the need for frequent search for markets (or supplies). As compared to trade in short-term markets, long-term contract arrangements are likely to result in larger quantities being traded between individual sellers and individual buyers, so that there is a greater bilateral concentration of trade flows. These factors reduce the number of transactions which need to be undertaken, not only as between buyers and sellers but also in shipping arrangements. Stable long-term bulk trade arrangements may allow greater advantage to be taken of bulk transport facilities and there may be some advantage in negotiating long-term shipping contracts. Also, the experience gained from continuous dealing with particular suppliers, or purchasers, may promote a mutual understanding which, once initial contracts have been negotiated, allows additional contracts or contract renewals to be negotiated relatively
quickly and efficiently.

The types of reductions in transactions costs outlined above will result from trade under long-term contracts for any commodity. However, the importance of the savings will clearly vary according to the importance of transactions costs in short-term trade arrangements.

(b) Market Stabilization

The sort of rigid contractual arrangement outlined at the beginning of this section would have the effect of completely stabilizing the real export earnings of producers and the real raw material costs of importers. We turn, now, to the possible advantages and disadvantages of such stability.

Where an exporter has a relatively fixed supply but a variable export demand for his product he may gain substantially from trading under a completely stabilizing long-term contract. In the absence of such a contract, variations in the quantity exported or variations in the price (or both) will produce instability in his export income. If the instability arises through price variations, it may be very difficult, and costly, to resort to borrowing as a means of smoothing the cash-flow position, since the prospect of loan repayment depends on an expectation of a future price increase which lenders may view as extremely uncertain. If demand variations can be absorbed by variations in export quantity, with price kept stable, it may be easier and cheaper to attract finance since any increase in borrowing will be matched by a build-up of stocks. Although lenders may be uncertain as to the value of these stocks, it is likely that they can be sold in future at some price. However, to absorb demand variations through variations in quantity sold requires the exporter to have some degree of monopoly power over buyers if the resulting income instability is not to be very large. In the absence of such monopoly power, the greater degree of instability in cash flows generated by quantity variation may more than offset any advantage of cheaper finance to smooth the cash-flow position. Also, the desirability of absorbing demand variations through variations in export quantity depends on the cost of storage facilities and on the commodity being capable of storage for long periods without deterioration.

In contrast to the above case, the advantages of stabilizing long-term contracts are much less obvious for the exporter when the source of instability lies in his own supply situation. Suppose that the exporter faces a relatively stable demand for his product but, because of variations in weather conditions, his output level is subject to considerable instability. In order to meet commitments under a long-term
contract, the exporter would need to carry permanent buffer stocks with consequent interest charges and, depending on the product, there could be substantial storage costs. Also, it may not be any easier to obtain finance for investment in buffer stocks than to borrow to smooth out the income variations resulting from supply instability. The uncertainty facing lenders in both cases lies in the estimation of the long-run average level of output.\(^8\) Assuming that finance can be obtained for buffer stocks and for smoothing unstable export receipts at the same rate of interest, there are two reasons why investment in buffer stocks may be more costly than borrowing to meet shortfalls in income due to supply variations, aside from any costs of storage. First, unless the demand for the exporter’s product is infinitely elastic, variations in supply will, to some extent, be offset by price variations so that the instability of income will not be as great as the instability in supply. At the limit, if the price elasticity of demand is equal to one, supply instability will not produce any instability of income. Second, where the exporter borrows to meet a shortfall in income, the size of his debt is exactly tailored to the actual supply situation. In contrast, the exporter who is committed to a constant export quantity needs to hold a permanent level of stocks sufficient to cover the worst possible situation.

The above discussion suggests that stabilizing long-term contracts may have strong advantages for exporters able to provide relatively stable supplies, but that, where instability is mainly due to supply fluctuations, long-term contracts may well increase the costs of market instability. Broadly, it may be said that minerals producers fall into the first classification, whilst many agricultural producers—for example, wheat farmers—fall into the second.

Importers of resource goods are engaged in processing activities. Thus, the demand for these raw materials is derived from the demand for the final products which they are used to produce.

Suppose that a processor produces for a stable domestic market where he is not subject to import competition or competition from other domestic producers and purchases his raw materials under short-term arrangements in a relatively unstable world market. Changes in raw materials prices will be passed on to the consumers of his product, with consequent effects on the level of demand and, therefore, on his degree of capacity utilization. Thus, the instability in the raw materials market may have the effect of generating instability in the product market. Under these circumstances, there is an incentive for the producer to negotiate a stabilizing long-term contract for the supply of the raw material, in order to reduce the instability in his own market situation.
However, this advantage relies on a number of restrictive conditions. First, the cost of the raw material needs to represent a fairly substantial proportion of the cost of the final product. If this condition is not met, instability in the raw material’s price will generate little instability in the product price and only minor changes in product demand. Thus, the case is most important for raw materials requiring only a small amount of processing before being sold to final consumers. Second, if the processor faces competition in his product market from producers, at home or overseas, who continue to purchase raw materials in the short-term market, the stability of his product price compared to the prices of his competitors is likely to be a source of instability in the demand for his product. The advantage of purchasing materials under a stabilizing long-term contract, then, is restricted to the case where the importer has a substantial degree of control over his product market.

Where the raw materials importer faces an unstable demand for his product, the purchase of materials under stabilizing long-term contracts would seem to be clearly disadvantageous since it eliminates the option to respond to a reduction in demand and output by reducing raw materials purchases. To the extent that the final product is sold in international markets, and that recessions in demand for manufactured goods tend to be transmitted internationally, the producer purchasing raw materials in short-term markets could expect variations in raw-materials prices partially to offset the effects of product demand changes. In this situation, then, the purchase of raw materials under stable long-term contracts essentially has the effect of passing the costs of stabilizing producer incomes, through the holding of buffer stocks, from producers of the raw materials to the users of those materials.

It seems likely that the complete stabilization of real raw-materials costs provided by rigid long-term contracts would represent a clear disadvantage to processors, unless they have a stable and captive demand for their own production.

(c) The Contract Price

Thus far, contracts have been characterised as having a fixed real price, with no mention of the factors determining that price. As noted earlier, issues of bilateral monopoly bargaining and appropriate export-pricing policy are dealt with elsewhere. Here, we shall assume that there are no monopoly elements in the exporter-importer relationship, so that we may conceive of a competitive solution for the determination of the contract price.

To begin with, suppose that there are no savings in transactions costs
associated with long-term contracting, that there is a uniform expectation that the short-term market price will be stable over the contract period, and that neither the supplies of individual exporters nor the demands of individual importers are subject to instability. Then, the only advantage of a fixed-price contract is that it eliminates traders' uncertainties about future prices. So long as both exporter and importer are equally risk-averse, the contract price will be the same as the expected, stable short-term market price. If one of the parties is less risk-averse than the other, he will be able to negotiate a contract price which is more favourable to him than the expected short-term price, since the other party will be prepared to accept a smaller certain gain from trade under the contract than he would expect to obtain by trading in the short-term market. The same propositions hold true if traders have uniform expectations that the short-term market price will rise (fall) over the period of the contract, except that the contract price will then tend to be higher (lower) than the current market price.

Where exporters hold expectations of falling prices whilst importers expect prices to rise, it is obvious that a contract price can be negotiated which both parties regard as superior to trading in the short-term market, even if neither party is at all risk-averse. On the other hand, if exporters expect prices to rise,Whilst importers expect prices to fall, it will only be possible to agree a fixed contract price if the parties are sufficiently risk-averse that the certainty of the contract price outweighs its divergence from expectations about the trend in market prices. Otherwise, a contract will be agreed only if the price is subject to relatively frequent renegotiation.

Now suppose that long-term contracts allow savings in transaction costs. Although there frequently seems to be a belief that these savings accrue only to the seller, there is no reason why they should not be just as important for the buyer. The effect of a reduction in transactions costs will be that an exporter will wish to supply a larger quantity, whilst an importer will demand a larger quantity, at any given price. Whether the transactions cost advantages of long-term contracts tend to reduce or increase the contract price depends on the relative importance of the transactions cost savings to the two sides and on the responsiveness of export supply and import demand to such savings.

So far, it has been assumed that short-term markets are not subject to instability and that individual exporters have stable supplies and individual importers have stable demands. Thus, the degree of market stabilization afforded by rigid long-term contracts conveys no advantages and creates no problems. In practice, as noted in the previous
section, the market stabilizing effect of contractual arrangements will tend to benefit exporters with stable supply conditions and, possibly, importers facing stable demand for their product. On the other hand, exporters with unstable supply conditions may be disadvantaged by market stabilization and importers with unstable demand for their product are almost certain to be disadvantaged.

The effects of the benefits, or costs, of complete market stability can be analyzed in a similar manner to the effects of reductions in transactions costs. Where exporters benefit from increased market stability they will be prepared to supply a greater quantity at any given price and, where the increased market stability represents a cost, they will tend to reduce supply. Similarly, where importers benefit from increased stability they will tend to demand more at any given price and, where increased market stability represents a cost, they will tend to demand less. Thus, the smaller are the benefits of stability to importers and the greater are the benefits to exporters, the lower will be the equilibrium contract price, and vice versa.

Where market stability represents a benefit to one party which is greater than any cost to the other, it should be possible to negotiate a fixed-price/fixed-quantity contract which both parties find preferable to trading in short-term markets. However, it is possible that the cost of market stability to one of the parties exceeds the benefit to the other. In such cases, it may not be possible to agree to a long-term contract at all, and both parties may prefer to trade in the spot market. However, if there are substantial advantages to trading under a long-term contract, outside considerations of market stability, a contract may be agreed in which the party for whom market stability represents a cost has the option to vary the quantity purchased (or sold) within certain limits, or where the contract price is variable within limits. Although conclusion of a contract may require a significant divergence from the complete degree of market stabilization earlier envisaged, advanced notice of likely demand or supply changes may reduce the costs of such changes to the party against whom such options are exercised.

(d) Market Access

The discussion of transaction costs, market stability and contract prices has been predicated on the assumption that short-term markets actually do exist, so that traders face a genuine choice between short- and long-term trade arrangements. We now turn to the problems arising when short-term markets are so undeveloped that exporters may have no
reliable access to markets and importers may have no reliable access to supplies.

When a large proportion of world output is traded in relatively free short-term markets, the only constraint on an exporter selling any desired quantity or an importer buying any desired quantity, is the price which must be accepted or paid. Although price fluctuations may have a destabilizing effect on producer incomes or user costs, they do not, in a literal sense, inhibit access to markets or supplies.

On the other hand, when the bulk of world production is tied up in the operations of multinational companies (or consortia) or in long-term trade arrangements of one sort or another, short-term markets tend to be small, volatile and generally unreliable. At any point in time, an exporter may be unable to find a market for a given quantity at any price, or an importer may be unable to obtain supplies at any price.

The problem of market access is by far the most important reason for the prevalence of long-term contract arrangements in the minerals trade between Australia and Japan. In the minerals trade generally, short-term markets either literally do not exist or are extremely unreliable. Although iron ore and coal are, by comparison with other minerals, relatively heavily traded under short-term arrangements in international markets, the Japanese steel industry does not have access to large short-term supplies. Even where, as with coal, significant spot supplies may be available at particular times, these do not represent a reliable long-term source of supply since the signing of new contracts or sudden shortfalls in production may quickly reduce the quantities available for spot sales. From the seller's viewpoint, Australian minerals producers do not have regular access to any significant levels of spot sales, let alone to a short-term market large enough to absorb their whole outputs. For the minerals trade, then, there are clear quantitative constraints on access to short-term markets, in addition to any constraints imposed by transactions costs or price variability.

Whilst the degree of difficulty in ensuring access to markets or supplies varies according to the conditions under which commodities are sold internationally, the importance of the problem varies, both for importers and for exporters, according to the proportion of fixed costs to variable costs and to the degree of substitutability in their operations. For many agricultural products, a large part of the land employed could, at some cost, be diverted to alternative uses. Thus, it is only essential to have guaranteed access to markets for 'normal' output levels for a sufficiently long period ahead to allow changes in production patterns to be implemented.
In contrast, the exploitation of minerals deposits involves a total commitment to a single product and is extremely capital-intensive, both in the actual extraction and in the development of infrastructure and port facilities. The very high ratio of fixed costs to variable costs means that constant operation at more or less full capacity is essential. Without the guaranteed market access that long-term contracts provide, minerals producers would be unable to raise the capital necessary to exploit their deposits. In the Australian experience, it has generally been necessary for long-term contracts covering a substantial proportion of expected output levels to be negotiated before, and in some instances a number of years before, any output can be produced.

Not only is minerals extraction highly capital-intensive, but minerals processing also tends to be capital-intensive. There is therefore, a strong incentive for the buyers of minerals exports to seek guaranteed access to supplies, in order that their plants should not have to operate below capacity due to a shortage of raw materials. Often, plants are designed to run at, or near, full capacity and must be shut down if this cannot be achieved. The costs of shutting down and restarting capital structures such as coke ovens or smelting pots may be very much greater than the interest charges on the idle capital. In the case of Japanese buyers, the need to ensure reliable access to supplies is strengthened by two further factors. First, Japanese companies have a very high ratio of fixed debt to equity in their financial structures. Second, they tend to provide 'lifetime employment' for their labour forces. Both of these factors have the effect of greatly reducing the variable element in total costs, so that there are very limited possibilities of reducing total costs in the event of an enforced reduction in output due to a shortage of raw materials.

In addition to the direct private costs of a severe shortage of raw materials, there would be substantial social costs arising from lost income and employment in other sectors of the economy. Given the important linkages through the manufacturing sector of metals production, these costs would be particularly high for a shortage of metal ores or of energy goods used in metals production. To the extent that Japanese metals producers are attached to industrial groups engaged in higher stages of manufacture, part of these additional costs is likely to be internalized. More important, perhaps, is the fact that government agencies are concerned to avoid the social implications of raw materials shortages, and actively encourage Japanese companies to purchase minerals under long-term contracts.
(e) Objectives and Terms of Long Term Contracts

The above analysis suggests that long-term contract arrangements may be inappropriate to the trade in many commodities. The Appendix considers the relevance of such arrangements to trade in some agricultural commodities. For minerals, however, the problem of ensuring market access looms so large, in the absence of vertical integration, that some form of long-term trade arrangements is essential. Before turning to a detailed consideration of the trade arrangements for selected minerals products, it is useful to consider what the objectives and terms of minerals contracts are likely to be, given the above discussion of the advantages and disadvantages of rigid contractual arrangements.

The minerals exporter is interested in guaranteeing market access for his normal output, at a price which ensures an adequate return on his investment. Since, once mining production reaches full capacity and barring prolonged industrial disputes, mining output is highly stable, the interest of the exporter would seem to be best served by a contract which allows no flexibility in annual tonnage. The desirability of a rigidly fixed contract price is less clear—it depends on the level of fixed price which can be obtained, relative to the exporter's expectations as to market conditions over the contract period, the premium which he places on certainty, and the perceived advantage of complete stability of export earnings. Thus, so long as a sufficiently high fixed long-term price can be obtained, it will be preferred to an annually negotiated price. The higher the premium placed on stability, the more risk-averse the exporter, and the less optimistic his expectations of future market conditions, the lower will be the acceptable level of fixed contract price.

The minerals importer wishes to ensure access to supplies of raw materials. However, because of variations in the demand for his own product, he has an interest in maintaining flexibility in the quantity of raw materials purchased. Ideally, he would want a contract which provided him with very substantial freedom to vary the tonnage traded. So far as the price is concerned, however, the importer's attitude is likely to be similar to that of the exporter. Variations in demand for processed minerals tend to be reflected in output changes, rather than real price changes. Thus, whilst the processor will want to preserve flexibility in the quantity of raw materials purchased, it is less necessary to preserve price flexibility. At the same time, a fixed long-term price offers advantages in that it protects the importer against the effects of future shortfalls in world supply of the raw material. In general, it seems reasonable to argue that the importer will prefer a fixed price to
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an annually negotiated price, so long as the fixed price obtainable is consistent with his expectations as to future market conditions and the premium he places on certainty.

There is a clear conflict of interest between importer and exporter over the quantity specifications of contracts. If quantity is highly variable, severe instability and stockholding costs will be borne by the exporter. On the other hand, a fixed annual tonnage imposes stockholding costs on a processor faced with a variable demand for his own product. For two reasons, the costs of holding stocks are likely to be greater if they fall on the importer rather than the exporter. First, the exporter is likely to be able to vary production levels to some extent and to be able to make variable levels of spot sales. These factors reduce the need for stocks fully to reflect variations in contract tonnages. Second, the cost of holding stocks is substantially lower in Australia than in Japan, largely in consequence of the lower premium on space. Thus, an 'efficient' solution requires the importer to have the option to vary the tonnage purchased within limits. The limits set protect the exporter against great instability, and, if the intention to exercise options is announced far enough in advance, the exporter has the opportunity to attempt to adjust production levels or the level of sales to alternative buyers. The contract price will, of course, reflect the distribution of stockholding costs between two parties.

The discussion of attitudes towards fixed-contract prices suggests that both sides will prefer a fixed price to a variable price if their expectations as to future market conditions are consistent, or if the premiums which they place on certainty more than outweigh any inconsistency in expectations. In general, there is no reason why the two sides should hold strongly divergent expectations, at least as regards the medium term, and a preference for certainty is likely to mean that there is a fixed contract price which both sides regard as superior to frequent price negotiation. The longer the period considered, the more likely it is that expectations will become inconsistent. A possibility, which allows some degree of price variability but which largely eliminates uncertainty, is to set a fixed price for, say, 5-7 years, at the end of which period a new price, which must lie within a specified band around the initial price, is negotiated for the following 5-7 years, and so on.

The analysis of this section suggests that there are considerable advantages to long-term trade arrangements in the minerals trade. The objectives of exporters and importers can best be reconciled where contracts specify a contract price which is fixed for the short to medium term, and which can vary only within predetermined limits over the
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long term,\textsuperscript{11} and a contract tonnage which is variable within strict limits at the option of the importer, subject to advance notification of the intention to exercise such options.

In the light of the above discussion, the following section gives detailed attention to the role of long-term contracts in the trade of selected minerals, and considers the sorts of problems which have emerged since initial contracts were drawn up.

III Trade in Selected Minerals Products

Iron Ore

In 1960, Australia's production of iron ore was 4.4 million tonnes, all of which was consumed domestically. The lifting of the embargo on exports in that year resulted in a stimulus to exploration for iron ore deposits and to search for markets. The prospects of finding markets outside Japan were very poor, since the transport cost disadvantage of Australian producers in the North American and European markets was considerable.\textsuperscript{12} Also, in 1960, 42 per cent of all iron ore traded originated in 'captive' mines and 19 per cent was traded under long-term contracts.\textsuperscript{13} The remaining 39 per cent, although described as 'free market', was in large measure traded under short-term contracts which, by convention, were renegotiated annually. The possibilities of breaking into established markets on any large scale were, therefore, extremely limited. For the same reasons, Japan's ability to obtain supplies of iron ore from established sources to meet the rapidly growing needs of her steel industry was also limited.

By 1965, Australia's production had risen to 6.8 million tonnes, with only 200,000 tonnes being exported to Japan. In the period 1965-1970 Australia's production rose to 51.1 million tonnes per annum, with exports to Japan accounting for 82 per cent of the growth in output. In the same period, Japan's annual imports of iron ore increased by 163 per cent, with Australia meeting 58 per cent of this growth in requirements.

It can be seen from the above that the Australia-Japan trade relationship has played a major role in the development of Australia's iron ore industry. At present, Australia has the largest iron ore production capacity in the western world and iron ore provides the greatest export earnings of any single mineral product. At the same time, the development of Australia's iron ore production has been of considerable importance in allowing Japan's steel industry to obtain the raw materials necessary for its rapid growth.
The exporters of iron ore, principally Hamersley and Mt Newman, trade with Japan under long-term contracts concluded with a consortium of Japanese steel mills for which Nippon Steel acts as the negotiating agent.

Contracts have been for given quantities to be delivered in a specified pattern, generally over periods of 10-16 years. Whilst annual base tonnages are specified, buyers are provided with options to vary purchases from base tonnages, usually within a margin of ± 10 per cent. The intention to exercise such options has to be notified to the producer three months before the commencement of the contract year. Where contracts are closed on a fixed-quantity basis, variations from the specified annual tonnages are made up later in the contract period or by extension of that period. However, where contracts are closed on a fixed-period basis, the effect of the exercise of quantity options may be to reduce or increase the total contract quantity. All contracts have specified a fixed price for a number of years, with provision for a new fixed price to be negotiated to cover a further number of years. However, the contracts generally specify the range within which the price can be varied (± 7.5 per cent is usual) and often specify that the price shall be unchanged if no agreement is reached.

At the time when initial contracts were drawn up, in the early 1960s, the possibilities of price variation built into contracts would have appeared to offer the possibility of a more or less fixed real price over the life of the contract, so long as the price was increased by the maximum amount on each renegotiation. At the same time, the limited possibilities for price reductions gave protection to Australian producers against any drastic reduction in the ‘world’ price.

In the event, of course, Australian producers have suffered from the rapid escalation in the rate of inflation. Real profits have been eroded by the faster increase in costs than in prices and by the reduced real value of nominal profits. Also, the revaluations of the Australian dollar against the United States dollar in 1971, 1972 and early 1973 had the effect of reducing the A$ value of the fixed US$ price by 21.2 per cent.

