STRUCTURAL ADJUSTMENTS IN ASIAN-PACIFIC TRADE

Papers and Proceedings of
The Fifth Pacific Trade and Development Conference
sponsored by
The Japan Economic Research Center and
The Japan Institute of International Affairs
January 1973

Edited
by
Kiyoshi Kojima

Volume II

Center Paper No. 21

July, 1973

THE JAPAN ECONOMIC RESEARCH CENTER
TOKYO
CONTENTS

VOLUME I

Foreword .................................................. iii
Editor's Preface ............................................ iv
List of Participants ........................................ vi
Communique ................................................. ix

Part I  Problems in the World Economy

1. Greater European Economic Integration, Jean Royer ........ 3
   Comments and Discussion .................................. 41

2. The Impact of the Emergence of China on Asian-Pacific
   Trade, Shigeru Ishikawa ................................ 48
   Comments and Discussion .................................. 80

Part II  Industrialization and Trade Growth
   in Developing Countries

3. Trade and Industrialization Policies: The Political
   Economy of the Second Best, Helen Hughes .............. 89
   Comments and Discussion .................................. 116

4. The Growth of Exports and Economic Development in Labor
   Surplus Economies - With Particular Reference to
   Korea, Taiwan, and Hong Kong, Soon Chough .............. 121
   Comments and Discussion .................................. 146

5. Trade Policy and Problems of Export Expansion - The
   Case of Southeast Asia, Seiji Naya and Udom Kerdpibule.. 151
   Comments and Discussion .................................. 187
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Author(s)</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Latin American Growth and Trade Strategies in the Post-War Period</td>
<td>Miguel S. Wionozek</td>
<td>191</td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>230</td>
</tr>
<tr>
<td></td>
<td><strong>Volume II</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part III</td>
<td>Structural Adjustment in Advanced Countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The Japanese Economy - An Introduction to its Industrial Adjustment</td>
<td>Nobuyoshi Namiki</td>
<td>241</td>
</tr>
<tr>
<td></td>
<td>Problems, Nobuyoshi Namiki</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>282</td>
</tr>
<tr>
<td>8</td>
<td>Structural Adjustment of Japanese Agriculture,</td>
<td>Kenzo Hemmi</td>
<td>289</td>
</tr>
<tr>
<td></td>
<td>Kenzo Hemmi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>305</td>
</tr>
<tr>
<td>9</td>
<td>The Assessment of Adjustment Problems in Australian Trade,</td>
<td>David E. James</td>
<td>311</td>
</tr>
<tr>
<td></td>
<td>David E. James</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>351</td>
</tr>
<tr>
<td>10</td>
<td>The Direction of New Zealand's Industry, Trade and</td>
<td>F. W. Holmes</td>
<td>356</td>
</tr>
<tr>
<td></td>
<td>External Economic Policies,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>F. W. Holmes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>379</td>
</tr>
<tr>
<td>11</td>
<td>The U.S. Economy and International Trade,</td>
<td>Lawrence B. Krause</td>
<td>385</td>
</tr>
<tr>
<td></td>
<td>Lawrence B. Krause</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>414</td>
</tr>
<tr>
<td>12</td>
<td>Trade Liberalization and National Adjustment Policy -</td>
<td>H. Edward English</td>
<td>420</td>
</tr>
<tr>
<td></td>
<td>The Canadian Case,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H. Edward English</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Comments and Discussion</td>
<td></td>
<td>454</td>
</tr>
<tr>
<td></td>
<td><strong>Part IV Summary</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Summary, Hugh T. Patrick</td>
<td></td>
<td>461</td>
</tr>
<tr>
<td></td>
<td>Discussion</td>
<td></td>
<td>475</td>
</tr>
<tr>
<td></td>
<td>************</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program of the Conference</td>
<td></td>
<td>477</td>
</tr>
</tbody>
</table>
PART III

STRUCTURAL ADJUSTMENT IN ADVANCED COUNTRIES
The industrial structure of a country changes according to such factors as its adaptability to changes in the international economy, changes in the domestic demand structure, technical progress and changes in its resource conditions.

Changes in industrial structure involve industrial adjustment. Industrial adjustment implies that some enterprises, finding it difficult to continue on the same line of business in consequence of changes in the situation around it, either decides to transfer into another industrial sector or to remain in the same sector but change its production method (technology or raw materials) in order to lower costs and improve quality.

Our country has experienced the highest economic growth among leading industrial countries and this fact alone indicates a high degree of structural change due to such factors as adaptation to the international economic environment, changes in demand and technology, changes in resource conditions and the like as well as the role of industrial adjustment through a process of creative destruction.

Industrial adjustment takes different forms in different industries, according to the size of the enterprise and the timing of adjustment. The scale factor does not operate independently of the nature of the industry, but in the following pages they are discussed separately for the sake of convenience. As a supplement to the
general explanation of adjustment problems government policies are also explained.

To show the characteristics of industrial adjustment in the Japanese economy it is convenient to take up some important concrete cases. The textile and mining industries are chosen to illustrate the adjustment problems and analyze the policy problems in this paper.

Furthermore, as international economic relations becomes closer, especially with the progress of industrialization in developing countries, it is vitally important for the sound development of the international economic relations to settle the problems of the international industrial adjustment smoothly. Finally, some policy proposals are presented. In sum, this paper examines the following four points:

1. The problem of industrial adjustment by sectors.
2. The problem of industrial adjustment by scale of firm.
   (Supplementary to (1), (2) an outline of Government policies)
3. The problem of how to handle adjustment problems in particular industries and what the policies should be adopted.
4. A proposal for international economic policy and international industrial adjustment problems.

1. Problems of Industrial Adjustment by Sectors

First of all, to outline the problem statistics relating to the changes of the long-range production, employment and trade structure are presented (Tables 1-6).

These macro data, by showing the high growth rate and the wide structural fluctuations in the Japanese economy, suggest a high probability of the occurrence of adjustment problems in the Japanese economy.

These macro-data do not show the micro-changes hidden behind them; namely, they do not show any essentially important features of the social, economic, managerial, cultural or political changes, but only a rough outline of the adjustment problems involved.

The growth of Japanese industry is due, in large part, to its highly sensitive reactions to the changes in the rest of the world. Japan, troubled by the shortage of foreign currencies, tried to see
through every trend of international demand, and to make every ef-
fort to develop industries to meet that demand.

The domestic production structure supporting exports was well
maintained, often through various forms of industrial adjustment,
and exports grew at a rate higher than the world average. (For the
period 1960-67, SITC Class 5: World trade, 10.4 percent; Japan's
export, 25.1 percent. SITC Class 7: World trade, 10.7 percent;
Japan's export, 24.1 percent. SITC Classes 6 & 8: World trade, 8.2
percent; Japan's export, 13.8 percent.)

Japan's imports are alleged to have been institutionally controll-
ed to a great extent, but, whether or not this was in fact the case,
this image should change within a few years.

Seen from