The provision of an option for buyers to vary purchases is consistent with the earlier discussion of market stabilization. Whilst Australian iron ore producers do not welcome the exercise of options, the prescribed limits and the advance notification have generally meant that no great instability problem results. Clearly, from the viewpoint of the ‘integrated’ producer-consumer relationship, it is more efficient for demand variations to be absorbed by Australian producers than by Japanese steel companies. In the absence of consumer quantity options,
it is reasonable to expect that the lower price that steel producers would be prepared to pay for iron ore would represent a more significant cost to Australian exporters than does the degree of instability imposed by the exercise of options. A particular advantage of Japan's consortium buying is the extent to which it allows steel mills to readjust the scheduling of deliveries as between consumers without affecting the scheduling of shipments from Australia. Thus, by internal trading within the consortium, Australian producers are isolated from minor demand fluctuations of particular steel companies.

Occasionally problems have arisen when the Japanese steel industry has wanted to purchase less than the minimum amounts specified in contracts, or when Australian producers have been unable to meet the specified scheduling of deliveries, particularly when all steel mills have opted to take the maximum quantity. The manner in which such problems have been dealt with is indicative of the 'integrative' nature of the contractual arrangement. Rather than insisting on their contractual rights, both sides have entered negotiations aimed at getting the best arrangement consistent with the reality of the problems faced by the other. Thus, with a severe shortfall in Japanese demand due to a recession in steel production, both sides have accepted an increased stockholding cost with the shortfall in tonnage purchased being added on later in the life of the contract.

Similarly, despite the exact price specifications of contracts, the steel mills agreed to conduct price negotiations, focused on the problems created by the revaluations of the Australian dollar, with Australian producers in 1973. These negotiations resulted in price increases of approximately 15 per cent, compensating for about 70 per cent of the total effects of the revaluations to that time. During 1974, producers with contracts due for price review approached the steel mills seeking price increases of 30-40 per cent. After separate negotiations with each producer, the mills agreed to raise the base price on all Australian contracts, whether or not they were due for price review, by US$1.75 per tonne, and subsequently to increase prices due for review by the full 7.5 per cent (of the new base prices) permitted by contract provisions. The combined effects of these price changes would have been to raise prices by around 25 per cent.

Whilst long-term contracts have provided the framework within which the iron ore trade has developed, both sides have recognized the mutuality of interest in preserving a co-operative attitude towards each other's problems, so that, where one side has been unable to trade within the specific terms of the contracts, discussions have generally
succeeded in finding a reasonable compromise. Given the present level of uncertainty as to inflation rates and currency values, there is a clear desire on the part of Australian exporters to introduce more frequent negotiation of price within the framework of existing contracts. What appears to be sought is an 'understanding' that price levels and the frequency of price changes should not be limited by the terms of the contracts, rather than any formal revision of those terms. However, it is not clear that any new contract could now be agreed upon without providing for frequent official price negotiations and relatively wide limits on possible price changes.

Coal

Between 1960/61 and 1973/74, Australia's annual exports of coal increased from 2.0 million tonnes to 28.8 million tonnes. Of the latter figure, 24 million tonnes was exported to Japan. Up to 1969/70, NSW coal exports rose steadily from 1.95 million tonnes to 12.2 million tonnes, but since 1969/70 NSW coal exports have remained more or less constant. Queensland coal exports rose from 0.05 million tonnes in 1960/71 to 5.7 million tonnes in 1969/70, with the whole volume of exports going to Japan throughout this period, and by 1973/74 Queensland producers were exporting 15.6 million tonnes. For coking coal only, Australia exports more than 60 per cent of total production, with about 92 per cent of those exports going to Japan in 1974.

Whilst the growth of Australian coal production generally has relied heavily on Japanese demand, the enormous increase in production from the Queensland mines, with their large-scale capital intensive operations, has depended almost totally on long-term contract arrangements with Japanese steel mills.

Initially, individual coal producers negotiated fixed US$ price contracts with the consortium of Japanese steel mills. These contracts extended over 10-15 years and annual quantities were specified with ± 5 per cent or ± 10 per cent options provided for buyers, subject to notification six months before commencement of the contract year. The principal point of difference from iron ore contracts was that, although coal contracts had no provision for price renegotiation, they included escalation clauses which allowed producers to pass on virtually all increases in costs. As with iron ore, coal export prices are set f.o.b. for Japanese buyers—though for both commodities prices are specified c.i.f. for sales to Europe. This difference results from the desire of Japanese steel mills to arrange their own shipping, and the assessment of Australian sellers that the steel companies can be relied upon to
ensure that ships arrive on due dates.

As with iron ore contracts, the quantity options provided for buyers represent a more efficient means of handling demand instability than would rigid quantity specifications. In the case of coal, however, the producer has a rather better chance of adjusting to changes in Japan’s demand by seeking alternative short-term markets. Utah, for example, regularly sells marginal production on a short-term basis and has the possibility of increasing spot sales where contract demand is reduced under the buyers’ options.

Australia’s main competitor for the Japanese coal market has been the United States, where suppliers shifted from the sorts of long-term contracts outlined above to arrangements providing for yearly pricing. In consequence, the long-term contracts effectively became renewable yearly contracts since clauses were added providing both sides with the option to cancel the contractual arrangement at twelve months’ notice.

In 1970, a number of NSW coal producers negotiated amendments to contract arrangements to provide for yearly pricing under the same terms as US suppliers. The large Queensland producers, Utah and Thiess-Peabody-Mitsui, took the view that such a change in contract arrangements was essentially risky. Without any alteration of contracts these companies come to an ‘understanding’ with the steel mills that there should be annual price discussions.

As with the major iron ore producers, the trade relationship between the Queensland coal producers and the Japanese steel mills seems to reflect the ‘integrative’ nature of long-term contract arrangements. Original contract terms have served as the basic framework, with ‘unofficial’ discussions and negotiations providing the means of resolving problems arising from the specific contractual arrangements. Utah, in particular, claims to have been a particularly reliable supplier — meeting contract tonnages 100 per cent except where this was physically impossible. The same relationship does not really seem to hold for NSW producers, though this may largely be a function of the smaller sizes of those producers. In general, NSW producers have proved less reliable with respect to their delivery of contract tonnages than have Queensland producers. This difference has been reflected in the attitude of Japanese steel mills towards different producers. When it has been necessary to cut purchases from Australia below the minimum contract tonnages, the steel mills have not imposed the cuts equally across all producers but have imposed them more heavily on those producers with the worst delivery records.

By comparison with United States’ suppliers, however, Australian
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producers have been very reliable. United States producers have frequently delivered 20-30 per cent below contract, with one producer in particular delivering only 30 per cent of contract tonnage in 1974. Overall, long term contracts with Australia have substituted fairly well for vertical integration and, so long as the stable trade relationship persists, some credence must be given to the ‘undertaking’ of the steel mills that variations in their demand will not in future be reflected in variations in imports from Australia. It is consistent with their past behaviour that demand cuts should fall on the more unreliable United States producers.

The effects of currency parity changes on the earnings of Australian coal producers have been taken care of by annual price negotiations, especially given the rapid increases in price which the coal producers have recently been able to negotiate. However, the Department of Minerals and Energy has not only insisted that prices should be renegotiated annually, but also that producers should be compensated for cost increases and protected against currency parity changes between price negotiations. Thus, contracts continue to include escalation clauses and, whilst the price for half the contract tonnage is specified in US$, the price for the other half is, effectively, specified in A$.

Nickel

The trade in nickel between Australia and Japan offers the clearest example of the ‘integrative’ nature of long-term contract arrangements, and of the potential long-term developments which may spring from established inter-company relationships.

The growth of the Australian nickel industry has been dominated by the activities of the Western Mining Corporation, which has deliberately set out to develop a vertically integrated ore-to-metal domestic industry starting from the possession of a ‘captive’ ore body. However, such development clearly had to be a gradual process, given the time lag involved in acquiring and implementing the appropriate technology, the small size of the domestic market for nickel metal, and the problems involved in breaking into an international metal market in which three major companies controlled over 75 per cent of total ‘free’ world production.

In order to provide security for the necessary investment in mining development, and to provide a stable income source to allow the development of processing facilities, it was essential for Western Mining Corporation to obtain export contracts for concentrated nickel ore. The relatively low transport cost to Japan, and the fact that Japanese
producers were not tied to 'captive' ore bodies, made Japan the natural market. Under a long-term contract with Sumitomo Metal Mining Co., WMC began shipping nickel concentrates in 1967. By 1970, the export of nickel concentrates to Japan had reached 107,000 tonnes per annum and, during the year, WMC commenced production of refined nickel metal in Australia.

As with other products, nickel contracts provide for a given tonnage to be shipped in each year, with the buyer having the option to vary the tonnage purchased within specified margins. The significant characteristic of nickel contracts lies in the pricing arrangement, which is based on the nickel metal price quoted by the International Nickel Company of Canada (INCO). INCO, which accounts for over forty per cent of world production of nickel, regularly publishes a price for nickel metal to which other producers adjust so that it becomes the effective world price. The nickel contracts specify a US$ c.i.f. price for nickel concentrates, based on the INCO price for metal ruling at the time. The price varies automatically with changes in the nickel content of concentrates. Over the life of the contract, any change in the INCO metal price is shared in specified proportions between the two companies.

Over the period of the contract there has been a severe recession in world nickel production. During 1971, world consumption of nickel fell by about fifteen per cent and the cutback in production was particularly severely felt in Japan, where, by February 1972, nickel metal production stood at only seventy per cent of capacity. During 1972, then, the Japanese nickel industry's requirements for nickel concentrates fell substantially below contract tonnages.

WMC, by this time a substantial producer of refined nickel metal in its own right, was well able to appreciate the problems of Japanese producers. After intensive negotiations, a reduction in shipments was agreed upon which left both sides in the position of having to carry enlarged stocks of nickel concentrates. As compared to the figure for 1971, Japan's imports of nickel concentrates from Australia fell by twenty per cent in 1972. After the exercise of the buyer's option to reduce quantity purchased, this may be thought to have left the effects of reduced metal production more or less equally divided between the stockpiles of concentrates held by buyer and seller.

Given the difficulties of the Japanese nickel metal producers in competing against imports, WMC argued that savings in costs could be achieved if nickel concentrates were smelted to nickel matte (70-75 per cent nickel content as compared to about 20 per cent for concentrates) in Australia before export to Japan. Agreement was reached with
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Sumitomo that, during 1973, 1974 and 1975, sales of concentrates would gradually be replaced by sales of nickel matte, with contract prices being adjusted accordingly.

The developments in trade with Japan have been accompanied by a steady growth in Australia’s own nickel refining capacity, with more than half of the nickel ore produced being refined to metal in Australia by 1973. The Australian market provides an outlet for only about twenty per cent of this production, with the remainder being exported.

The highly-integrated and co-operative nature of the Australia-Japan trade in nickel suggests the strong possibility that, as Japan’s nickel refining industry becomes more strongly subject to import competition, rational decisions will result in a further transfer of processing activities—with Japanese participation in Australia’s nickel refining industry and exports to the established Japanese metal market outlets.

Bauxite/Alumina

The world aluminium industry is heavily concentrated in the hands of a few large firms which are, in large measure, serviced by ‘captive’ ore deposits. As with other metals, Japanese aluminium production was not based on ‘captive’ supplies of raw materials, and the quadrupling of Japan’s production of primary aluminium between 1963 and 1973 provided a natural market for Australia’s expanding bauxite production. However, the size of Australia’s bauxite reserves is such that the Japanese market alone could not provide the necessary outlet. In 1973, Japan’s production of primary aluminium was about seven per cent of the world total, whilst Australia’s production of bauxite was about twenty-four per cent of the world total.

Given the limited size of the Japanese market, and the highly integrated nature of most of the rest of Western world production, Australian bauxite could not be fully exploited through long-term contract sales to independent producers. In consequence, a variety of approaches have been adopted in order to integrate Australian bauxite production into the world market.

The Nabalco deposit at Gove has been developed with a seventy per cent holding by Alusuisse, whose interest was primarily to obtain a ‘captive’ mine. About two-thirds of the bauxite produced is refined at Gove to produce 1 million tonnes of alumina, most of which is shipped to the North-Atlantic area—largely, presumably, to Alusuisse smelters. The remaining production of bauxite, around 1 million tonnes, is almost wholly sold under contract to Japan.

Alcoa (US) has a majority holding in Alcoa of Australia, which
produces about 5.7 million tonnes of bauxite. The bauxite is too low in alumina content to be worth shipping in its raw state, so that the whole output is refined in two refineries with a total alumina capacity of 2.2 million tonnes. It is not clear how far these operations represent a ‘captive’ source of supply for Alcoa’s United States smelters. About 0.5 million tonnes of alumina is exported to Japan and about 0.4 million tonnes to Amax in the United States, both under long-term contracts, with about 180,000 tonnes being required for Alcoa’s Australian smelter. The bulk of the remaining output is exported to the United States and it is likely that it is principally used in Alcoa’s own smelters.

Comalco has the largest bauxite operation at Weipa, which began production on the basis of a three year contract to supply 200,000 tonnes of bauxite per annum to Japan. Further contracts have lifted Comalco’s current bauxite sales to independent alumina producers in Japan to about 1.8 million tonnes and in Europe to about 2.0 million tonnes. The development of the Queensland Alumina refinery, tied to the use of Weipa bauxite, by a consortium in which Comalco has a fourteen per cent interest has created an outlet for about 4.4 million tonnes of bauxite. The QAL partners, Alcan, Kaiser and Pechiney, export alumina to their overseas smelters. Comalco uses QAL alumina in its Australian smelter and in the Bluff smelter in New Zealand. The latter smelter is fifty per cent owned by Showa Denko and Sumitomo Chemical, and produces aluminium for export to Japan. Comalco has also been involved in another consortium alumina refinery — Eurallumina in Sardinia — which provides a ‘captive’ outlet for about 1.5 million tonnes of Weipa bauxite per annum. A third consortium plant is now planned for the Philippines.

In all, then, Australia’s sales of bauxite to independent purchasers may amount to only 4.8 million tonnes whilst alumina exports to independent purchasers may represent a bauxite equivalent of only 2.6 million tonnes. Comparing these figures to Australia’s total bauxite production of about 17.5 million tonnes, of which only 0.5 million tonnes is required for domestic aluminium production, total contract sales to independent purchasers would provide only 43.5 per cent of the total export outlets, with contract sales to independent producers in Japan accounting for about 25 per cent of total exports. Allowing that the above figures will tend to underestimate the importance of sales to independent purchasers, it still seems reasonable to suggest that around half of the market for Australian bauxite has been provided through vertical integration — either backward from smelter to ‘captive’
mine or forward from mining to consortium operations in refining and
smelting—rather than through long-term contract sales to independent
purchasers.

For Japan, Australia is the major source of bauxite and alumina, as
can be seen from Table 12.2. On an alumina-equivalent basis, Japan's
imports of the two commodities from Australia would have represented
about seventy per cent of total import requirements in 1974.

Bauxite contracts tend to be very long term, sometimes in excess of
twenty-five years. This reflects the fact that alumina refineries generally
need to be modified in order to switch from one bauxite source to
another. Contracts provide buyers with quantity options within speci­
ified limits. In the event of a reduction in bauxite requirements below
the minimum contract tonnage, some arrangements have been made for
a build-up of stocks of bauxite by consumers but, largely, exporters
have had to accept a reduction in sales and have negotiated for the
foregone quantity to be taken up later in the contract period. In
general, however, there have not been any great problems caused by
demand instability, since the high costs of shutting down smelting pots
provides an incentive for producers to absorb demand fluctuations by
stockpiling metal rather than reducing output. At the same time, the
desire of Japanese companies to maintain alumina refineries at full
capacity tends to mean that fluctuations in metal production are
reflected in the volume of alumina imports rather than in the volume
of bauxite imports.

Contract prices are specified in US dollars, with no provisions for
price review but with production cost escalation clauses. Following the
revaluations of the Australian dollar, Australian bauxite exporters were
able to negotiate price increases for sales to Japan to compensate for
about half of the fall in Australian dollar earnings. With the present
uncertainty as to future rates of inflation and currency parities, bauxite
exporters would like to see fairly frequent renegotiations of contract
prices. However, they hold out little expectation that price renegotia­
tions can be obtained much more frequently than at five-year intervals.

Alumina contracts are basically similar to bauxite contracts.
However, whilst bauxite exporters have generally found contract sales to
Japan to be relatively problem free, alumina producers have recently had
difficulties in their relations with the Japanese purchasers. All Japanese
buyers have been taking the minimum contract tonnages, and there
have been substantial pressures from them to be allowed to purchase
less than these minimum quantities. All but one of the Japanese
aluminium producers have their own alumina refinery and there is
a natural desire for any reduction in alumina requirements to fall on imports. Mitsubishi does not have an alumina refinery, but it is likely that it has the opportunity to purchase the excess alumina output of its competitors at a low price, so that it also has an incentive to cut back heavily on imports of alumina. Australian alumina exporters, however, have insisted that Japanese buyers should adhere to the quantity specifications of the contracts. At the same time, the Australian exporters have been seeking increased prices for their alumina sales to Japan, since there seems to have developed a consensus between the producers and the Department of Minerals and Energy that alumina is being sold at well below ‘world’ prices. The circumstances of the alumina trade provide a fairly clear example of a situation where the close quantity specifications of contracts impose heavy costs on importers so that, if they are to buy under contract, they require to be supplied at a relatively low price.

Given the weak international competitive position of the Japanese aluminium industry, the potential for joint-venture operations, involving Japanese companies and Australian mining companies, to supply the Japanese metal market from outside Japan would seem to be very large. The co-operative manner in which trade in bauxite has progressed, coupled with Comalco’s clear interest in joint-venture alumina refineries and aluminium smelters, suggests that Australia may be able to realise a good deal of that potential.

IV Long-Term Contract Objectives, Inflation and Exchange Rate Changes

As the last section indicates, long-term contract arrangements between Australia and Japan have been characterized by a readiness on both sides to accommodate each other’s problems as far as possible through informal negotiations. Thus, in general, situations in which either side is greatly disadvantaged by rigid adherence to the contract terms have been avoided. So far as quantity specifications are concerned, problems can arise on both sides so that neither party is placed in the position of being the permanent supplicant. Pricing problems have been much more one-sided, since escalation in inflation rates and exchange rate changes have steadily eroded the value of fixed prices to Australian exporters. Thus, there is now a common interest among Australian exporters in seeking more frequent and more open-ended price negotiations and/or in building more effective currency protection and inflation cover into contract terms.

The discussion of Section II suggested that, in a world of zero
inflation and fixed exchange rates, both importers and exporters have an interest in setting a fixed contract price, at least for a number of years. The significance of the assumptions, of course, is that a fixed US dollar price is also a fixed real price for both parties. The examination of contracts, drawn up in a period when inflation rates were low and exchange rates were fixed, suggests that traders did indeed seek to set fixed real prices. By setting a price which reflected expectations as to future market conditions, traders sought to eliminate uncertainty and to guarantee adequate real returns on investments.

There is no reason why the existence of high rates of inflation and variable exchange rates should alter the objective of seeking to guarantee real prices and real returns. The relevant consideration is the appropriate means of achieving that objective, given the changed economic conditions.

One alternative is to introduce relatively frequent price renegotiation into trade arrangements. This can be done formally, by revising contract terms to allow annual price review, or informally, by reaching an ‘understanding’ that there will be annual price discussions outside the terms of the contract. A basic difficulty with frequent price negotiation is that it is improbable that either side will be able to resist the temptation to exploit any bargaining power provided by current market conditions. Thus, frequent price renegotiations are unlikely to have the effect of maintaining a long-term real price but, rather, will lead to adjustable real prices following short-term market trends.

If annual price review is recognised formally in contract terms, it is likely to be matched by clauses inserted to provide either side with the option to terminate contracts at relatively short notice. Such a development would represent an important weakening of the role of long-term contracts in Australia-Japan trade. Neither side will have any guarantee that contract prices will continue to justify initial investments over a reasonable time period. At the same time, the possibility that there may be a failure to agree at some future date will be likely to mean that both sides will seek to achieve a smaller degree of dependence on each other, in order to minimize the disruptive effects of possible termination of contracts. Such moves are especially likely to take place if frequent price negotiation is accompanied by a degree of government intervention which constrains either of the parties to make maximum use of short-term bargaining strengths.

The alternative to more frequent price negotiation is to build automatic price adjustments into contract terms, aimed at maintaining, as closely as possible, a fixed price in constant value Australian dollars.
We turn, now, to consideration of the possibility of finding an appropriate formula for such automatic adjustments.

The simplest case to consider is a world of rigidly-fixed exchange rates, in which there is a uniform rate of inflation. Clearly, it would not then matter what currency was used to denominate the contract price, and the problem would lie in providing a suitable formula for indexing the nominal price to the inflation rate. It would seem more appropriate to use the Wholesale Price Index, rather than the Consumer Price Index, since the former more closely represents conditions in the transactions area of which the minerals trade is a part—wholesale, traded goods transactions. Certainly it would not be appropriate to use an index of mineral exporters’ costs (as is the case for escalation clauses in present contracts) or, strictly, an index of processed minerals prices. Both of these indices would be likely to produce real price changes, and the former does little to protect the real return on investment in minerals production. An obvious difficulty with price indexation is that, so long as inflation is generally positive and given that contract prices will be adjusted ex post the importer must gain at the expense of the exporter. The cumulative effects of this redistribution can become very large if the rate of inflation is continuously rising. Whilst it is true that the redistribution can be eliminated by appropriate adjustment of the initial contract price, or by putting an automatic price escalation mechanism into the contract with ex post adjustments to match the actual (higher or lower) rate of inflation, both of these approaches require sellers and buyers to be in a position to make reasonable estimates of the future rates of inflation. It is, therefore, not possible to index the fixed contract price in such a way as to completely offset the inability of buyers and sellers fully to anticipate inflation rates.

If we now complicate the issue by assuming that there is a divergence between the inflation rates in Australia and Japan, but that all exchange rates remain fixed, there is clearly no mechanism whereby a constant real price can be maintained for both buyers and sellers. The only reasonable solution would be to index the contract price to the ‘world’ rate of inflation, were it not for the incalculable problems involved in attempting to reach an agreed, appropriate index of ‘world’ inflation.

On the other hand, if exchange rates are continuously variable but respond only to international differences in inflation rates, the problems do not disappear. If the contract price is denominated in Australian dollars and indexed to the Australian (or Japanese) rate
of inflation, this will provide both sides with a fixed real price only if movements in the A$ : Yen exchange rate exactly offset the differences in inflation rates between the two countries. However, the values of the two currencies will depend on the rates of inflation in Australia and Japan compared to the rates of inflation in the various countries with which they trade, on some sort of weighted basis. The greater is the difference in the geographical pattern of the two countries’ trade, the less will the A$ : Yen exchange rate reflect the differences between their rates of inflation. For similar reasons, it is even less likely that a US dollar price indexed to either the Japanese or the Australian rate of inflation will provide a fixed real price to both buyers and sellers in Australia-Japan trade.

In any case, exchange rates are affected by factors other than international differences in inflation rates. On the trade side, exchange rates will tend to reflect changes in the terms of trade for commodities other than those covered by long-term contracts. Where capital movements are important determinants of the balance of payments position, variations in net capital flows will tend to affect the exchange rate. Even in the more flexible exchange rate era of the 1970s, central bank intervention continues to have a substantial impact on exchange rates in the short to medium term, and exchange-rate changes continue to occur in discrete jumps—albeit smaller jumps than in the past. Although, in the long term, these factors may be unimportant and bilateral exchange rates may reflect bilateral differences in inflation rates, the purpose of currency protection and inflation cover is to avoid short-term instability in real prices.

It would seem that there is no formula which can insulate both buyers and sellers from fluctuations in the real contract price. In an earlier paper in this series,21 Professor Arndt has provided a more extensive discussion of the currency protection problem and argued that perhaps the best available solution would be to denominate the price for half the delivered tonnage in Australian dollars and the price for the other half in yen. In a world of zero inflation, but where exchange rates vary in the short to medium term as a result of other factors, this solution would provide both parties with an assured real price for half the volume of trade, with each party accepting half the risk of loss, or change of gain, from any change in the A$ : Yen exchange rate.

The currency realignments since 1971 have highlighted the problem of currency protection in long-term contracting. However, for the future, providing adequate cover for inflation is likely to pose a greater
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problem in any attempt to set a long-term fixed real price. So long as there is a uniform world rate of inflation, and both sides can agree on the appropriate index of that rate, the only necessary amendment to Professor Arndt's proposal is that the Australian dollar price and the yen price be linked to the inflation rate. If the Australian and Japanese inflation rates differ, however, it would be appropriate to link the Australian dollar price to the Australian rate of inflation and the yen price to the Japanese inflation rate. Real windfall gains and losses will then only arise to the extent that the A$ : Yen exchange rate does not adjust to the differing inflation rates, and then for only half of the contract tonnage.

It should be noted that, once there is a problem of coping with differential rates of inflation, it is important that exchange rates should be flexible. Attempts to maintain the foreign currency value of the Australian dollar in the face of a relatively high rate of inflation in Australia will result in a real cost to exporters for that part of their trade conducted in constant value Australian dollars.

Clearly, price indexation poses problems of determining the appropriate indices. As a starting point, it has been suggested that the Wholesale Price Index in each country might be the appropriate index for prices denominated in that country's currency. However, there may be substantial scope for bargaining over the indices to be used. In a sense, division of the contract price between the two currencies and the consequent need to adopt a Japanese index and an Australian index, might help to resolve the problem, since there would then be scope for offering concessions on the index to be used in relation to the domestic currency in return for similar concessions on the index to be used in relation to foreign currency.

Once agreement is reached on appropriate price indices, there remains the problem that the lag in adjusting prices to inflation has a redistributive effect which disfavours the sellers. This effect can be offset by providing for a predetermined rate of price increase, with indexation only operating to eliminate deviations of the actual rate of inflation from the anticipated rate, but it is not possible to anticipate the rate of inflation more than about twelve months ahead. Thus, there would probably need to be annual meetings to discuss the appropriate ex ante rates at which Australian dollar prices and yen prices should be increased over the next year.

The indexation of prices discussed above would not represent a freezing of relative prices in an attempt to escape the effects of market forces. Rather, traders would seek to set a single real price for a number
of years ahead and this price would reflect their expectations as to changes in market conditions over the period concerned. The indexation arrangements would then serve as a means of ensuring that this real price was, in fact, maintained.

An alternative pricing formula, which allows a high degree of stability and co-operation in trade relations, is the arrangement used in the nickel trade between Australia and Japan, where the prices of nickel ores and concentrates in US dollars are determined by, and adjusted in line with, the US dollar price of nickel metal. This case is important in that it demonstrates the sorts of problems which can arise from a rigid adherence to any fixed real price formula.

Nickel metal is relatively cheaply transported and is available throughout the world at the US dollar price set by INCO, the major producer. The competitive position of Japanese producers is weak, with Japanese production supplying less than half the Japanese market despite a tariff of thirteen per cent (which would provide effective protection around forty per cent). In consequence of the currency realignments, the yen price for Japanese nickel metal had to be reduced by about 15.5 per cent between July 1971 and July 1973 in order to remain competitive with imports. Given the pricing formula for nickel concentrates, the yen cost of raw materials also fell by about the same proportion as the metal price, leaving producers with a reduction in margins also of about 15.5 per cent. In this situation, any attempt to maintain the nominal Australian dollar value of exports of nickel concentrates would have been irreparably damaging to an already weak Japanese nickel metal industry. The Japanese market is important to the Australian nickel industry at the present time for smelted nickel matte, and in the long term for nickel metal. The association with the principal nickel metal producer in Japan is also important in pursuit of those long-term objectives. Thus, it would have been damaging to both the short- and the long-term interests of the Australian industry to have insisted on a fixed real price in the face of the obvious problems of the Japanese buyers.

To some extent, it may be said that the problems for the nickel trade during 1971-73 were a function not of exchange rate flexibility but, rather, of the inflexibility of exchange rates in earlier years. That is, the undervaluation of both the Australian dollar and the yen had produced a situation in which the prices received by Japanese metal producers and by the Australian ore producer were higher than the long-run sustainable levels. The effect of the realignments was to bring prices down to their true equilibrium levels. The same sort of argument
also applies to trade in other minerals, though the erosion of prices by inflation for many of these had largely offset the effects of currency undervaluation. Thus, unlike the nickel trade, for most minerals it was possible to negotiate at least partial compensation for the Australian dollar revaluations.

It may not be unreasonable to suggest that the sort of inflation cover and currency protection proposed earlier can work without creating substantial problems in an environment of relative flexibility of exchange rates. The problems which the nickel industry would have faced in attempting to implement these proposals during 1971-73 were, in large part, a function of the earlier lack of exchange rate flexibility and would not necessarily arise in the future.

Long-term contracts have provided the element of stability necessary to develop a highly interdependent trade relationship in which there is substantial quasi-integration between Australian and Japanese companies. The long-term benefits to be derived from stable and cooperative relations, for both sides, lie in the possibilities of improved efficiency in the location of productive activities with greater participation by Australian based companies in processing activities having access to the Japanese market. On a wider front, the demonstration that stable long-term supply arrangements are possible for minerals can be expected to have some long-term effects on the view taken by Japan of the desirability of maintaining a high degree of self-sufficiency in agricultural production.

It would seem desirable that uncertainties created by inflation and greater exchange rate flexibility should, so far as possible, be eliminated by appropriate revisions of the terms of long-term contracts, rather than be incorporated into the trade relationship through a movement towards shorter-term trade arrangements. Whilst there are clear limits to the period over which either party can make reasonable predictions of future market trends, setting a constant real price for a period of five to seven years should not prove impracticable. It has been suggested above that the price should be denominated in Australian dollars for half the tonnage and yen for the other half, that there should be annual agreement as to the ex ante monthly rate of change in each price over the next twelve months, and that there should be ex post adjustments to the rates of price change based on the actual movements in agreed price indices.

However, it must be accepted that, whatever contractual arrangements may be made to attempt to guarantee the real value of contract prices, there will continue to be a need for a readiness on both sides to
make adjustments outside the contract terms to accommodate the particular problems of trading partners. Indeed, such a readiness has played, and should continue to play, an important role in the development of co-operative trade relations.

Appendix

Long-Term Contracts and Trade in Agricultural Products

This Appendix considers the trade arrangements for three agricultural exports—sugar, wheat, wool—in the light of the analysis of Section II. The growth of Australia's exports and Japan's imports, since 1965, and the importance of the bilateral trade relationship are indicated in Tables 12.1 and 12.2.

Sugar Historically, world trade in sugar has been heavily regulated by multilateral, bilateral and unilateral trade arrangements, with the result that in 1973-4 only about 12.5 per cent of total world production was traded in the free market.22 A further 12.5 per cent was traded under bilateral agreements between major consumers and overseas suppliers, with the remaining production consumed in the producing countries where there is, almost without exception, protection for domestic producers. Because of the narrowness of the 'free' market it has exhibited great instability. Until recently, prices on the free market have, on average, been too low to allow any major producer to survive on sales in that market. Thus the 'free' market has been a dumping ground for excess sugar after supplying protected home markets and the preferential markets provided by bilateral supply agreements.23

In the last two years, the United States Sugar Act, the Commonwealth Sugar Agreement and the International Sugar Agreement have all fallen into abeyance, with the result that the size of the free market has substantially increased. The access of sugar producers to guaranteed, stable-priced markets has been substantially reduced.

Market access for cane sugar producers is a relatively important problem since, by comparison with most agricultural commodities, there is a heavy commitment to a single crop. Also, the historical and recent instability of the free market suggests that trade on the free market would lead to considerable instability in producer incomes. Given the relative stability of sugar supply in Australia it was natural that Australian producers should seek to replace the market access and stability provided by previous agreements with new long-term contract
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arrangements.

The advantage to buyers of stable long-term contract arrangements lies in the extent to which this stabilizes their own market situations and degrees of capacity utilization. In general, the market situation facing sugar refiners meets the conditions specified earlier. They produce for a stable domestic market behind protective barriers, are not subject to great competition either because of their monopoly positions or because the market is heavily regulated,24 and the raw material represents a substantial proportion of the total costs of the final consumer good. Thus, stabilization of the raw-material price tends to stabilize the product price and the level of demand.

Long-term contracts of 5-6 years' duration have been concluded with New Zealand, Singapore, South Korea, Malaysia and Japan, covering a total annual export volume of about 1.2 million tonnes. Negotiations are continuing over a further contract to supply about 0.3 million tonnes per annum to China. At the record production level of 2.8 million tonnes in 1974, the total exportable surplus would be just over 2 million tonnes. Thus, it can be seen that the industry is firmly committed to disposing of 75 per cent of exports under long-term contracts. Whether the industry would wish to go beyond that proportion is uncertain, owing both to supply stability problems and to the attraction of trading a proportion of output in the free market.

Sugar contracts are all fixed price contracts, though allowance is made for producer cost increases. The nature of this allowance varies between contracts. In the case of the Malaysian contract, a formula is built into the contract to allow compensation for producers for changes in costs of key inputs and, to some extent, for currency parity changes. In the case of the Korean contract, the buyers desired a greater certainty as to the price they would be required to pay, so that the price increases by a predetermined rate per annum in a manner which is anticipated to have much the same effect as the cost-escalation clauses in the Malaysian contract. Japanese buyers required even greater certainty, and insisted on a fixed, non-adjustable price. Thus, this contract builds expectations about cost changes into the initial contract price.

The currency in which contracts prices are denominated is confidential. However, Australian sellers seek to set prices in Australian dollars as far as possible, and it seems that currency mixes are relatively common.

Contracts specify a minimum tonnage which must be taken by the buyer. There are provisions for buyers to obtain greater quantities, if they are available, though the extra tonnage may not be provided at the
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contract price. The option to increase purchases essentially provides contractual buyers with first refusal of surplus export quantities. However, the mutual desire to extend contracts means that mid-contract meetings will be held to negotiate the possibility of increasing the tonnage covered by the contract as the Australian industry expands and to foreshadow negotiations over arrangements for extension of the contract.

Sugar contracts are interesting in that they provide an example in which there are no basic conflicts of interest between buyers and sellers. Also, they seem successfully to have set prices which escalate to provide some inflation cover, but are otherwise fixed over the 5-6 year period, and in the Japanese contract case to have set a fixed price anticipating the required inflation cover. One may wonder, however, how far this is due to the fact that the base prices specified in contracts are high by comparison with sugar prices over the years up to 1974. This reflects the behaviour of the free sugar market during 1974 and provides growers with a substantial return. In a sense, growers can afford to have some erosion of their margins by inflation which is not fully compensated for. The real test of sugar contracts will come when their renegotiation coincides with a depressed free market situation.

Wheat In contrast to the case of sugar, the Australian Wheat Board has no apparent general desire to sell under long-term contracts. This reflects the wider free world market for wheat and the general lack of access problems. It also reflects the relatively high volatility in the availability of wheat for export, whereby commitment of a large proportion of 'normal' sales to contract arrangements would require the holding of large buffer stocks. On the buyers' side there is no desire to enter contractual arrangements except where the buyers have controlled market arrangements for their own products.

Australia's only long-term contract wheat sales are 1.5 million tonnes to China and 1 million tonnes to Egypt per annum. In total these represented about half of Australia's wheat exports in 1973-4 but in a year of high exports they might only represent one-third, or less, of the total. The latter contract was signed at a time when Australia had substantial excess supplies. The Chinese contract was necessary as a means of gaining access to a large Chinese market, since China prefers to purchase under contract. However, neither contract specifies a price but, rather, the price for the coming year is negotiated a few months in advance. In the event of a failure to agree on the price, the contracts would become void. Thus, long-term contracts merely provide both
sides with access to assured markets and supplies and have the effect of reducing transactions costs.

Whilst the formal contractual arrangements provide for a substantial base level for Australian exports, the Wheat Board has fairly similar informal arrangements with its other major customers. Rather than guaranteeing to supply a given quantity, however, it advises them of the amount which it can make available in the next year. The buyers inform the Board of the quantity that they wish to take up and any possible adjustments to the allocations are made. This process is followed by negotiation of the price. Thus, the Wheat Board effectively maintains long-term supply arrangements for the bulk of its output with annual price fixing, but for non-contract customers the quantity made available depends on Australia's supply position with variations being made on a 'most favoured customer' basis.

The marketing arrangements for wheat probably provide as great a degree of stability as is consistent with the unstable supply situation and the free access of buyers to the world market. Where the buyers are not guaranteed a particular level of supply, they will obviously not be prepared to guarantee any sort of fixed price. However, it is not obvious that some sort of stable real price arrangement could not be introduced into the contract sales to China and Egypt.

**Wool** The nature of wool marketing arrangements is such that neither buyers nor sellers have any difficulties with market access. The marketing of Australian wool brings buyers and sellers together in a single market, and the existence of similarly well-developed markets in the two major competing countries provides buyers with no difficulties in assessing alternative market opportunities. Thus, on grounds of market access or possible savings in transactions costs, there are no important incentives for either side to seek long-term supply arrangements.

The basic problem of the wool market lies in its instability. By comparison with demand fluctuations, unplanned variations in supply have been relatively minor so that stabilizing long-term contract arrangements would seem to offer substantial benefits to producers. On the other hand, the woollen textile industry is subject to marked fluctuations in the level of activity, so that wool spinners have a very unstable demand for their product. The purchase of wool under stabilizing long-term contracts would impose severe stockholding costs on wool buyers. Thus, an approach to Japanese wool spinners by the Australian Minister for Agriculture, suggesting that wool might be sold
under contract, was met by a reply from a committee of wool buyers and wool spinners which reaffirmed their satisfaction with the auction marketing system.

However, both Australian wool sellers and overseas spinners have a common interest in price stabilization. Both believe that an unstable wool price creates a shift in demand away from wool towards more stable price synthetics and it is in both their interests to avoid such a demand shift. The problem is to determine the most efficient way to achieve price stability, with the real alternatives being stable priced, fixed quantity contract sales and stable priced, variable quantity short term sales. With the first alternative quantity variations would have to be absorbed in buffer stocks held by spinners. With the second alternative they are absorbed by the buffer stocks of the Australian Wool Corporation.

It seems reasonable to assume that the fluctuations in quantities required by individual spinners to some extent tend to cancel out, so that the central stocks held by the AWC would not require to be as large as the sum of individual spinners' stocks under contract arrangements. Also, it is certainly the case that the cost of holding stocks is lower in Australia than in Japan, and probably lower than in most consuming countries. Thus, it seems likely that price stability can more cheaply be achieved with the present centralized auction system and AWC intervention than through stabilizing long-term contracts. The consequence of this is that the reduction in price that wool buyers would require to persuade them to trade under stabilizing long-term contracts is likely to represent a greater cost to Australian producers than does the present necessity to maintain buffer stocks.

The above assumes that the stockholding costs are reflected in wool prices. In fact, the AWC does not cover the costs of its stockholding arrangements either in the eventual prices at which stocks are sold or through levies on wool growers. There is, then, an implicit subsidy to overseas purchasers, and possibly to growers, in the present arrangements for price stabilization. However, the gains to overseas buyers may well be more than offset if the AWC's stockholding policy effectively removes supplies from the market for a long period or, perhaps, permanently. In the last wool selling season, the AWC bought one-third of the total supplies on offer. This has boosted its stocks to a level from which it may be unable to retreat at all quickly without substantially reducing prices.

The essential difference between agricultural commodities and minerals lies in the much greater freedom of access to well developed
short-term markets. The principal reason for seeking long-term contract arrangements for agricultural commodities is to achieve market stabilization. However, unless buyers have relatively stable and controlled markets for their products, they will rarely be interested in long-term trade stabilization. Also, where Australian supply is relatively unstable, long-term contract sales may impose heavy stockholding costs on the suppliers. A clear case where long-term contracts may be mutually desirable in the future is the export of beef from Australia to Japan. Given the development of an appropriate marketing agency, it should be possible for Australia to guarantee a stable supply at a stable real price. Given a stable price, Japan's demand for beef could also be expected to be relatively stable. The stumbling block, of course, lies in Japan's heavily protected domestic beef production. However, it seems reasonable to believe that the policy towards this industry will eventually succumb to market pressures, and that the availability of assured and stable-priced imports through long-term contracts would help to speed that process.

NOTES

1. The first paper, 'Export Price Bargaining and Bilateral Monopoly in Australia-Japan Trade', has been published in the Australia-Japan Economic Relations Research Project series of monographs. It provides a theoretical discussion of bargaining limits and likely bargaining outcomes under alternative conditions. The third paper, concerned with policy problems (particularly pricing-policy problems) and government regulation of the trade relationship, is currently in preparation.

2. Includes S.I.T.C. Divisions 27, 28, 32 and 513.65.01 (Alumina).

3. The apparently small dependence of Japan on Australia as a supplier of nickel is misleading. The bulk of Japan's imports of nickel is used to produce ferro-nickel. Australian supplies are used only for nickel metal production and provide over 75 per cent of the nickel input into this activity.

4. Frequently, 'free' market minerals sales are, in fact, yearly contract sales and, although there may be no official provision for renewal, it is likely that established trade partners will look first to renewal of existing arrangements before seeking alternatives.

5. The view of long-term contracts as substitutes for vertical integration is presented by R. B. McKern, *Multinational Enterprise and Natural Resources*, Ch. 4. McKern provides some discussion of the sorts of situations in which a processor may choose to deal with independent raw materials producers rather than invest directly in 'captive' mines.

6. Also, Australian mining companies are likely to be able to bargain for (if not actively promote) participation in processing facilities set up in third countries in the region. The benefits to Australia from such participation may, however, be quite small if 'Australian' mining companies have only a small degree of Australian ownership. In that case, the benefit to Australia is likely to depend, mostly, on the extent to which participation in processing creates wider markets for Australian mining products.

7. That is, if the price elasticity of demand for the individual seller's product is
high, an attempt to maintain price in the face of declining prices of competing suppliers will result in a substantial reduction in sales.

8. In the case of finance for buffer stocks, the risk is that the long-term average supply will be underestimated and there will be a continuous rise in unsaleable stocks. In the case of finance to smooth the effects of a shortfall in supply, the risk is that the long-term average supply will be overestimated and that producers will not be able to service the debt incurred.

9. There appears to be a general presumption in some quarters that bulk buyers should receive discount prices. Whilst this is reasonable for an individual consumer buying well in advance of needs and incurring stockholding costs, there is no reason why it should apply to a consumer whose bulk purchases satisfy immediate requirements. Just as much as the seller, such a consumer benefits by obtaining his total supply in a single transaction.

10. In practice, the distribution of transactions cost savings may depend largely on whether the seller or the buyer is responsible for arranging shipping and, therefore, benefits from any savings involved in bulk long-term shipping arrangements.

11. It should be remembered that the discussion of this section is predicated on the assumption of zero inflation and fixed exchange rates. Thus, the fixed price referred to is a fixed real price.

12. Although not foreseeable in the early 1960s, reductions in ocean shipping rates through the introduction of larger vessels have allowed some sales of iron ore to be made in Europe.

13. By 1968, with the rapid growth of Japan's influence, the proportions had changed to 30 per cent 'captive' and 36 per cent long-term contract.

14. The initial period of fixed price may be from 5-7 years. Thereafter, shorter periods are involved and more complex pricing arrangements are often introduced.

15. In fact, the agreement was not sanctioned by the Australian government. After a further round of negotiations the base price was increased by a further 50 cents per tonne.

16. It is probably also true that the smaller iron ore exporters take a less 'integrative and co-operative' view of their trade relations with Japan than do the major exporters.

17. Indeed, WMC foresaw the emerging problem and attempted to persuade their Japanese customer to make advance adjustments to its requirements. Some part of the final difficulties were because this advice was not heeded and WMC were forced to over-extend themselves to meet assumed requirements which were not taken up.

18. The Japanese nickel metal industry is in a fairly precarious situation, requiring protection to allow it to meet half the domestic demand. WMC has some legitimate concern at being dependent on this market and would like to see as much as possible of the processing activities moved to Australia where production is more competitive internationally.

19. Although the discussion refers to Australian dollar and yen prices, there is no reason why the US dollar should not remain the actual transactions currency. US dollar prices would simply adjust to provide the desired Australian dollar or yen prices.

20. Either directly or via the US dollar as transactions currency.


22. The free market was itself controlled to some extent by the operation of the International Sugar Agreement.

23. I. Smith, *The European Community and the World Sugar Crisis*, Trade Policy...
24. In most countries sugar refining is monopolistic or oligopolistic activity. In Japan there are some thirty-three refineries, but the market is subject to close government regulation.

25. In fact, about fifteen per cent of all wool sold in Australia is sold 'on sheep's back'. These sales presumably reflect, in some measures, a desire to avoid the transactions costs of the auction system—one of which, for growers, is a delay in being paid for his wool.

26. In fact, of course, there is no particular reason why Japanese buyers should hold their excess stocks in Japan. At the present time, the Japanese stocks held in Australia probably considerably exceed their stocks held in Japan. Thus, to some extent the excess costs of passing responsibility for maintaining buffer stocks to consumers can be avoided.

27. In the wool trade the feeling seems to be that long-term contracting could arise through a demand for such arrangements from Eastern European countries, which have controlled and stable textile markets.
ALTERNATIVE APPROACH TO THE TAXATION OF NATURAL RESOURCE PROJECTS*
Ross Garnaut and Anthony Clunies-Ross

Rising prices for foodstuffs and natural resources associated with pressure on world energy, mineral, fish and forest resources in recent years has provided new economic opportunities for many developing countries. Production of commodities from natural resources has become profitable in new locations which are further from markets or more costly to operate. At the same time, established resource-based industries have become very much more profitable.

Industries based on cheap sources of energy or producing fuels and minerals are typically capital-intensive with limited scope for purchase of supplies. Thus the national stake comes mainly as taxation revenue. The maximization of projects' contribution to revenue is the central task of economic management in the resource-based industries. This task has two aspects: the utilization of the resources in ways that maximize long-term social profitability, and the capture for the public of a maximum proportion of benefits generated by exploitation of the resources.

This paper analyzes the problem and suggests a new approach that has less damaging effects on the efficient utilization of resources than any alternative taxation system in a national economy in which major resource projects are financed externally. If applied in its hybrid form with normal company income tax the suggested approach has less damaging effects on the efficient utilization of resources than alternative taxation systems in any economy. At the same time, in any but the most predictable and stable economic environment it can secure for the government a higher proportion of super-normal profits from each resource than most other taxation systems. The only taxation systems that might secure for the government a higher proportion of super-normal profits from established projects require ex post adjustments to the terms upon which investments are made and so reduce revenue from new projects and from extensions of existing projects.

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The Problem of Taxing Resource Projects

Control of the use of natural resources gives governments the power to extract Ricardian rent from use of the resources. If there were no prospect of further investment in existing or new natural resource projects the taxation problem would involve raising rent charges to the maximum level consistent with the continuation of the project. In an economy in which there are prospects for expanded investment in natural-resource projects and in which the profitability of future investments is not known with certainty, maximizing total government revenue involves balancing the possibility of revenue loss on highly profitable projects through an over-liberal approach against the possibility of setting rent charges so high that there is revenue loss through deterrence of projects which *ex ante*, are not certainly intramarginal. In all cases, the value of revenue to the nation must be assessed after deduction of the cost of administration and the cost of reduced efficiency in the industry and in other sectors of the economy associated with tax collection.

Through this paper we use the term 'rent' in a slightly unusual way, to mean the profits that remain after deduction of the company income which corresponds to the minimum return necessary to attract private investment to new projects. Thus the 'rent' generated by exploitation of a resource is a function of the efficiency with which it is exploited and of any factors that affect the rate of return necessary to attract investment. We use the 'supply price of investment' to describe the expected rate of return (the weighted average of possible outcomes, with weightings reflecting the probability of each outcome's occurrence) that is consistent with a decision to invest.

The supply price of investment and 'rent' are thus behavioural concepts. The supply price of investment is a function of normal, competitive returns to capital, the degree of monopoly in the industry, the degree of economic and political risk associated with a project and of investors' attitudes to risk. The literature on foreign investment in resource industries in the developing countries stresses qualitatively investors' oligopolistic organization but is singularly weak on the quantitative effects of this on profits. Competition among the oligopolists controls to some extent levels of profits in the resource industries and causes relatively sophisticated techniques of computing profitability to be used widely as aids to profit maximization. Variations in approach remain, however, and governments negotiating with investors have little information on variations in the supply price of investment.

Governments seeking to extract a maximum proportion of the 'rent'
must assume some behavioural characteristics of investors and potential revenue is wasted if there is serious divergence between assumed and actual motivation. There is evidence that major investors look for a certain expected internal rate of return on total funds employed in a project, calculated by discounted cash flow methods. For projects of 'normal' riskiness and in developing countries of 'normal' political instability this expected rate of return seems in recent years to have ranged between about fifteen and eighteen per cent. Risk affects the supply price of investment differently depending on whether it is related primarily to uncertainties about economic variables or to uncertainties relating to the stability of negotiated taxation systems.

Investors' objective functions are non-linear with respect to profit unless an investment is very small relative to the total operations of an investor. Risk aversion is likely to be associated with any investment that is large relative to the total operations of a firm, since the negative value of total failure, which could have major adverse effects on the standing of high-level company personnel and on the parent company, is likely to weigh more heavily than the positive value of unusually large profits. If there is a risk of substantial failure, the firm will not invest under \textit{ex ante} arrangements that would leave expected profits equal to the supply price of riskless investment. In addition, the firm will not invest under \textit{ex ante} arrangements that provide a substantial possibility that profits will be well below the supply price of riskless investment, even if expected profits are significantly above this price. Some large investors take risk into account in a crude way by requiring the investment to yield a certain rate of return on 'safe' \textit{ex ante} estimates of production costs and product prices. A high degree of political risk is taken into account by some firms through a shortening of the 'pay back period', that is the number of years whose income and expenditure streams are considered in calculation of profitability. This has the effect of raising the supply price of investment in a way that depends very much on the timing of profits and taxation.

Two other behavioural characteristics are assumed in the arguments upon which the taxation proposals are based. First, investors assess political risk and the stability of negotiated taxation systems by reference to the \textit{ex post} treatment of established investments in the country. Second, limits to the proportion of the 'rent' that can be extracted from highly profitable projects are set by the incentives to inefficiency that are provided by very high marginal taxation rates. The first characteristic causes \textit{ex post} adjustment in one project to affect \textit{ex ante} expectations of the profitability of future projects.\textit{Ex}
adjustments that are based on clearly articulated principles may cause new investors to expect consistent treatment, although the fact of *ex post* adjustments probably contributes to some uncertainty about the stability of all systems within the country, and, given investors' aversion to risk, raises the supply price of investment and lowers the 'rent' in new projects. The second behavioural characteristic prevents the capture of the whole of the 'rent' available from the efficient exploitation of a resource even with royalty systems applied *ex post*, provided only that such systems are anticipated *ex ante* by new investors.

The complexity of the 'rent' concept and the government's ignorance in any particular case of the supply price of investment make the balancing of revenue loss through over-liberal approaches to taxation and revenue loss through deterrence of new projects extremely difficult. Provided each project were given its own set of tax and royalty rates, the rent problem would be simple if there were no uncertainty about production costs, product prices, the supply price of capital or, in the eyes of investors, the stability of the taxation system. Proportional profit taxes, lump-sum fees or royalties could be set in advance of investment for each project at levels that left the rate of return on investment equal to the supply price of capital. Taxes and charges could be expressed for each project in absolute amounts or as a percentage of turnover or profits. This approach is less useful the greater the uncertainty about profitability. The problem is greatest when information available to the investor is superior to that available to the government, but under conditions of uncertainty risk aversion introduces problems even with equal information.

We will look first at the problem as it would exist if the government and the investing company had identical information on costs of production, prices of products, and the supply price of investment. If there is uncertainty about future profitability, risk aversion causes the supply price of investment to rise if a project is subject to *ex ante* lump-sum rent charges, specific or *ad valorem* royalties on production or proportional taxes on profits. Prior taxes that are proportional to the volume or value of production or to company profits raise the risk of failure or of unacceptably low returns and hence raise the level of expected profits that will induce investment. For a project that seemed *ex ante* possibly marginal in the absence of any tax, the rates of such uniform percentage profits or turnover taxes would need to be set at negligible levels if the investor was to consider the investment worth undertaking. But such a 'marginal' project might *ex post* provide high returns. With
negligible rates of tax unexpectedly high profitability would, of course, produce negligible revenue for the government. This problem could only be overcome by a system of taxation that did not add to the risk of failure or of unacceptably low returns and yet was still capable of reaping for the government a generous share if returns turned out to be high.

The problem is increased if the firm has superior access to information on price movements and cost of production. In this case, even in the absence of risk aversion, the government may be impelled through ignorance to accept revenue arrangements that would leave expected profits above the supply price of capital. The pattern of risk aversion on the part of the investor is a further unknown on which the investor is likely to be better informed than the government.

In some circumstances, the government can take steps to reduce the reduction in 'rent' associated with the investor's risk aversion. It can reduce the size of the investment to individual parent companies by promoting consortia, by borrowing to provide infrastructure or by borrowing to purchase equity.

Incidentally, if loan capital is available to the government at a price lower than the supply price of investment, government provision of infrastructure or purchase of equity will raise revenue yields even if investors are not averse to risk. The availability of loan capital from foreign governments and international agencies makes this an important possibility.

One further implication for policy follows if the supply price of loan capital to the government is below the supply price of investment. In this situation, the net present value of government revenue is increased by allowing revenue charges to be concentrated in later years of the project (rather than extracting earlier a stream of charges which, from the viewpoint of the investor, is equivalent) and borrowing to maintain desired levels of general expenditure in the earlier years.

The advantages to the government of concentrating revenue charges in later years are increased further if investors perceive political risk and ignore or discount at a very high rate the income of later years.

The degree of uncertainty associated with production costs depends upon the point in time at which an agreement is entered. Investor risk aversion makes it desirable for the government to delay agreement as long into the exploration and assessment period as is possible. But exploration and feasibility studies are expensive, and investors will be unwilling to invest heavily in these activities without some security of tenure on the resource, and some indication of the terms upon which it
Trade in Raw Materials

can be developed. It follows that a fixed system of tax provides more encouragement to investment in exploration than a system of *ad hoc* arrangements. The problem could be overcome in principle by direct government involvement in exploration and assessment, but for most developing countries this is inefficient, even though in some circumstances assistance in these activities can be purchased or obtained as aid.

Production costs per unit of output remain uncertain even after detailed feasibility studies and, in many cases, after commencement of production. Sampling procedures are imperfect and the size and quality of the resource cannot be ascertained in advance of its exploitation. The cost of infrastructure is uncertain before construction, especially in high-rainfall country and swampy or mountainous terrain. Uncertainty about unit production costs is reduced if the scale of the investment is variable after production has begun, as in fishing, where underemployed boats can be withdrawn, or logging, where machinery can be used elsewhere. But short-term reduction in the scale of investment is impossible, or possible to a very limited degree, in mining or in the use of hydro-electric potential.

In some circumstances the government and the investor may believe that there is a high degree of certainty about unit production costs, and this will greatly facilitate the solution of the taxation problem. A set of price levels that is necessary to attract investment to the resource (or to each part of the resource) can be calculated, and the whole of income accruing from prices above that set of levels can be taxed away without loss of efficiency. But these circumstances will be rare, especially since the investor can expect to reduce rent charges by increasing the government's uncertainty about production costs. Thus where there is a high degree of uncertainty about production costs a high proportion of the rents cannot generally be collected except by a system of taxation that is based on *ex post facto* rate of return on investment. A method for doing this is discussed in what follows.

**Varying Tax-Rates with Rate of Return: The Resource Rent Tax**

Despite its theoretical attraction as a means of maximizing government returns from natural-resource projects, the variation of tax rates directly with rates of return is seldom used in practice. Some appallingly complex proposals have been made to prevent expatriation of excessive profits. We believe that the Resource Rent Tax defined below is an efficient means of taxing natural-resource projects where there is uncertainty about future production costs. It is also extremely
simple in conception and practice, and any reader disposed to doubt this assertion after reading the next few paragraphs is referred to the Appendix.

The Resource Rent Tax is briefly a profits tax that begins to be collected when a certain threshold rate of return on funds invested (as measured by discounted cash flow methods) has been realised. It may be collected at progressively higher rates as higher rates of return are realised. It may thus be regarded as a progressive company profits tax:

1. with no deduction from taxable income for interest payments;
2. with an immediate 100 per cent depreciation or amortisation of all capital outlays;
3. with unlimited carry-forward of losses discounted for time;
4. with a tax holiday which has an ‘adjustable’ duration, and may be repeated after periods of losses.

The implication of these concessions is that, if the thresholds are appropriately fixed, very high rates of tax can be collected without significant discouragement to new projects or to expansion of established projects.

The necessary arrangements for assessment are as follows:

‘Assessable receipts’ would need to be defined as covering all receipts of the operating company other than receipts in the nature of provision of capital or repayment of capital. They would thus exclude the value of loans and shareholders’ funds received and the value of loans repaid to the company by any other entity. They would include receipts from sale of depreciated, obsolescent or other assets formerly purchased for use by the company. Rewards for the provision of capital would be non-existent because of other limitations (described below) imposed on the operating company.

‘Deductible payments’ would need to be defined similarly as covering all payments of capital, provision of capital and rewards for the provision of capital. They would thus exclude repayments of loans, payments of interest, dividends and bonus issues, and provision of capital goods. They would not include past payments of Resource Rent Tax. They would, however, include payments of any tax other than the Resource Rent Tax.

With a few exceptional cases that can be specified, the definitions of receipts and payments that are used in the assessment of company income tax can be used in the assessment of Resource Rent Tax. The most important exceptions relate to the special treatment of interest
payments and depreciation, and are described above. Stocks of unsold raw materials should not be assessable receipts and it will be necessary to specify the time at which sales become assessable receipts. Either the time of physical export or the time of physical receipt by the purchaser would be appropriate. The income-tax definitions of deductible payments need to be limited in the case of payments in respect of contracts for services to payments in respect of services rendered in the relevant accounting period. Deferral of liability for taxation through early payment in respect of longer-term contracts for services occurs with conventional income tax as well, especially in transactions among affiliates, but the cost to the revenue of early payment would be greater with Resource Rent Tax.

The excess of assessable receipts over deductible payments for any one year might be referred to as the ‘net assessable receipts’ of that year. The principle would be to take a threshold rate of return, x per cent (it might be ten per cent or fifteen per cent for instance) as a discount rate, and each year find a total accumulated value of net assessable receipts from the inception of the project. A positive net accumulated value would, of course, indicate that a return in excess of x per cent on funds invested had been realised, and the excess would be taxable at a per cent (which might be fifty per cent).

In order to avoid double taxing, however, the positive net accumulated value for any year on which this tax (Resource Rent Tax) had been assessed would be deducted from the assessable receipts of that year for the purpose of calculating the net accumulated value for tax purposes in future years.

If it were desired to tax beyond higher profit-rate-thresholds at higher rates than a per cent, the process of discounting to find net present value for each year could be repeated with the higher threshold, y per cent (say, twenty per cent) as the rate of discount. Any positive accumulated value discounted at y per cent could then be taxed additionally at b per cent (which might be twenty-five per cent), with the provision against double taxation already explained. The steps of this process are given in detail in an appendix.

The total effect of the system would be to tax company returns in excess of x per cent (after company tax and royalties, if any) at a rate of a per cent, and returns in excess of y per cent at a rate of (a+b+c) per cent. The accumulation of net assessable receipts at a given discount rate ensures that the timing of a company’s income and expenditure has no distorting effect on the internal rate of return at which it becomes liable for resource profits tax.
So long as other systems of profit tax apply to other kinds of enterprise, the application of the Resource Rent Tax (RRT) would require the operating company—so taxed to have its operations confined appropriately, probably to those associated with production and sale of the raw material (or semi-finished product in the case of smelting industries based on cheap hydro-electricity). To make this provision effective, the operating company would need to be forbidden to make any loans other than interest-free loans or to buy equity in any profit-making entity. Management of its financial reserves would have to be carried out by a resident subsidiary of its parent companies, to which it would make interest-free loans and which would be subject to the normal company tax. Without some such provision as these the dual tax system would give opportunities of avoidance. Standard income-tax definitions relating to the termination of the ‘resource production’ phase could be used to exclude treatment and other operations unrelated to the extraction of raw materials at least in the case of mining projects.¹

The problem of defining the operational phase of a resource project that is subject to Resource Rent Tax is all present at the exploration end of a project. Exploration, in its early stages the most risky investment related to resource projects, can be treated in several ways. The logic of the Resource Rent Tax is probably presented best by allowing all expenditure on exploration for a particular raw material by a company prior to the signing of an agreement to proceed with an investment in a particular project as a deductible payment against income generated in the first project operated by the company. This procedure reduces the risk associated with early, general exploration. The limits of the first project would be defined at the time an agreement was signed and further exploration expenditure unrelated to the first project would be deductible only against future projects. Companies operating existing projects would receive an unrequited competitive advantage in exploration if they were permitted deductions for subsequent unrelated exploration. They should, however, be allowed deductions for expenditure on further exploration within the limits of an existing project.

The effective application of RRT, like that of other profits taxes, would require surveillance of prices received by the company for its products whether they were sold domestically or overseas, and of prices paid for equipment and materials. ‘Arm’s length’ prices would need to be enforced in transactions between the company and processing affiliates that were not subject to RRT or not included with it for tax purposes.
The rent of government-managed hydro-power resources used for privately-owned smelting and refining projects may be most efficiently extracted by taxing the projects by RRT and selling power to them at cost.

The system prevents the company from exploiting the government’s relative ignorance, because it is based on revealed profitability. By raising the probability of the company’s receiving moderate returns and lowering the probability of the company’s receiving extremely high returns, ‘progressiveness’ in the RRT lowers the expected after-tax profitability (and so raises the expected revenue charges) associated with a given company expected utility. If the problem were to fix the rates for one project only values for x, y and z and for a, b and c would be chosen to maximise the level of Resource Rent Tax that was consistent with the company’s decision to invest. If a general system were desired, either for all resource projects or for each industry, the rates would probably be set at levels expected to maximize overall receipts of Resource Rent Tax, or possibly of Resource Rent Tax and other taxes, resulting from the projects. This would, of course, entail a compromise between rates that were too lenient and those that were so severe as probably to discourage an undue proportion of potential projects.

Investors’ aversion to risk implies that a graduated scale of Resource Rent Tax will render acceptable to the company higher expected rent charges than a high, flat rate applied to all those receipts which would cause expected returns to exceed the supply price of capital. When one is setting the rates a, b and c and the profitability thresholds, x, y and z, it is of course the implied rates of return after payment of Resource Rent Tax that should be compared with the supply price of investment.

Rates of taxation could be extremely high in the later years of a highly profitable project without either encouraging the running down or disposal of assets or discouraging additional investment in exploitation of the natural resource. (In this the RRT would differ from company profits tax as usually assessed.) This is because any sale of assets would be counted as a receipt for Resource Rent Tax purposes, so that its value to the company would be reduced by Resource Rent Tax in the same proportion as income earned on the investment is reduced. However, although a very high rate of tax on marginal profits would not promote disinvestment through the effect on returns to investment, the marginal rate would, of course, need to be kept below 100 per cent to maintain company interest in the efficient management of the project.
As defined above, the RRT is based on rates of return on total funds invested in the operation. It could be adjusted to vary with the rate of return on equity capital. However, we favour using total funds since this method avoids arbitrary and unintended effects on the choice between equity and loan finance.

Possible difficulties and complications of Resource Rent Tax

1. Administrative

The Resource Rents Tax would place an additional burden on the heavily-laden taxation offices of the developing countries. However, the burden would mainly be that of learning to operate a new system. Accounting for the tax is straightforward (in fact rather more so than for conventional profits tax) because almost all receipts and payments are simply added for each year. Assessment from the accounting data follows a simple arithmetic principle familiar to accountants. Resource projects below a specified size could be taxed by more conventional methods, so that the projects subject to the Resource Rent would be small enough in number and individually large enough in weight to justify any additional administrative cost associated with the application of the new system in a particular case.

2. Exchange Rate Variation

If the investor has doubts about the stability of the host country’s currency, all calculations could be made in the currency of the investor, or in that of a country denominated by the investor. This might enable the government to fix rates of tax which would otherwise be unacceptable to some investors. The only requirement is that the same currency be used throughout the calculations, with conversions at exchange rates ruling at the time transactions are made.

3. Change in Purchasing Power

Inflation may introduce some divergence between ‘real’ and ‘money’ rates of return. If the rate of inflation were constant and known in advance, this would present no problem for the construction of Resource Rent Tax, since it would require merely that the threshold rates of return (x per cent, y per cent) beyond which various rates of tax are charged be set so much higher than if prices were stable. Since, however, expected rates of inflation do vary over time, it is likely that the ‘supply price of investment’ expressed in money terms will vary accordingly. This might be allowed for by relating the threshold rates of
return (x per cent, y per cent) to some international long-term landing rate. Such a refinement would not be worth introducing unless it were thought likely to sway some investors who might be deterred by the prospect of fixed thresholds totally unaffected by varying rates of price change. If the refinement is introduced, the threshold rates could be varied from year to year but, for each project, fixed for the life of the project at the rates appropriate at the time of agreement or of commencement of investment. Alternatively, the rates at which net assessable receipts are accumulated in a single project could vary from year to year. The first method would be more advantageous to the company in a period of rising land rates and to the government in a period of falling land rates. Either approach would be satisfactory.

4. Choice of Techniques

The substitution of the Resource Rent Tax for conventional company tax might reduce the latter's bias against the use of capital-intensive methods of production. There is, however, limited factor substitutability in many resource-based industries, and some government oversight of technology may in any case be necessary if it is desired to shift techniques in a labour-intensive direction.

5. Delay and Uncertainty in Revenue Receipts

The Resource Rent approach has disadvantages that would reduce its attractiveness in some circumstances. The concentration of profits in later years might be a disadvantage for governments that did not have access to the international capital markets. However, this is not a disadvantage in an economy which has a number of resource projects at different stages of development. This disadvantage could be ameliorated in part by a hybrid approach to taxation, with Resource Rent Tax being applied in addition to conventional royalties and company income tax. In this case, 'deductible payments' in the calculation of RRT would include royalties and company tax payments. Under conditions of uncertainty and risk aversion, it would be necessary to balance these additional forms of taxation by raising the threshold rate of return on investment at which the RRT began to be applied and total government revenue from resource projects would be reduced. An alternative, and probably better, method of overcoming delay in revenue receipts is outlined in the following paragraphs.

Resource Rent Tax with Company Profits Tax

One other possible reason for applying company profits tax in some
combination with Resource Rent Tax is that the home countries of the investing companies may treat the payment of RRT less favourably than the payment of company tax, particularly in years in which certain companies would (as might sometimes happen) be enjoying 'tax holidays' under RRT that would be unusually long for company profits tax systems. For this reason it is conceivable (and only careful investigation of various national tax systems would determine whether it is likely) that a company might gain if, instead of being subject simply to Resource Rent Tax, it were required to pay in any year either company profits tax or Resource Rent Tax, whichever was the higher, and then be permitted to rebate from future RRT liabilities (in any years and to the extent that they exceed company profits tax liabilities) the current accumulated value at some long-term land rate of all past payments of company profits tax that have exceeded Resource Rent Tax liabilities for the years in which they have been paid. This would ensure that it never in any year paid less than its liability under company profits tax, but that if profits were high it would not pay more over the life of the operation than was due under Resource Rent Tax. To allow for the possibility that because of overseas taxes a firm might have more incentive to invest under this system than under simple Resource Rent Tax, resource investors might be given the option to be taxed either in this hybrid way or by the pure form of the Resource Rent Tax.

Alternatively, if the problem of timing discussed in the second last paragraph were thought to be crucial, the hybrid method might be made obligatory. It would maintain the full advantages of Resource Rent Tax for highly profitable projects, supposed in advance to be such, but would be somewhat less satisfactory for those thought in advance to be marginal.

**Uniformity or Diversity of Rates and Thresholds**

The Resource Rent Tax could be applied at separate rates and thresholds to each project, or to each industry, or at the one set of rates and thresholds over the whole economy. The tailor-made approach to rate-setting would raise returns from individual projects or lower the risk of marginal investments’ being deterred accidentally. Against this, however, must be set the advantages in administrative simplicity, reduced expenditure on information, reduced delays in projects, and increased business certainty, of adoption of a single set of rates. Where much has to be spent on exploration, prior certainty over the terms on which the resource can be exploited is of great value to the prospective investor. There are also gains to the government from a single set of
rates and thresholds if it is not well equipped for bargaining over individual projects, especially since the governments of less developed countries rarely have access to the knowledge that is necessary for the exploitation of special cases of unusually low investment supply price. In industries in which investment in exploration is both highly risky and a high proportion of total investment there will be a case for separate, higher threshold rates.

**Resource Rent Tax and Government Equity**

The use of Resource Rent Tax would remove or reduce one important motive for desiring government equity in resource projects: the desire to benefit from high returns. The advantages for the government in being able to get the benefit of high returns without actually purchasing equity is that it removes the risk of absolute loss that equity investment entails. Nevertheless, the desire for equity may persist for symbolic reasons, although the desire is irrational in terms of more fundamental government objectives. One neat way of satisfying this desire is to trade equity for tax obligations. The equivalence between equity and tax obligations is probably easier to establish with the Resource Rent Tax than with conventional company tax. If the marginal rates of tax considered appropriate were, say, fifty per cent after the first threshold and seventy-five per cent after the second, an equivalent alternative would probably be to establish an option for the government to maintain the fifty per cent marginal tax rate from the first threshold throughout but to receive in addition fifty per cent of the private holders' equity when the second threshold is reached.

Under the pure form of Resource Rent Tax the government would have stronger grounds than under a conventional system of company profit tax for insisting that it be rewarded with equity in just the same proportion as the private operator for any capital costs that it incurs in establishing a resource project. This is because government's discounted returns are quite likely to be negative if it is necessary to give infrastructural subsidies to a project taxed by the pure form of the Resource Rent Tax.

**Conclusion**

The developing countries have much to gain from rising prices of many raw materials. But conventional means of taxing natural resource projects give exporting countries, especially those with long-established projects, an unnecessarily small share of the benefits of rising prices. On the other hand, arbitrary interference in terms of access to natural
resources in times of changing prices and production costs has led to income losses through reduced investment. The varying of taxation rates with the rate of return on investment as suggested in this paper provides for varying average rates of tax on profits without arbitrary interference, and hence gives some of the resource-rich countries an opportunity for more fruitful use of their endowments.

Appendix

Assessing the Resource Rent

This appendix is inserted to show the steps that need to be taken in actual calculation of the Resource Rent. The reader is referred to the definitions of 'assessable receipts' and 'deductible payments' and 'net assessable receipts' (NAR) given in the body of the text. NAR in any year might be a positive or a negative quantity.

NAR may be expected to be negative over the first few years of a project's life which cover the period of initial investment. At the end of each year through the early life of the project, the accumulated value figure is calculated which represents the sum of all NAR figures up to and including that year, each raised by the discount rate of x per cent per year (the first threshold rate). When a year is reached at which the present value so calculated is positive, 1 per cent (say 50 per cent) of that positive present value is taken in tax for that year.

In all subsequent years until a time is reached when the current year's NAR is once more negative, a per cent (say 50 per cent) of the NAR of each year is taken as tax.

If in any subsequent year or consecutive years (years n+1, n+2, n+m) NAR is negative, no tax is collected in any of these years, but in each year a present value of all NARs from that of year (n+1) is calculated with an x per cent discount rate, and this process continues until again a year is reached when the accumulated value is positive. In this year a per cent of this accumulated value is collected in tax. In subsequent years, while NAR is positive, a per cent of NAR is collected each year until again a year is reached at which NAR is negative, when once again no tax is collected and the sequence is repeated.

Precisely the same set of operations is performed in order to assess the additional tax that has to be paid when rates of return in excess of y per cent have been realised, except that y per cent is used as the discount rate, and the additional tax is assessed at b per cent (instead of a per cent) of the relevant aggregate.
As explained in the text, the effect would be to tax at a per cent that part of profit from the project (net of company tax and royalties) which would cause the rate of return on funds to exceed \( x \) per cent but not to exceed \( y \) per cent and at \( (a+b) \) per cent that part of profit which would cause the rate of return to exceed \( y \) per cent. The exercise could be extended to tax at \( (a+b+c) \) per cent that part of profit which would cause the rate of return to exceed \( z \) per cent.

**NOTES**

1. For example, see Division 10 of the Australian Income Tax Assessment Act.
Table 13.1 Hypothetical Example of Resource Rent Assessment

<table>
<thead>
<tr>
<th>Year</th>
<th>(2) Assesable Receipts</th>
<th>(3) Deductible payments</th>
<th>(4) NAR = (2) − (3)</th>
<th>(5) Accumulated value of NAR of current year and previous series of years with negative current or accumulated value of NAR (10% discount)</th>
<th>(6) Tax on returns over 10% threshold at 50% rate of tax</th>
<th>(7) Accumulated value of NAR of current year and previous series of years with negative current or accumulated value of NAR (20% discount)</th>
<th>(8) Tax on returns over 20% threshold at 25% rate of tax</th>
<th>(9) Total tax = (6) + (8)</th>
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Australia has found herself the pleased but puzzled owner of a vast stock of mineral wealth at a time when rising world demand and the depletion of competing supplies have caused rapidly escalating prices. These natural assets have raised the nation's real income, shifted the course of her economic development, and posed divisive problems of how best to manage exploitation of the newfound wealth and how to share the gains. This report seeks to bring general economic analysis to bear on these policy issues under discussion in Australia. The first section sets forth certain vital points of general analysis, and the second applies them to policy issues concerning resource production and trade. A concluding section considers the interests of Japan and other countries and their relation to Australian policies.

I General Analytical Background

To form effective economic policies one needs several ingredients: a statement of the goals of policy, an analytical model to identify the connections between policy instruments and goals, and a quantity of detailed information to provide an exact programme for the efficient use of policy instruments. It is not for the economist—especially an itinerant one—to define the goals of policy, although he can provide useful information on the cost of one goal in terms of others foregone. In the following discussion I shall assume that the principal goal of Australian policy toward resources development and trade is to maximize the real incomes of Australian factors of production, by which I mean loosely the present value of net national income over an extended period of time. I shall try to recognize other goals that seem implicitly or explicitly to inform Australian policy making, although only in terms of their competitive or complementary relation to the goal of maximizing real income.

The second ingredient of policy-making is a set of analytical models

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linking instruments and targets. The whole toolkit of the professional economist is relevant for this purpose—general theoretical models and empirically-tested hypotheses. This is no occasion to pen a text on economic principles. Certain parcels of economic analysis, however, seem sufficiently central to the issues at hand to deserve a brief restatement.

1. Economics of Conservation

The first of these is the economics of resource conservation, relevant to questions about control over rates of extraction of Australia's resources for both domestic consumption and sale abroad. First, assume that resource deposits are under well-defined ownership (public or private) and that Australian owners of a given resource are individually and collectively in control of a proportion of the world's total stock too small to confer any monopoly power on them. The individual owner presumably maximizes the present value of his resource asset and does so by scheduling rates of extraction over time so that no revision of the schedule would alter expected future cash flows in a way that increases their discounted present value. The schedule will depend on the owner's expectation about future prices for the resource (dependent in turn on world demand and the development of competing supplies), the response of his unit costs of production to the rate of extraction per unit of time and the discount rate that he employs in the calculation.

The sum of these private output schedules will be socially optimal under certain further assumptions. Resource owners must be able to borrow and lend freely at the market rate governing the allocation of society's consumption over time. They must be able to buy and sell natural-resource deposits freely. This assumption is required so that the finiteness of individual owners' lives (whether personal or corporate) does not affect their planned rates of extraction; if a resource asset can be transferred, the owner wishing to consume in excess of his income has no incentive to over-consume the output of his particular resource deposit. Furthermore, free transferability of deposits among owners puts into effect a process of market determination via present values of expected future prices (i.e. the pessimists can sell out to the optimists). As in all markets for future delivery, the public's expectations about future prices can be wrong; if they prove erroneous, some individuals did not maximize their real wealth ex post and resource extraction rates in some periods were not optimal. But who has a flawless record for forecasting? The public-spirited are not necessarily
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more accurate than the greedy, and indeed may be easier prey for transient fashions.

To the extent these assumptions hold valid—competitive resource and factor markets, certain tenure—there is no need for the government to regulate the activities of resource owners (or their licensees). Indeed, this conclusion holds even if one accepts the proposition that the government should give effect to a social rate of time preference different from that emerging from private decisions to save and invest. If the government decides that we are making inadequate provision for our grandchildren, it should act to elevate the general level of saving and investment and suppress current consumption. On the assumptions made above, there is no case for intervening in present consumption rates of bauxite, say, relative to deodorants. If the prevailing market interest rate is raised, the owners of bauxite deposits will themselves make a postponement that is efficient in relation to the expected future price of bauxite.

2. Adjustment to Growing Exports

The second parcel of economic analysis concerns the general-equilibrium adjustments in international trade associated with the discovery and development of natural resources. Such discoveries in essence improve Australia's factoral terms of trade. They also raise the real income accruing to general factors of production (capital and labour) producing the typical dollar's worth of exports relative to those carrying on activities that compete with the typical dollar's worth of imports. (And if Australian macro-economic policy stabilizes the price level in terms of exportable goods, they also cause an appreciation or revaluation of the Australian dollar.) The real returns to capital and labour are bid up generally as resource-based exports divert resources away from the import-competing and protected secondary manufacturing sector, and the real-income gain is spread throughout the economy. Furthermore, any given resource development competes resources away from other export activities, including resource developments previously undertaken. In transition these competitive pressures on the allocation of the Australian factor stock turn up as attractive opportunities for profit in the expanding resource sector and diminished profits in other economic activities. But there is no reason why these (positive and negative) windfalls should persist for long periods of time; they are just the signals that resources should be reallocated. Thus, real gains to Australia from expanding of exports resources must coincide with some transitional distress in other sectors of the economy, distress due to some
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combination of rising costs of domestic inputs and increases in the external value of the Australian dollar. Yet these shifts play a necessary part in the readjustment of production activities in Australia to make the most of the real income from resource discoveries.

Two extensions of this analysis are potentially important. First, resources developments are highly capital-intensive, both in their direct input requirements and in the infrastructural investments that support them. The fact that they make proportionally greater demands on Australia’s capital stock than on the labour force has important implications for the adjustments taking place in the economy. Among non-traded goods (whose prices are determined within the Australian economy), the prices of capital-intensive goods will increase relative to labour-intensive goods. Among commodities whose prices are determined on world markets, outputs of capital-intensive goods will contract but outputs of labour-intensive goods may even expand.

Second, the consequences of expanding primary exports differ if they can bring changes in international flows of capital and labour to the Australian economy. In the extreme, if the factors of production required by the resource-based development all come from abroad, no permanent changes occur in prices or outputs in other Australian industries. But the distribution of Australia’s gains from the expanding exports is also affected. The gain is now restricted to the rents collected from the resource-based development, whereas in the absence of factor inflows this development can bid up the real incomes of domestic factors of production directly. (Throughout this discussion I have neglected any temporary gains that could accrue if expanding resources output increases levels of employment and utilization in the economy. I have also assumed that the discoveries do not affect world prices of the resources in question.)

3. Foreign Investment

A third parcel of economic analysis applicable to this discussion deals with foreign direct investment and the probable role of foreign capital in large-scale resource developments. The reasons for the prevalence of foreign investment and its consequences for Australian welfare both require attention. Foreign investment in Australia’s extractive industries usually emanates from companies abroad mainly engaged in fabricating and marketing the raw materials that they undertake to develop in Australia. The direct investment thus represents a form of vertical integration. Even in those cases of the foreign company developing the Australian resources not for its own fabrication but for sale to other
fabricators, vertical integration is relevant to the parent’s behaviour for reasons that will emerge below.

We do not observe extensive vertical integration in every set of successive production processes running from farm to kitchen table, from mine to patio. In some such processes, however, technical characteristics of production at one or more stages make vertical integration a highly likely form of market organization. Suppose that extraction of the raw materials stage is a highly capital-intensive process and must be carried on at a large scale for efficiency. Suppose also that the number of firms at the downstream fabricating stage is small, whether because of scale economies or some other reason. Any non-integrated firm producing the raw material finds itself in a highly risky position, because it must make a very large and long-lived investment whose profitability is dependent on the arm’s-length bargain it can strike for the sale of its output in a bilateral oligopolistic market. The situation is not necessarily better for a non-integrated fabricator of the raw material, whose profitability depends on the availability and price of the raw-material input. Risk-averse enterprises are likely to grasp various strategies to avoid the uncertainties of spot transactions in such a bilateral market. Long-term contracts are one possibility, vertical integration another.

Now, when the raw materials are located in one country, the processing facility in another, vertical integration inevitably entails foreign direct investment. Thus this line of analysis predicts differences in the extent of ‘vertical’ foreign direct investment from sector to sector related to differences in enterprise concentration and production characteristics.

The model remains relevant when the vertically integrated foreign investor does not use his resource output directly but sells it ‘at arm’s length’. He still faces less risk in undertaking the extractive investment than would an independent firm for two reasons. His own fabricating facilities are a potential preferred destination for his resource output, if not an actual one; especially if the firm is a net purchaser of the resource elsewhere in the world (while a net seller in Australia), it is hedged against the risk surrounding arm’s-length transactions. And, if the multinational company enjoys some monopoly power in downstream markets for fabricated products, it can make the credible threat of a ‘squeeze’ in bargaining with customers for its primary resource output.

The advantages of the foreign enterprise may rise less narrowly on self supply or hedging in the world market for the raw material. It can gain purely from geographic diversification by moving into the Australian market; indeed, such risk-spreading gains would be greater
in a primary activity (for example, coal mining) for which national markets are somewhat isolated from one another by transport costs or controls, and national prices and profits therefore more independent. The multinational enterprise holds various intangible assets that can be applied costlessly to an Australian investment—its technological expertise, store of marketing information, and credit rating in the world financial community. An Australian company, even if already established in another activity, is sure to lack some of these assets. McKern's study of foreign investment in Australia's extractive industries shows that these gains from geographic diversification and use of intangible assets seem to explain the prevalence of multinationals in a number of sectors, whereas vertical integration applies only to those that are relatively concentrated and highly-integrated vertically throughout the world.

For the individual producer or national policy maker it is difficult to avoid falling in with this pattern of international integration and extensive multinational control. Non-integrated enterprises must incur greater costs and/or risks, and these burdens are social as well as private ones for the resource-producing country (if not always for the world as a whole). Licensing of foreign technology and the use of long-term contracts offer alternatives that reduce the disadvantages of the independent enterprise and in some sectors largely eliminate them. But in other sectors the alternatives are ineffectual and the independent national enterprise hardly a live option. This is particularly true where downstream market control and vertical integration prevail. Vertical integration in such an international market raises barriers to entry and increases the potential profitability of the oligopolists already present. Extensive vertical integration poses a dilemma to the potential entrant firm: if it starts production at only one stage it faces the transaction risks described above; but if it avoids that shoal the price ticket of entering fully integrated into both stages at once becomes prohibitively high, and capital rationing deters the newcomer. Either way the entrant is at a disadvantage relative to the going firms, which therefore come to enjoy potential long-run excess profits.

The political difficulties associated with vertically-integrated direct investment in resources development have become all too familiar in recent years. They concern the division of rents from a large-scale resources development in the face of the *ex ante* uncertainty that such projects entail. But technical and market uncertainties, before the event, often create a wide variance around the rate of return (including rents) expected by the entrepreneur of such a project. Therefore the
maximum prepayment or prior commitment that he will make to the host government or resources owner can be quite small, and may be shrivelled further by the government's eagerness to promote development for reasons not tightly linked to maximizing the rents it receives. After the event, the project may be a failure entailing losses for the entrepreneur, or it may be a big win. If the latter, the host government naturally grows restive over the rents being captured from its native soil, and exacerbating threats of punitive tax action or takeover are raised or executed. The reluctance of the government to see the wealth of its soil carried off by foreigners is understandable enough, but so is the resistance of the company, which may see its success in this development as no more than an offset to failures it has experienced or might face elsewhere. Surveys of United States multinational corporations have shown that those undertaking 'vertical' investments abroad in resource extraction often voice fear of expropriation, while those carrying out manufacturing operations for the local market do not.

Thus this analysis of the role of foreign investment in resource extraction explains both its occurrence in certain sectors and the likelihood of adverse economic and political consequences.

II Policy Alternatives and Options

With this analytical material in hand, we can turn to actual and proposed policies towards Australia's resource sector and the scale and distribution of their benefits and costs. I shall tie the issues loosely into three groups: export control and terms of trade, scope of domestic production activities, and foreign direct investment.

1. Export Control and Terms of Trade

The Australian government has recently shown interest in cartelizing resource exporters in order to exert such monopoly power as Australia possesses on world markets. In the absence of foreign retaliation, it is well known that the exploitation of a nation's monopoly power in trade will raise its real income at the cost of the rest of the world (and of total world income). Because attempts to exploit monopoly power in international trade are commonplace the dangers of retaliation against a modest effort are slight. One concludes that Australia can potentially gain in this fashion at relatively little risk. Nonetheless, three important issues surround any exploitation of the country's monopoly power in international trade.

The first is simply the extent of that monopoly power. The answer
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depends, for each export product, on Australia's share of world output (not world trade) and the extent of 'natural' protection by transport costs against competition from other exporters. The studies prepared for this project suggest that Australia possesses modest monopoly power due to transport-cost advantages in the Japanese market for certain of her resource exports. She does not appear large enough, however, to affect world prices significantly for any of her principal resource exports. The monopoly power associated with transport-cost margins furthermore is vulnerable to shifts in exchange rates, ocean shipping rates, or money costs of production in Australia or the principal competing exporters. Thus the scope for gains from monopolistic exploitation does not promise wealth beyond the dreams of avarice. The popular image of Japanese buyers bargaining collusively under the Japanese government's banner has basis in fact, and some observers believe that the independence of Australian sellers may have cost them a slice of the bargaining margin. However, that slice may be negligible in many instances. If Japanese buyers collude, so do most countries' sellers, and it is not clear that Australia's are an exception. And collusion among Japanese businesses, although often supported by the government, is neither enforced by public authority nor adhered to perfectly by Japanese businesses.

The second issue surrounding Australia's monopoly power in trade concerns the difficulty of managing an efficient government cartel in a natural-resource industry. The problem is not the usual bugbear of cartels—the probability of defections once the price is nicely elevated—because sellers of the relevant products in any case are few in number. Rather, 'efficient' monopolization requires a knowledge of the seller's long-run supply or cost conditions, in this case meaning full information of the stocks and recovery costs of the exportable resources. But cartelization requires the restriction of supply (or at least the credible threat to restrict), and thus may have important effects on the exploration for and discovery of new resource deposits. Suppose that the government has determined the quantity of exports that will maximize Australian profits and allocated them somehow among existing suppliers, who thereby enjoy a monopolistic margin of price over marginal cost. What of the incentive for further exploration? A new producer would anticipate above-normal profits if he were allowed a share of the restricted market. But such a share can hardly be offered freely without creating an incentive for existing Australian producers to cheat on the cartel, or at least incurring their wrath. Thus it is conceivable that export monopolization could reduce exploration enough
that the country's real gains from monopolistic sale of a small supply could fall short of the real gains it might enjoy in the long run from the more competitive sale of a larger output.

The third issue concerns Australia's general interest in unhampered international trade. The last few years have seen major disruptions of international trade due first to shortages arising from the fast-growing demands of a prosperous world (wheat, soya beans, etc.), then to the machinations of the Organization of Petroleum Exporting Countries. Many observers have feared that these new conditions could easily lead to trade warfare reminiscent of the 1920s and happily absent for much of the past two decades. Australia might well consider whether her long-run interest is better served by following the pack to taste the fruits of monopolistic exploitation or taking an active role in the effort one hopes will be mounted to restate and extend codes of good behaviour under the General Agreement on Tariffs and Trade to the marketing of primary products.

Independent of the question of monopoly gains from trade, the government has expressed concern that private traders inadequately protected Australia's interests by contracting for payments stated in fixed prices and in terms of the depreciating United States dollar. The advantages of hindsight in criticizing this choice for a currency of denomination do not need underlining here. The question for the future, however, is whether the government's foresight will necessarily excel that of private traders. Exchange-rate changes present a risk that must be faced somehow whenever a transaction takes place between two parties dealing in different currencies. They can divide the risk between themselves in various ways, but they cannot dispose of it entirely unless they have access to forward markets of long duration. In this context one is disturbed by the intention of the Australian government to require that export contracts be written to guarantee the value of payment in terms of the Australian dollar, whatever the actual currency of denomination. Such a requirement denies the Australian bargainer the chance to haggle over the distribution of exchange risk by making him insist that the other party accept it all, and thereby excludes from the bargaining process a dimension along which the parties might usefully and agreeably compromise.

The same argument bears on the presence or absence of fixed prices in long-term contracts. Buyer and seller presumably both have their expectations about future price and cost inflation. A buyer asked to pay a price that can be raised will presumably demand a lower one at the start, and it is not clear that the seller will get a better deal (in the
sense of expected value) if he is required to hold out for an adjustable price. There is probably a case for government review of the terms of important contracts for foreign sale of resources, if only because the information should be publicly available. But it is dangerous for the government to constrain future bargains with the extrapolated wisdom of its own hindsight.

An important problem ancillary to the pricing of Australian resource exports is whether or not the domestic market should be favoured with a lower price than the export market. The analytical argument is somewhat intricate, and depends on whether the restriction of exports is being undertaken to extract monopoly gains or to enforce conservation measures. I deal with the monopoly question here, the conservation issue in the next section. Just as a monopoly price maximizes Australia's gains from foreign trade, welfare is maximized by a competitive one in domestic sales. Thus any government that cartelizes exporters to maximize gains from foreign trade runs the risk of an incidental cost if they can thereby more readily monopolize the domestic market as well. Ideally one should extract monopoly profits from foreign trade not by cartelizing exporters but by imposing a tax on exports calculated to produce the desired monopoly price after the exporters have made suitable adjustments in the quantity they sell. This policy retains the possibility of a lower competitive price in domestic sales and also captures the monopoly rents for the general public rather than leaving them in the hands of the exporting firms. Outside this context of foreign-trade monopoly the case for charging a lower price to domestic than to foreign customers is shaky or non-existent; I return to this matter below.

2. Scale and Scope of Domestic Production

Another group of issues concerns the appropriate total volume of production of resource products and the government’s policy towards various stages of production. The former issue—rate of extraction—raises primarily the issue of resource conservation and requires application of the analysis set forth at the start of this paper. That theoretical model established circumstances in which the rate of extraction over time chosen by private enterprise would be efficient and require no government intervention. The question therefore is whether the assumptions of that analysis match tolerably well the conditions under which Australia’s metals and minerals are extracted and sold. Its answer requires evidence beyond what has come into my hands. Hence I shall confine myself to listing distortions that might preclude an optimal rate
of extraction.

1. *Do the private developers of resources employ a socially appropriate rate of time discount?* A serious market failure can occur on this ground when the developers are atomistic and affected by capital rationing, and therefore value the returns from future sales of their resources lower than would the general public. Australia's resources seem mostly to be in the hands of enterprises large enough to avoid this failing. There are suggestions, though, that imperfections in domestic capital markets may be serious enough to constrain domestic enterprises' access to capital and thus induce excessive rates of extraction. Foreign-owned enterprises are presumably less subject to this problem. The efforts of the Australian Industry Development Corporation (AIDC) to relieve temporary capital shortages for domestic mining companies therefore enjoy support on conservation grounds, but I wonder if there may not be wider institutional shortcomings in Australian capital markets that require attention.

2. *Do private resource developers enjoy certainty of tenure?* If an enterprise holds only temporary rights to develop a resource, or if its tenure is subject to legal uncertainty, an incentive arises for it to extract the resource at a socially excessive rate. Arrangements in effect for natural-gas exploration under the Pipelines Authority Act apparently have these undesirable properties, although it is not clear whether effective controls can pertain to production.

3. *Does foreign ownership entail any special conditions that distort enterprises' decisions?* To the extent that international firms maximize the present value of their expected returns from world-wide operations and face 'correct' competitive prices, no problem arises here. But their behaviour might be thrown off course by several circumstances. Tax provisions, especially in the corporate parent's land of residence, might distort production rates in either direction. Output rates in Australia would also be distorted if the firm expects Australian taxes on current profits to be either tightened or relaxed in the future (to the extent that the change would not wash out when Australian tax payments are credited against the parent's tax liability to its home government). The parent might be under administrative pressure from its home government either to speed up or delay resource extraction in the home country, and therefore make compensating adjustments to output rates in Australia or elsewhere.
4. Are private resource developers' expectations of future prices unbiased, i.e. free from systematic forecasting errors? Unreasonably pessimistic expectations of future prices would, for example, promote excessive current rates of extraction. In considering this question we should remember that information on which expected prices are based is intrinsically a public good and subject to under-provision in a private market. Australia's resource industries, being far from atomistic, may not under-invest seriously in information relevant to forecasting future operating conditions. Furthermore, multinational companies can make international administrative transfer of information and thus partly circumvent possible market failures in its provision. Nonetheless, there may be a case for government-sponsored research aimed at forecasting future conditions in resources markets, in order to insure against any failure in the market for information.

5. Is resource production in Australia subject to external economies or diseconomies? In many locations resource extraction is a prolific source of external diseconomies because of its harm to the environment or because of technical production problems with a fugacious resource exploited by competing producers. Although economic theory explains how private bargaining can ideally alleviate the impact of these externalities, in practice transaction costs and other impediments impel some form of public intervention. Fortunately, Australia's mining industries seem to pose relatively few problems of this sort, because of the nature of the extractive processes and their geographic remoteness from centres of population. To the extent that diseconomies are felt, the rapidly-growing literature on pollution and environmental problems discusses the efficient solutions that are available; generally they call for equalizing the private and social costs of polluting activities, but not the flat reduction of the outputs of those activities.

6. Are the resource development industries monopolistic? If so, they tend to underproduce in each period of time and thus postpone the use of resources inefficiently. Of course, we must distinguish between the case for monopolizing export markets (considered above) and the organization of Australia's domestic markets for resource products. Monopoly in the domestic market implies an inadequate rate of current supply and thus excessive conservation.

There is no case for public intervention to affect the rate of resource extraction if these distortions are all absent, or if they should accidentally offset each other in their effects. Conversely, intervention...
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is appropriate if net distortions seem to prevail. The best intervention would probably be to attack the source of the distortion itself (e.g. imperfectly functioning domestic capital markets), because each distortion generally will impose social costs other than those of inappropriate rates of resource extraction. If a direct attack is impossible, the appropriate strategy becomes an offsetting intervention through taxes/subsidies or other devices to alter rates of output.

Two issues affect social policy toward rates of resource extraction beyond the questions covered so far. First, how should Australian policy react to the fact or the possibility of supplies and prices being manipulated by other producing countries? Following the Yom Kippur war and the disruption of world trade imposed by OPEC, few people would be unwilling to make some payment for insurance against such sharp disruptions of markets. Yet it is important to disentangle two quite different issues concerning the appropriate response to external manipulations of supply.

First, where Australia remains a gross importer of some primary material, it is vulnerable to short-run disruptions of supply of the OPEC variety, which impose costs of adjustment having a present value much greater than if the same supply curtailments (or price increases) occurred over a longer period of time. It is clearly worth something for a country to maintain stand-by supply capability. Where domestic resources are available as substitutes for imports, the requisite insurance takes the form of extra domestic production capacity but not a higher actual rate of supply except when disruption is occurring. In general, therefore, appropriate policies would involve subsidized exploration for materials subject to disruption, and subsidy to support either inventories or production capacity larger than would be commercially warranted.

Second, supply manipulations by foreign governments may take the form not of short-term disruptions but of longer-run curbs on their rates of extraction or use. Suppose that these are occurring, and that they affect the prices that Australians expect to prevail for some resource product in various future time periods. Can Australian policy usefully respond to this sort of manipulation? It is important to understand that, to the extent Australia is merely a small producer (or consumer) of some resource, prices become parametric and it makes no difference why they are what they are (or are expected to be). If other countries act to postpone extraction of their domestic energy supplies, they drive up expected prices in the near future but reduce them in the more distant future. Apart from efficient provision for emergency
disruption (outlined above), there is no case for Australia’s reacting to those price effects as if they were other than ‘natural’. (The point is the same one that bears generally on a small country’s comparative advantage in international trade. If it is relatively cheaper to secure oranges by importing them from abroad, it makes no difference whether the cheapness results from abundant foreign sunshine, producer subsidies, dumping practices, cut-throat competition among the orange growers, or whatever other cause so long as it is persistent.)

A further issue going beyond the structure and performance of the resources industries and markets is whether conservation policies to slow down the rate of extraction, if they are undertaken, should affect domestic and foreign users alike. Embargoes on the export of primary resources have been used before in Australia (e.g. iron ore), and mineral exports are to be restricted generally until Australia’s ‘needs’ are satisfied. The government currently takes a favourable view of making Australian energy resources available more cheaply at home than to foreign purchasers. To clarify this question it must be disentangled from that of exerting monopoly power in international trade. Hence I now assume that Australia’s export sales are too small to influence prices in the relevant foreign markets. Suppose that the government concludes that current market-determined rates of extraction are too high, and so intervenes to restrict supply. Should the restriction of foreign supplies be managed so that domestic users are favoured with lower prices than attach to export sales? In general, should domestic users be able to claim exhaustible resources more cheaply than foreign customers? There is no broad economic case (foreign-trade monopoly apart) for allowing opportunity cost to be lower to domestic than to foreign users. If considerations of conservation (i.e. maximizing the present value of the resource deposits) call for postponing foreign consumption, they require postponing domestic consumption as well if domestic welfare is to be maximized. Should the government construe domestic ‘needs’ to warrant lower domestic prices, the public are in essence consuming units of it for which they are willing to pay less than the social opportunity cost; that opportunity cost can be either units of other commodities that they might consume now (by exporting the resource and spending the proceeds on foreign goods) or units of the resource or other commodities that they could consume in the future by postponing present consumption (and either trading or consuming more resource units in future time periods).

Thus the general conclusion emerges that domestic and foreign buyers should be treated alike in enforcing any conservation of
non-renewable resources. Curbing exports until Australia’s ‘needs’ are met could mean no more than an injunction against selling more cheaply abroad. But without specific justification it should not mean causing domestic prices to be persistently below (fob.) export prices. This case for equal treatment of domestic and foreign users is subject to qualifications, of course. Let us consider some of the reasons why the Australian government has, or might wish to ignore it.

A major reason for restricting or precluding exports of resource products has evidently been to encourage their further processing in Australia. Processing investments have been further promoted by the state governments, taking their rents on resource developments in the form of promises to undertake what may be uneconomic processing facilities. Such policies should be examined in the broader context of policies to divert resources towards the secondary manufacturing industries, which policies notably include the protective tariff. Cheapening of industry’s inputs through the restriction of exports is in general similar in effect to elevating the price of its output by taxing competing imports. I shall not deal with the welfare economics of diverting resources towards secondary manufacturing industries generally, because that policy is well established in Australia and its appraisal requires evidence beyond what is available to me. I would raise the question, however, of whether there is any reason to prefer secondary industries processing Australia’s resource products over other secondary industries. The suggestion is often made to less-developed countries that industrial protection aimed at import substitution should afford the same moderate rate of protection to all industries, to allow the market to determine in which ones the country enjoys the least comparative disadvantage. The same proposition seems applicable to Australia’s various encouragements to secondary manufacturing industries. An exception arises, of course, if the development of a processing industry is impeded by some special malfunction elsewhere in the Australian economy. Excessive rates for domestic water transport are one such malfunction that has been cited. If they exceed minimum attainable long-run marginal cost, an offsetting encouragement to the processing activities would be appropriate. The ideal encouragement is a subsidy equal to the excess of shipping charges over their ‘efficient’ marginal cost; if this is unavailable, preferential access to raw-material inputs is a plausible second-best measure.

Lowering the cost of resources to domestic users may redistribute income favourably. A familiar general proposition of economic analysis holds that income redistribution is better effected through transfers of
general purchasing power than by cheapening the goods consumed heavily by the deserving individuals and/or sold by the unjustly wealthy. Thus one cannot make an unqualified recommendation that resources prices be manipulated in order to redistribute income. The reason why this specific method of redistribution looks attractive to many Australians is no doubt because the profits and rents from resource extraction often accrue to foreign-owned enterprises. Hence the adoption of ways to tax such enterprises with minimal distortion of their production decisions becomes an important means to effective redistribution; I discuss below how such taxation should be carried out. The goal of avoiding unjust enrichment of foreign-owned enterprises also appears as a reluctance to remove export restrictions when the capital gains (or their annualized equivalent profits) will pass into foreign hands. Once again, it would be desirable if taxation arrangements could remove such reluctance to adopt efficient policies on account of their distributive consequences.

Australian policy has concerned itself not just with the extraction of resources but also the activity of exploration for new resources, and various subsidies have encouraged the search for energy sources and certain minerals. Furthermore, the government has been attracted to the prospect of using public enterprise to carry on the search for energy deposits. The merits of subsidizing exploration were mentioned above in the context of providing insurance against the short-term disruption of imported supplies of primary materials. There are evidently other distortions and market failures that could warrant subsidizing exploration. It is not clear, though, that Australia's subsidies have been motivated by more than a general desire to promote industrial development, and they may therefore be unwarranted.

Also under active discussion has been a public corporation to undertake the exploration for energy sources. I am not sure if a public enterprise is favoured by the government for its own virtues or to provide an alternative to the participation of foreign-owned firms. Let me assume the former, however, to make sure that all relevant issues are covered. Under what conditions is public enterprise efficiently substituted for private? Despite a century of debate on 'socialism versus capitalism' economic analysis has made an appalling botch of providing theoretically-solid and empirically-tested answers to this question. Hence the following suggestions are highly tentative.

Placing an activity in the public sector makes the general public the (voluntary or involuntary) holders of equity in the activity and precludes private exchanges of equity shares reflecting different
expectations or attitudes toward the riskiness of the activity. Therefore one must expect certain costs of placing an activity in the public sector in precluding privately desired shifts in its equity. These costs (and any others that we might associate with public enterprise *per se*) must be set against any social gains that flow from placing an activity in the public sector. What gains might attend a public role in energy exploration? One possibility might lie in the nature of the risk in exploration. Suppose that there is a high probability of finding a large energy source in a large number of tries, but that the chances of a find are very small for the individual attempt. If private parties who might make the individual tries are risk-averse and unable to pool their interests in individual search activities, the social cost of undertaking the risky search will be greater when atomistic private enterprise undertakes the job than when it rests in a single set of hands (public or private). A preference for public over private monopoly could then establish an argument for public enterprise. I have no confidence that the assumptions of this argument necessarily fit the case in hand. My general impression of the track records of public enterprises in various countries is that they are highly idiosyncratic: in some cases effectively seizing large opportunities or coping with difficult problems of externality, in others distorting allocations toward politically effective groups or simply indulging in the sloth available to those protected from competition. The case for public enterprise in energy exploration in Australia should be considered on grounds of the specific performance of public and private enterprise, not on general grounds of its 'importance' save in the obvious case of national security (uranium).

3. Role of Foreign-Owned Enterprises

The Australian government has taken the position that foreign control should be kept to its present limits in mining and excluded from the energy sector. Takeovers of domestic enterprises by foreign firms are subject to review. The economic consequences of restricting further direct investment in Australia are thus evidently an important area of resources policy.

In no area of economic policy-making are non-economic goals more evident than in policy toward foreign direct investment. Nearly all countries are moving toward greater restriction of the inflow or outflow of foreign investment, or both. Yet the restrictions rarely seem to rest on any explicitly economic analysis of benefits and costs, and the observer can hardly avoid crediting many of these actions to a rising tide of economic nationalism. Because there is no reason to rule out
economic nationalism and hostility to foreign enterprise as valid expressions of national preference, the economist often finds himself with little advice to offer on whether foreign enterprise should or should not be restricted, but he can supply some judgment on the effects of imposing various restrictions.

The analysis set forth in the first section of this paper explains why foreign investment should be common in the resource industries of Australia. Indeed, in my judgment, the level of foreign investment in the Australian economy overall and in the key resource industries is about what one would expect on the basis of the economy's structural characteristics and those of the particular industries in question. Foreign investment is thus the outcome of a rational economic process that has its natural determinants and limits. But that fact does not imply any economic optimality in the outcome. What are the chief effects of foreign investment on Australian national income and its distribution?

1. Tax revenue. Without doubt the largest single lump of benefit accruing to a host country lies in the corporation income taxes collected on the profits of foreign subsidiaries. Because, for the multinational company, these payments normally credit against the parent's tax liability to the home government, they represent a transfer payment to the Australian treasury from that of the multinational's native country. These benefits are foregone or postponed, of course, to the extent that foreign companies receive tax concessions or accelerated depreciation.

2. Productivity. Foreign-owned enterprises may achieve greater productivity in carrying out large-scale resources developments than would domestic enterprises for several reasons. They may enjoy better access to specialized technology or managerial skills. Their sources of finance outside the country may spare them from pressures to operate at inefficiently small scales, which could weigh on domestic enterprises subject to capital rationing. Their marketing abilities may permit them to effect arm's-length sales abroad on better terms. These sources of higher productivity of course turn to Australia's advantage only insofar as they raise Australian real incomes, i.e. to the extent that the foreign-owned enterprises cannot collect all the rents from their higher productivity. The corporation income tax, as noted above, gives the Australian government a slice of these rents (unless they have been bargained away in special deals). Some of them may accrue in higher payments to Australian factors of production employed by the foreign enterprises or
lower prices of products sold on the domestic market, although the size of the gains through these latter channels is conjectural and unknown. (In manufacturing industries another gain from foreign investment lies in the imitation of their technology or innovations by domestic firms, but this is probably unimportant in the resources industry.)

The notion that there is some 'optimal' amount of foreign investment in Australia's resource industries implies, in the grand economic tradition, that we can measure costs to place against these benefits and identify the intersection of two marginal-value functions. Costs are certainly present. For instance, the vertical integration associated with foreign investment in the international extractive industries probably raises barriers to the entry of new firms at either the extractive or the fabricating level and permits potential monopolistic distortions to the industry world-wide. Yet what value should one place on the additional social cost associated with one more direct investment? And how much of that cost falls on Australia? Many instances of costs due to foreign direct investment have been cited, but they are quite difficult to appraise. Some represent definite enough costs, but are identified in highly specific contexts of unknown general importance. Others are costs as compared to some ill-defined or unlikely alternative situation, and thus subject to discount in a benefit-cost calculation. One must conclude that some particular investments are undesirable, but it is conceptually quite impossible to say that the appropriate share of foreign investment in some sector is x per cent. (Economic theory identifies such an optimum only on the assumption that the supply price of foreign investment in Australia varies with the quantity admitted—an empirically elusive matter.) One can thus support a screening mechanism for new investments, although with the proviso that it should not become merely a means for established firms to object to the admission of new competitors.

Some objections to foreign investment apparently rest on the view that government regulation of the activity that it undertakes is or may prove necessary. This view appears to underlie official hostility toward foreign investment in the energy sector, and is common to restrictions found in many countries on foreign investment in sectors such as banking and transportation. Its justification probably rests on two assumptions: first, that foreign-owned enterprises might be less sensitive to 'moral suasion' and informal controls than domestic firms; and second, that they can get entrapped in conflicts of sovereign interest between the host nation and the firm's parent country.

Although it would seem better to keep an otherwise desirable firm
enterprise on a tight regulatory tether rather than exclude it totally, one can certainly understand a national willingness to pay something in order to insure public control. Unfortunately the price is an ill-defined one, and it may be very difficult to anticipate what economic sectors will appear 'strategic' in some future crisis.

Opponents of foreign enterprise often show greater hostility to foreign control than to fractional foreign ownership, and show a preference for diluting the foreign presence through joint venture. A full analysis of these issues would demand an extended discussion, and so the following comments are rather summary. Joint ventures and minority participation should not be taken up too readily as easy compromises with hostility toward a foreign presence. In some circumstances forcing minority participation on an enterprise reduces its efficiency or profitability, because the foreign parent is no longer indifferent between a dollar of profit accruing to the parent itself and a dollar accruing to the subsidiary (which must then be split with other owners). But this problem is much more acute in manufacturing than in resource industries. Similarly, joint ventures can sometimes prove to be closely-hobbled entrepreneurial units, although in large-scale resource developments they often provide means of spreading risks and attaining scale economies that are attractive to the foreign investors themselves. Thus the promotion of these diluted forms of foreign control is a reasonably viable option in many resources sectors, although not necessarily for all sectors receiving foreign investment.

If serious efforts are made, as suggested in some quarters, to 'buy back' enterprises from their foreign owners, similar cautions bear on the social benefits and costs. Any rents or monopoly profits captured by foreign enterprises get capitalized in share prices, and so repurchase would generally do nothing to take these surpluses out of foreign hands unless sale is forced at something below a market price. McKern\textsuperscript{3} shows how large are the premiums that the Australian public have paid for their minority shareholdings. Likewise, the hope of increasing social control over foreign-owned enterprises by enforcing local equity participation or imposing requirements about the national composition of directors is probably illusory. Minority shareholders presumably invest to enlarge their own dividend incomes and not to uphold the national honour. Australian directors might be more conscious of domestic public relations, but there is no guarantee in any case that a subsidiary's board of directors gets to make the important decisions. Both devices are flabby substitutes for the direct imposition of public policy objectives on foreign companies, and one can argue that if the Australian
public have well-defined preferences about how the companies should behave these should be imposed directly by the government rather than percolated through these ineffectual and sometimes costly control mechanisms.

Much of the public concern over foreign investment in the resource industries lies with the distribution of the rents captured by a successful project. Indeed, this is a source of contention the world around, surely the worst point of friction over the multinational company. *Ex ante*, large-scale resource developments no doubt are often quite risky, and companies probably undertake them only if the mean expected rate of return is quite high. *Ex post* some win, some lose, with the winners collecting substantial rents. Citizens of the host country witness exorbitant profits being made by foreigners carrying off their very soil, and the cry goes up for punitive taxation, or nationalization. The company resists, and an international dispute is joined.

The public concern over rents accruing to foreigners rests (consciously or not) on a valid issue. Before the event, little is known about the rents that will accrue from a large-scale and long-lived resources development. The national welfare is clearly increased by intercepting the largest feasible portion of the rents from the foreign operator, yet this cannot be done by an *ex ante* fixed levy or (for other reasons) via the conventional corporation income tax. The various royalties imposed by Australian state governments also are largely short of the mark. Fortunately, a feasible solution to this problem seems to lie in the Resources Rent Tax proposed by Garnaut and Clunies-Ross in a paper circulated by this Project. Their device appears administratively feasible and possesses several ancillary advantages. It would also capture a share of any monopoly profits (as distinct from Ricardian rents) accruing to the firm. Although it lops off the upper tail of the profits expected *ex ante* by the firm without offering comparable down-side protection, it does cushion the firm's risk somewhat by allowing it to write off and disentangle its investment immediately before the accumulated value of the rents starts to count. And it avoids many difficulties with other types of taxes by removing their incentives for the firm to distort the distribution of its outlays and receipts over time. I hope it will receive wide consideration as a method of taxing resource rents. Indeed, on the well-known theoretical preference for lump-sum taxation, there is no reason why it should be applied only to resource developments under foreign ownership.

This approach should do much to relieve controversy over foreign investments in Australia's resource industries and (if it can be applied
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...to going projects) straighten out their tangled relation to the public finances. It is apparent that the state governments, negotiating with foreign companies over mining concessions, have generally imposed relatively modest royalties and taken their ‘profits’ instead in promises to undertake local processing and to contribute investments in infrastructure. The rents that could accrue to the Australian public have therefore been distorted in form and probably reduced in total amount. The Fitzgerald Report addressed this problem obliquely by comparing the public revenues received from the extractive sector to the various subsidies and tax breaks provided to it. That procedure is inappropriate to evaluate the merits of those aids and subsidies. The social benefits sought by those policies either are or are not worth the tax revenue that is foregone in the process, and they are properly evaluated by netting them against tax revenues only if the generation of subsequent tax revenues was their sole objective. Still, the report serves a purpose in calling public attention to the scale of subsidies that may indeed have had no well-conceived goal, and to the fact that rents that could be captured by the Australian public have been taken in suspect forms or allowed to escape entirely.

III Australia’s External Relations

The policy discussed to this point bears almost entirely on Australian matters and not on trading relations with Japan or other countries (especially less-developed) that as sellers or buyers are affected by Australia’s decisions. The discussion has assumed that maximum national income for Australia is the leading concern of policy, implying an indifference to the economic effects of these decisions on the incomes of other countries.

Japan’s evident concern is with the price and availability of Australia’s resources. It is widely believed that, insofar as Australia enjoys any monopoly profits or suffers any monopsony exactions in the sale of her resources, Japan is on the other end of the transaction. This view is qualitatively correct, but the studies prepared for this project suggest that the bargaining margin within which prices are determined (Australia’s best offer from another buyer, Japan’s lowest delivered price from another seller) is relatively narrow in most cases. As to the merits of various prices lying within those limits little can be said. The joint welfare of the two countries would be maximized by a ‘competitive’ price set by non-collusive bargaining among both Australian sellers and Japanese buyers. But this point is of little relevance if the Japanese buyers in any case act in concert, presenting
the Australians the choice between yielding to monopsony
determination and exerting a 'due' amount of economic and political
bargaining power.

The issue of resources availability is somewhat independent of the
issue of price, in that buyers' concerns with the future availability of
resources ride on avoiding short-run embargoes of the OPEC variety
rather than long-run future scarcities. It is fair to say that the risks of
short-term disruption are asymmetrical between buyer and seller; the
seller whose market is temporarily terminated loses a modest flow of
factor services (and thus income) through temporary idleness, whereas
for the buyer of a widely used input or energy source this loss can be
very large. Hence the expressed Japanese interest in diversifying her
sources of supply is unsurprising. Because diversification is a hedge
against natural as well as political and economic risks, there is probably
little Australia can or should do to deter it. The avoidance of policies
that create unnecessary uncertainties about future prices and supplies
is, of course, a help. It is not obvious that Australia should act on any
parallel concern with diversification of her customers (aside from selling
to the highest bidder), though it would be very difficult to assemble the
evidence needed for a reasoned judgement on the matter.

About the interests and needs of the developing countries there is
little to say. Because of OPEC's success there will surely be efforts
among LDC suppliers of other primary products to organize for the
pursuit of monopoly gain. The well-known history of commodity
agreements before World War II suggests that such schemes can some­
times capture temporary monopoly rents but usually collapse after
introducing assorted distortions of the allocation of resources and
exacerbating diplomatic relations. Even if one would like to employ
every feasible channel for diverting more purchasing power to the
LDCs, the monopoly-selling route is not a clear winner. There is thus a
case for Australia's staying aloof from any effort to organize suppliers
of her primary exports for monopolistic purposes, although it cannot
be pretended that the economic considerations discussed in this paper
are themselves decisive. To the extent that LDCs are competing
suppliers of the resources exported by Australia, the rate of supply and
pattern of expected future prices may be affected. It is alleged that
LDCs often display a high rate of time preference, which would mean a
willingness to extract and sell resources at a faster rate than would a
supplier with a lower time preference. It follows that their presence as
competing suppliers would tend to depress present and near-future
prices and raise those expected in the more distant future—a possibility
that should be allowed for in any price forecasting undertaken to inform the supply decisions of Australia’s own resource developers.

NOTES

5. McKern, *passim*.
Annotated List of Supporting Papers

The following papers were prepared and circulated under the auspices of the Australia-Japan Economic Relations Research Project. These brief notes aim to summarize the main subjects covered or argument of each paper.


Outlines the qualitative interdependence of the Australian and Japanese economies and suggests various resource-based industries in which nuclear power-based development could occur. This reorganisation would mesh with Japan's need to refashion her economy along the lines of the knowledge-intensive Swiss economy. Agricultural protectionism in Japan, manufacturing protectionism in Australia and the high cost of Australian labour are current hindrances to development. A liberalised Australian immigration policy which allowed Asian labour into specified 'free zones' in Australia would provide attractive conditions for Japanese investors in resource-based industries. South-East Asian development should also be encouraged by the establishment of areas where direct investment by the advanced countries could be carried out with little government interference, in areas of comparative advantage such as light manufactures.


Notes the change in world trade patterns after the oil price rises and economic recession of 1973. Developed countries' share of trade fell for the first time since 1960. Australia's trade with ASEAN and Indian Ocean Peripheral Countries, however, increased. Suggests that growing relations between Australia and the Middle East may allow some diversification of Australia's export dependence on Japan. Australian aid will play an important role in her growing relations with the region and it is suggested that Australia and Japan should jointly assist in promotion of industries in the ASEAN region to adjust the trade imbalance.


Outlines the change from the use of exchange controls to the use of import restrictions in the post-war period and the necessary liberalisation of exchange inflows after Japan became a signatory of the GATT. These included capital liberalisation of both direct and portfolio investment, changes in the non-resident free yen account and in the other direction, lifting restrictions on outward direct investment. However, Japan's exchange controls remain relatively strict in regard to capital transactions and since exchange control policy changes significantly with balance of payments conditions, several problems are foreseen in the internationalisation of the yen.


Points out that exchange control in both Australia and Japan is relatively strict compared with America and Europe, particularly in respect of capital transfers. Since, in both countries, exchange control is sensitive to economic conditions and to the balance of payments, the unpredictability of exchange policy is a major barrier to currency integration between Japan and Australia. If this is desired and if the internationalisation of the yen is to proceed
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(questions discussed elsewhere) then an easing of exchange control will be a necessary part of the deepening Japan-Australia relationship. Both countries are members of IMF and have liberalised current account transactions. Yet a point by point comparison of exchange controls applying to capital account transactions shows both countries to be extremely strict.


Examines some of the important issues relating to foreign exchange market arrangements and policies of significance to trading and other economic relations between Australia and Japan. The paper deals with foreign exchange market arrangements; foreign exchange controls; forward exchange facilities; the transactions currency problem; and the composition of international reserves. It recommends against a direct link between the Australian dollar and the yen and in favour of denominating long term contracts half in dollars and half in yen.


Explains some of the elements in the Australian conception of resources diplomacy, including the objectives of maximising Australia's gains from trade in natural resources; minimising foreign ownership and control; safeguarding future needs for natural resources; encouraging domestic processing; minimising dependence on foreign supplies; and safeguarding the interests of Australian Aborigines. The pursuit of these broad objectives by the nation state is said to be fraught with the danger of nationalist hysteria and preoccupation with shares of income rather than with the size of income. Resources policy covering foreign trade and investment aspects is seen as a necessary element in foreign economic policy but the aims of resources diplomacy are seen largely as confused and self-defeating.


Sets out the factors that have dictated largescale production in the steelmaking industry and those leading to the emergence of competitive reduction of iron ore directly or through electric arc furnaces. The economics of jumbo plant steel production for export by Australia are evaluated in the context of these technological changes in the steel industry. The importance of overseas marketing outlets in successful largescale production by additional Australian capacity is stressed.


Describes the structure of the Australian iron and steel industry; the state of technology; the utilisation of scale economies; protection; pricing strategy and policies; and profitability. The choice of maintaining a national strategic industry and opening it up to higher profitability and competition is seen as crucial. The paper concludes that the industry is likely to become more export-oriented, with larger exports of semi-finished steel; and that it is likely to see national ownership diluted.


Describes the structure of both countries' steel trade and their importance in each others' markets. A review of the competitive position of each industry suggests that the Japanese industry's interest in production and supply from abroad will continue to grow in some of the areas from which Australia faces strong competition as a potential supplier. The attractions of a jumbo steel plant for export from Australia are seen not necessarily in the
development of the Japanese market but in the development of third country markets, especially in South-East and East Asia.

Describes the main financial markets in Australia and Japan. The principal financial institutions in Japan and Australia are compared, the mobilisation of funds explained, and the relative importance of monetary policy and role of government in each country discussed. The similar development of international linkages in both countries in the post-war period is noted. The key role of the banks in the Japanese financial market is related to the greater emphasis on direct controls through the banking system in monetary management.

Outlines a general framework for analysing the technical issues involved in the pursuit of domestic policy objectives in an increasingly interdependent world. The paper argues that regional interdependence such as that which has grown between Australia and Japan, is certain to demand a greater degree of domestic policy harmonisation than is currently undertaken if relatively fixed exchange rates are maintained. The burden of policy adjustment must fall on the smaller economy. Monetary union between Australia and Japan is not seen as desirable.

Reviews the policy issues arising from Australia’s emergence as a major exporter of minerals. The issues discussed include the economics of conservation; adjustment to the growth of exports; the role of foreign-owned enterprises; export control and the terms of trade; the scale and scope of domestic production; and the impact of the mineral trade on Australia’s external relations. The paper provides a very careful yet comprehensive analysis of these policy issues under discussion in Australia.

Presents a detailed inventory of energy resources in Australia, and outlines Australia’s past and forecast consumption requirements and export potential. Government policy up till the early 1970s is reviewed. Trading opportunities are specified in the context of Japanese energy consumption and trade position. Policy recommendations include the establishment of a co-ordinating authority to reconcile the several interests of authorities concerned with fuel and energy development.

Assesses Japan’s trade, investment, and aid relations with resource-rich developing countries in the period of adjustment through resource scarcity to restructured industrial growth patterns. The paper quantifies the large effects Japan’s past import growth has had on the smaller resource exporting developing countries and their extreme sensitivity to changes in the pace of Japanese production. The interaction between short and long term development is analysed and there is a warning that insensitive handling of shorter term problems will damage the prospects for long term economic interdependence.
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Undertakes a major survey of Australian agriculture and trade experience in recent years. Land use in Australia, agricultural policy, marketing and stabilisation arrangements, production controls, and research and extension are first described. The remainder of the paper analyses trade performance and prospects in Australia’s major overseas markets for agricultural output including Japan. Detailed studies of particular industries are contained in the appendices.


Identifies two approaches, the gravity and intensity models, to study of the determinants of bilateral trade flows and develops projections of Australia-Japan trade flows based on trade intensity analysis. Simple projections are made on the basis of available data and a model is elaborated for the generation of more complex projections which require more detailed data. The projections are claimed to provide a useful framework for longer term policy choices.


Outlines the impact of growth in the mining sector on Australian production and trade in the sixties. The key role of Japanese demand in Australian mining sector growth is described. With this background four broad policy issues are identified as requiring policy action in carefully defined circumstances: problems of concentration in production and marketing; foreign ownership and control; conservation; and externalities such as environmental pollution. The paper argues that there is no general case for policy intervention in the mining industries but policy intervention should be dictated by the particular circumstances of each industry.


Examines the forces shaping the structure of Papua New Guinea’s economic relations with the rest of the world in the years following self-government. The paper stresses the delicate balance to be achieved between domestic, social and economic development aspirations and generating external resources through trade and aid to finance these goals. Trade and investment with Japan is seen as likely to grow rapidly. It concludes that Japan would be wise to develop the non-trade and investment aspects of a development assistance relationship with Papua New Guinea and points to the need for co-operation and understanding between Papua New Guinea, Australia, and Japan.


Notes the growing importance of all light metals as inputs and particularly the rapid growth of output and consumption of aluminium relative to other metals. Japan’s position as producer and consumer in the world has grown in importance and is expected to continue to grow to 1980. In spite of the complexity of the relationship between GNP growth and world consumption of aluminium, it is projected that consumption will continue to grow, if more slowly than in the past, to levels between 17 million tonnes and 26 million tonnes around 1980. It is suggested that there will be reasonable demand growth in Japan and sufficient imports to make up any gap, to 1980. The need for development of raw materials sources is recognised.
and it is hoped that much greater participation by Japanese producers will occur in the development of Australia's large deposits of bauxite.


Australia's large bauxite reserves are currently used mostly in export, and development is largely dominated by the six major aluminium companies in the world. Japan has had relations with major bauxite producing companies since the 1950s but has not yet participated in mine developments. This is seen as forcing Japan to pay higher prices for raw materials. Several projects, potentially harnessing energy to process resources now under study in Australia are, therefore, of considerable interest to Japan. The Pilbara project is the most attractive of these. In view of new estimates of Japan's aluminium demand to 1990 and probable static production capacity, such projects might be the basis of a continuing relationship between Japanese producers and Australian suppliers.


Points out the special features of the Japanese iron and steel industry and the economy in general which have been responsible for the very high rates of expansion compared to other major producers. In particular, exports have acted as a buffer for fluctuations in domestic demand which is particularly sensitive to changes in the level of activity. However, the changing situation of the Japanese economy in the 1970s will have major repercussions for the industry. A slowing of the rate of private investment will mean much slower expansion of domestic demand. Other technological and cost barriers will also slow growth. At the same time Japan does retain significant comparative advantage in iron and steel and moves to locate abroad should be considered carefully as this could involve very significant costs and could be disadvantageous to both parent and host countries.


Explores the role of the Japanese bureaucracy in foreign policy decision-making. The paper examines the background of Foreign Ministry bureaucrats and the role of organisational structure in foreign policy priorities. The links between the bureaucratic and political decision process are also discussed. The limits to bureaucratic power are specified and the conclusion suggests that the foreign policy-making process is not rigid or exclusive but fluid and subject to a variety of influences beyond the bureaucracy.


Examines the effects of Japanese growth and current policy on the resource-rich countries of the Western Pacific region as a whole, taking the Papua New Guinea economy as a case study in development and dependence. The paper then analyses policy aspects of the problem of 'neo-colonialism' stressing the importance, in foreign investment and aid relationships, of the Papua New Guinea Government's maintaining effective control over its own development programs whilst negotiating with foreign organisations for resources necessary to development.


Observes that industries based on cheap sources of energy or producing fuels and minerals are typically capital-intensive and that the principal national benefits from projects in these
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industries come mainly as taxation revenue. A new approach to the taxation of resource rents is suggested which through relating tax rates to profitability allows governments to tax highly profitable projects without deterring investment which \textit{ex ante} appears possibly marginal.


Traces the evolution of policies aimed at the development of a cheap and stable supply of imported oil. The discussion is set in the context of Japan's overall resources policies and resource import dependence. The development of more active procurement policies in the late sixties, the advent of high cost energy and Japan's response to OPEC bargaining are the principal subjects of the paper. The paper draws out the dilemma facing policy makers in choosing alignment with other industrial consumers or the pursuit of an 'independent' oil policy after 1973 and concludes that oil policy will continue to emerge as a delicate compromise between these two interests.


Reviews the policy problems and issues in the Australia-Japan relationship which seem worthy of serious research and the approaches that might be adopted to their comprehensive study. Industry and structural adjustment problems, particularly in labour-intensive manufacturing and agriculture; trade and foreign investment problems; monetary arrangements and stabilisation problems; and relations with other countries are considered the key broad areas for study.


Observes that the United States and Europe generally depend on captive mines for iron ore. Japan relies on long term contract tie-ups and in spite of the use of large carriers the geographical relation of importers and suppliers remains important. Thus the supplying countries around the Atlantic have close ties with the United States and European producers and those around the Pacific with Japan. The large scale of investment needed in iron ore development and technical inflexibilities have made stable long term arrangements necessary. The Australia-Japan relationship therefore has depended on short distances, large port facilities in both Japan and Australia, largescale ore developments and restrictive conditions applying in American and European iron and steel industries. It is necessary that benefit-sharing as has occurred in the past should continue to operate in the face of any price rises. Japan must also recognise the desire for local processing but the problems which attend it may require some kind of government/private enterprise sharing of risks.


Outlines the special features of Japanese investment in Australia which may pose problems. Firstly, although direct investment flows to Australia complement the trade relation this aggravates Japan's unfavourable bilateral balance of trade with Australia and poses exchange rate problems. Secondly, in contrast to the major part of Japan's investment in Asian countries, cheap labour is not the motivation. Australia's high cost labour is a problem. Most of Japan's investment is therefore natural resource development oriented. However, Australia's industrial policies (including high tariff levels), various restrictions on investment
and the political circumstances surrounding a growing resources nationalism are major problems. The continuing issue of Commonwealth/State relations is also vexatious.


Suggests that the reasons for ‘Japanese-type’ investment (according to Professor Kojima’s characterisation) conforming to macro-economic interests are partly its relatively short history and partly the rules laid down by the Ministry of International Trade and Industry. The case of Japan’s investment in Australia’s resources provides an interesting testing ground for several questions of theoretical and practical interest: imperfect supply adjustments under uncertainty, transactions costs in the search for new partners, and the impact of various investment restriction policies. In general high tariffs could be expected to promote investment in import-Competing sectors and therefore reduce economic welfare in Australia. At the same time restrictions on capital inflow will mean a contraction in capital-intensive industries.


Outlines the way in which the Japanese farm household has adjusted to changing economic circumstances in Japan, especially through the growth of non-farm work and earnings by farm households, and the diversification of cropping. It is argued that, with minor exceptions Japanese farmers have not been damaged by agricultural import liberalisation but that the rice price support scheme has buttressed the farm sector. Both papers suggest that farm demography and the costs of agricultural protection will encourage further import liberalisation.


Supplements and updates the earlier paper. Australian exports of grain and sugar benefitted significantly from the boom of 1973-74 while wool, beef, veal, mutton and lamb declined. Australia’s supply of grains is not regarded as stable by Japan while imports of wool and beef also fluctuate considerably. Projections of Australia’s long term supply of agricultural products will depend significantly on Australia finding a market in Japan. An important policy problem to be faced is the instability in Australian grain supply and Japanese demand for wool and beef. Australia has two possible options in maintaining her position in Japan’s market, an economic diplomacy option or a market oriented approach.


Establishes two models with which to analyse the difference in economic welfare which results from final goods and intermediate goods trade. The first is a ‘two level production function’ model and the second one in which each intermediate good is specific to the production of a particular final good. Under the first model trade in either type of good produces the same welfare effect. Under the second model intermediate goods trade produces greater welfare than the closed economy case but less welfare than the final goods trade case.


Sets out the salient characteristics of Japanese direct investment in Oceania, using Bank of Japan and Ministry of International Trade and Industry data. The heavy resource-orientation of investment projects in Oceania is noted as too is the rapid increase in the volume of
investment directed to the region. The very heavy concentration of sales from affiliated firms on the Japanese home market in Oceania contrasts with Japan's overall foreign investment experience and is related to the resource orientation of investment in Oceania.


Analyses the macro-economic conditions in Australia between 1969 and 1973 and the process of recovery from the recession of 1971 led by a recovery in agricultural products' prices and a substantial increase in exports. Explores the degree of protection in Australia by reference to the expected employment and production impact of a 25 per cent tariff reduction, according to the work of Rattigan *et al.*, in 1973. Notes the changed emphasis in policy as a result of the establishment of the Industries Assistance Commission. Also follows the progression of investment policies culminating in the establishment of the Australian Industry Development Corporation.


Observes that during the 1960s expansion of bilateral trade depended on Japan's initiatives. In the new era of international trade represented by the 1970s, the relationship will depend much more on the policy initiatives taken by Australia. Notes that there are two complementary trade flows, industrial and agricultural products and industrial and mineral resources. However economic structures are to a marked degree competitive. Primary industries' share in GNP in Australia is much lower than might be expected and industrial employment distribution is similar in both economies. Protection policies now applied to Japanese agriculture and to Australian manufacturing are also similar. Their all-round protection is costly and inefficient. Co-ordination of policies to give selective protection to those sectors necessary for national security and to encourage participation in the development in Australia of a small number of large export-oriented, internationally competitive manufacturing industries is essential.


Employs input-output techniques to assess the adjustment problems arising from the achievement of an efficient structure of trade. The paper analyses the current structure of trade and the linkages associated with the key export and import-competing sectors. The findings suggest that the Australian economy is more sensitive to changes in imports from Japan than it is to changes in exports to Japan, and that the effects vary greatly among commodities. It is recommended that policy attention therefore needs to be given to micro- perhaps even more than to macro-adjustment problems.


Considers the present structural dependence of the Australian economy on export trade with Japan and develops an analytical framework through which future Japanese demands on Australian export industries might be studied. Input-output techniques are employed and measure the direct and indirect effects of exports to Japan on Australian employment and production.

Presents a new kind of general equilibrium model whereby some of the effects of economic change and the necessary adjustments which follow change induced by policy shifts such as trade liberalisation can be assessed. A programming model is developed to analyse the direct and indirect effects of tariff reductions on production and employment.


Compares Australian and Japanese experience with the import of industrial technology and research and development performance. The structure of local research and development effort is observed to be closely associated with the structure of technology imports. The costs and benefits arising from technology transfer and policies which might be employed to increase the net benefits of international technology transfer are examined.


Japan’s heavy involvement in trade with developing countries is related to the vertical structure of Japanese trade and her reliance on imports of raw materials. The impact of growth on raw material requirements and trade with developing countries; on foreign investment designed to facilitate raw material imports as well as the marketing of industrial exports; and on aid capacity is analysed. The objective of increasing the contribution of official development assistance is stressed as too are balanced relations with resource producers such as Papua New Guinea.


Notes that a significant change in the nature of Japan’s economy and trade had taken place by 1965 and that a resulting change should have occurred in policy thinking. However, the change to a long term, non-protectionist perspective takes time. Similarly Japan’s slow reaction to changed monetary circumstances is understandable. The sharp price rises of the oil crisis provoked a panic reaction but it is now realised that consumption curbs are the necessary weapons for pruning the bargaining power of OPEC. However, it is also clearer now that steady development of the developing countries and solution to the North-South problem are imperative. Japan must be aware of her position in the world economy. This will also require expansion of a liberal trading system in which Japan has made considerable progress. It is reasonable to expect reciprocity from major trade partners such as EEC. Important to the establishment of a new world economic order are the recognition that remaining tariff barriers are slight. GATT will be better served by establishing a ‘fair weather rule’ under which remaining tariffs are removed when the balance of payments situation is favourable but may not be reapplied when the situation is unfavourable. An equally important move is structural adjustment to promote and stimulate trade and within this framework, the knowledge-intensification of the Japanese economy.


Ten years have passed since the original proposal of a Pacific Free Trade Area. It still seems true that elimination of tariffs would have a substantial impact on intra-area trade although calculations of the gain to developing Asian economies suggests the benefits would be less. Several pragmatic first steps to a PAFTA were suggested at the time of the original proposal which involved strengthening functional rather than institutional integration. It seems now,
that PAFTA is still premature not least because the gains would be unevenly distributed with very large benefits going to Japan. Thus, suggestions of government-to-government bilateral consultations within an Organisation for Pacific Trade, Aid and Development would appear sound. There might also be scope for a North-East Asian Organisation along the lines of ASEAN. Changes during those ten years, include the strengthening EEC, the disappointment with GATT and the IMF, problems of developing countries and the emergence of China. The major problems facing the establishment of free trade are Japan’s agricultural protectionism and Australia’s manufacturing protectionism. It is necessary for Australia and Japan to cooperate to increase regional trade by transferring industry in stages to less developed economies. This is essentially similar to proposals for horizontal specialisation between Japan and Australia.


Argues that foreign direct investment and the activities of multinational firms should be trade-oriented and subordinated to free trade policy so as to contribute to the reorganisation of the international division of labour and the growth of trade between advanced and developing countries and amongst the industrialised countries alike. Foreign direct investment can be natural resource-oriented, labour-oriented or market-oriented. The first two are trade-oriented type investment and are characteristic of Japanese investment, hence ‘Japanese type’. The third may be either trade-oriented or anti-trade-oriented. A sub category of the third type, oligopolistic investment, is typically found in American investment in new manufacturing product industries, hence ‘American type’, and is anti-trade-oriented. A code of behaviour should be thought out to ensure that investment policy is subordinated to free trade policy in the interests of all trading countries.


Observes that the world economy in the 1970s faces severe setbacks to continued growth. It will be necessary, as in previous cases of interruptions to world growth, to find a suitable stimulus to overcome the blockage. Development in the Third World is one source of stimulus: linked with a reorganisation of the international division of labour and structural adjustment in all trading countries this could provide a break in the North-South problem. Japan’s long term interests would be well served by increased, organised trade with Third World countries and continuing growth of a liberal trading system. It is clear from the nature of the advanced countries’ trade with the less advanced and from the history of the process of Japanese development that Japan and other advanced countries should develop an integrated aid, investment cum preference, structural adjustment policy to expand harmonious North-South trade relations.


Suggests the basic problem confronting the world economy at present is the oil problem. It is essential to reverse the balance of bargaining power and return to a buyer’s market. Alternative sources of energy must be developed. An internal split in the oil producers’ organisation is to be hoped for. Past experience suggests that cycles of prices for primary products are to be expected. A commodity agreement approach to oil might, therefore, be the best solution. Measures to facilitate recycling of oil dollars are also vital. For Japan various revaluations of the long term structure of the economy are underway as a result of the oil crisis but it is imperative to strengthen the determination to move rapidly towards the knowledge intensification of the economy. While the long term prospects for the Australian econom...
remain unclear it is difficult to detail future relations. However since Australia will continue as a major resource and food supplier and should maintain steady and stable growth, relations will grow and require assurances of friendly relations which transcend commercial calculations.


The Japanese yen had not been fully internationalised while the United States dollar functioned well as the major world currency. However, as the international monetary system broke down and the era of flexible exchange rates was entered there was a greater interest in transactions in yen, to avoid exchange risk. The idea of a Yen Bloc developed with the confrontation between the EC Bloc and the Dollar Bloc. The South-East Asian and Oceanian countries which maintain close relations with Japan would be natural partners in a Yen Bloc. The internationalisation of the yen would require greater liberalisation of transactions and development of a liberalised forward market plus increased transactions (for example, aid) in yen. Since Japan and Australia are close trading partners and will become closer there is an advantage in transactions being carried out in yen. This will avoid the risk involved in use of third country currency, particularly for long term mineral contracts. Required are either fixed spot exchange rates (complete integration) or fluctuating spot rates within a range, and liberalised transactions. Also the operation of a forward market is required.


Explores the overlapping and conflicting interests of Japan and Australia in the multilateral trade negotiations. It suggests that trade policy-making at the unilateral, bilateral, and multilateral levels has been disjointed in Australia; that there has been no special relationship between the two countries in the multilateral negotiations; and that there is a need for internationally agreed rules on the use of export controls and safeguard measures. It concludes that the multilateral negotiations, given the cautious approach of both countries, are unlikely to yield striking gains.


Details the characteristics of the industry at the three stages of production and its prospects in international markets with special reference to Japan. Foreign participation is said to enhance the industry's contribution to Australian welfare and facilitate international marketing of output. Developments in technology and energy costs are said to hold the key to the competitiveness of production at the advanced processing stages, but the industry by and large is identified as one with strong comparative advantage in an Australian location.


Details foreign participation in the Australian minerals industry and addresses the main questions of policy relating to foreign investment, including effective taxation of profits, incentives to exploration and development, and routes to increased Australian ownership. The paper observes that there has been a substantial subsidy to the development of the minerals industry in Australia but suggests that, although much of this has been foreign-based, Australian welfare did not necessarily suffer. The opportunities for expanding the role of joint venture projects are emphasised.

In spite of the difficulties of forecasting a growth rate for GNP in the uncertainty which followed the oil crisis, attempts to forecast energy supply and demand for 1980 and 1985. If growth is 7.8 per cent per annum primary energy demand and supply are 711 million KI oil equivalent in 1980. If growth is 6.9 per cent, demand is 617 million KI oil equivalent. As a result of reduction in the oil supply, Japan's dependence on imported coal will reach its high point around 1980. Thus the long term prospects for trade in other energy sources than the traditional coking coal from Australia are hopeful. These will include steaming coal, gas and oil. Even under the 1973 price of oil, coal was an attractive source of energy for electricity production. Possible future trade in uranium is also viewed with interest.


Examines the operations of the Japanese automobile firms, particularly Toyota and Nissan, in Australia, providing a simple measure of the differences in their product from that of European and Australian makers and analyses of their pricing policies. The factors encouraging Toyota's and Nissan's application for involvement in the local content program are related to each company's position in the Asian-Pacific market for motor vehicles.


Analyses the basic features of the Australian economy as outlined in the Vernon Committee Report and sets up a model to analyse the macro-economic effect of Japanese-Australian trade. Using quarterly trade data is is obvious that trade growth between Japan and Australia has been based on price advantage. It is necessary for the establishment of the model to measure the substitution elasticity of Japan's imports. Similarly for Australia's imports from Japan, the analysis of the bilateral trade flows rests on the analysis of overall import levels and on the determinants (particularly price and economic distance) of the share of a particular country. Thus a model relating the domestic activity levels and trade of both countries can be constructed.


Sets up a model which relates levels of economic activity in each economy with levels of trade between them. Levels of bilateral imports are influenced by changes in the level of autonomous expenditure and by the elasticities of bilateral imports with respect to changes in total expenditure. The impact of a given change in Australia is relatively large considering the small size of the Australian economy in relation to the Japanese. Thus Japan's impact on Australia is only 4.5 times the reverse impact. Price analysis is not so easily carried out but it can be seen that a rise in Japan's import price of raw materials will influence the consumer price level and the wage level while a rise in the price of Australia's industrial imports will cause a fall in domestic price levels and activity.


Presents trade data which is used as the basis of the model in the later paper. Quarterly Japanese imports from the world and from Australia are set out. Difficulties were found in compiling suitable price data, particularly for commodities with very fine gradations such as iron ore. It was decided to use only those prices which were directly relevant to Japan's
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imports. A detailed chronology of policy changes in Australia from 1959-60 to 1971-72, is provided.


Econometrically traces out the effects on the Australian economy of changes in the level of economic activity in Japan by firstly estimating the effects of changes in the level of economic activity in Japan on Japanese imports from Australia and secondly estimating the effects on the Australian economy of the resulting change in Australian exports. A 10 per cent drop in Japanese production is found to increase unemployment in Australia by about one-half of a percentage point. It concludes that the stabilisation problems of interdependence are quite manageable.


Points out that the oil crisis has again drawn attention to Japan's dependence on supplies of natural resources from abroad. Oil, food, minerals and metals imports are seen as a key to Japan's high standards of living. Diversification of resource supply; increased resource processing abroad; energy economisation; resource-saving; and slower growth are seen as important facets of future resource import policy. It is argued that Japan's diplomacy in the age of 'resources nationalism' will be most successful if it continues to be based on the reality of *happo yabure* or a 'defenceless-on-all-sides' diplomatic posture.


Surveys developments in American foreign economic policy towards Japan and the Pacific. The paper stresses the domestic determinants of United States foreign economic policy, its global nature, and the objective of creating a liberal international economic system. It concludes that, whilst economic relations with Japan have been successfully stabilised within the framework of global policy initiatives for the present, a number of important problems, such as energy supply, agriculture, adjustment of key industrial sectors, in the United States-Japan relations are bound to lead to bilateral tension from time to time in the future.


Applies to the Japan-Australia context a critique of theories of the social anthropologist Chie Nakane on exclusiveness in Japanese reactions to other cultures and determinant social and psychological norms. While accepting her insights on Japanese ego-centric social perceptions and verticality in group-oriented social structure, it points to the limitations in static national-character analysis and the resulting misconceptions about conflict and consensus in Japanese social behaviour.


Investigates the development and operation of the exchange market and the techniques and rationale of official control. The balance of payments position and policies between 1952 and 1974 are described and the institutions and operations in the exchange market explained. Despite the progress of post-war exchange liberalisation Japan's exchange market and external capital transactions remain permeated by a system of comprehensive controls which
play an important role in the mix of policy instruments used for macro-economic management in Japan.


Explores the rapid rise in exchange between the two economies not only in trade but in other areas, notably immigration and capital flows. Outlines the reactions of both economies to the changing international monetary situation and details the growing imbalance in the bilateral trade flow. The relatively greater revaluation of the yen than of the Australian dollar was a barrier to expanding Japan's exports to Australia. From Japan's point of view Australia's tariff policy was another such barrier.


Analyses the changes in the trade of the 33 countries on the periphery of the Indian Ocean, with each other and with Japan, between 1968 and 1972. The region accounts for 22 per cent of Japan's exports and 33 per cent of her imports and comprises mostly developing countries with a wide range of natural resources. Development in the region depends on the degree of dependence of the industrialised world on oil, the amount of aid and technical assistance by the developed countries and international agencies, the recycling of oil dollars, and the development, with capital from Japan, West Germany and other large capital exporting countries, of largescale heavy and chemical industries in Western Australia.


Identifies the factors likely to create scope for bargaining in a particular bilateral trade relationship and presents a theoretical model, within whose framework the bargaining process and the likely bargaining outcomes under alternative conditions are examined. It is noted that long term bargaining margins are likely to be relatively small not only in relation to short term bargaining margins but also in relation to the basic levels of the gains from trade. Private cartelisation is generally seen as preferable to government intervention in the bargaining process, but a case can be made for the latter.


Assesses the advantages and problems associated with the export of resource intensive goods under long term contract arrangements, particularly to Japan. The role of long term contracts as a substitute for vertical integration in the minerals-metal trade is analysed and their market access and stabilisation properties evaluated. Proposals are set out whereby the desirable features of long term contracting, from both the suppliers' and buyers' viewpoints, can be preserved under conditions of exchange rate flexibility and inflation. Contracting experience with a number of key mineral and agricultural commodities is surveyed.


Compares the administrative and legal systems in Australia and Japan and contrasts both sharply with that of the United States in the context of regulation of the flow of trade and resources. In Japan and Australia there appear to be few of the domestic legal safeguards which are seen as essential to free international transactions and are endemic in the United
States legal structure. The reconciliation of domestic legal and administrative practices with international commitments is seen not always to be complete, or easy.


Argues that Japan's interests in foreign policy will continue to dictate a low profile defence policy. Six divergent interpretations of Japan's approach to foreign and defence policies in the post-war period are detailed, but none is seen as completely satisfactory. Alternatively, it is argued that there is no paradox in a low defence posture for a great economic power since the costs of external aggression are very high against the benefits, and the writing off of threatened assets and adjustment to external shocks can be accommodated relatively easily from a position of economic strength.


Observes that foreign exchange problems have been fundamental in Australian-Japanese relations since the discovery of mineral resources in the 1960s. To overcome the disadvantages of the Australian system, trading banks should be allowed to hold spot and forward positions, to use a free interbank market and allow exchange rates to respond to supply and demand changes. Trade financing in the Australian dollar should be increased and non-resident accounts permitted. A link between the yen and the Australian dollar is suggested by the fact that both have grown under fixed exchange rate systems, and that Australia is highly dependent on trade and would have to face instability of domestic prices if a genuine floating system is adopted. In view of obvious trade complementarity and interdependence it would be beneficial to fix the exchange rate and free capital movements between the two countries.


Contrasts Japanese science policy with Australian science policy, pointing out that Japanese policy has been largely geared to industrial policy and based upon developed economic and social priorities and objectives. The role of the Japanese Government has been to co-ordinate research effort and define goals and incentives in a national context, especially in guiding the large scale purchase of technology from abroad. Increased government involvement and indigenous research effort accompanied the redirection of national welfare objectives in the seventies. It is suggested that Australia needs to plan research policy on a longer term basis and in this could co-operate with Japan.


Establishes that, unlike Japan, Australia's perception of the importance of its role in the Western Pacific region does not derive fundamentally from the importance of trading and investment relations with these countries. These aspects of Australian relationships with Western Pacific countries are of secondary importance to political relationships, in which Australia conceives its bilateral associations set within an over-arching regional political role. Divergent interests in Papua New Guinea are used to illustrate the need for a regular process of consultation on aid matters in addition to that which takes place multilaterally.

Tries to identify the main elements and mechanism of Australian development by analysing past data and then introduces the external stimulus of the changing structure of trade with Japan to see what effects this is likely to have on development of Australia's heavy and chemical industry. Australian growth since the late 1960s was led by exports, particularly those of minerals to Japan. Australia should now try to develop processing industries to replace the possible failure of raw material exports. Pilbara and similar projects could compensate for lower raw materials exports to Japan.


Surveys the development of Japanese-Australian trade and the changing commodity structure. This is related to the changing structure of Japan's domestic economy. A model of minerals export led growth via the expansion of mining and minerals processing and hence income growth is postulated for Australia since the early sixties. This is in contrast to the import substitution type growth which resulted from population, demand and investment increases, which characterised pre-1960s growth in Australia. The establishment of heavy and chemical industries is a necessary step for continuing growth.


Examines the impact on the domestic economy and on the pattern of imports should Japan import more of her raw materials requirements in processed form, in line with the demand of less developed and other resource exporters. Points out that only this kind of structural change will effectively increase Japan's imports from the less developed countries. Using input-output analysis shows the greater import-saving result from a strategy of holding final goods imports constant and increasing raw materials imports than from a strategy of replacing intermediate goods imports with raw materials.


Explores the evolution of economic thought in post war Japan particularly as it is relevant to the import policy debates of the day. The transition from the 'black age of economics' until the end of the 1950s, in which the profession divided into esoteric orthodoxy and Marxist orthodoxy saw the ascendance of bureaucratic economists such as Okita and Goto. Shimomura and Kanamori growthmanship was later followed by the new liberal economics associated with Komiya. The recent development of radical economics using orthodox techniques of analysis is said to have heralded a period in which, for the first time, neo-classical economists, modern radicals, and neo-Marxists can communicate in the same professional language.


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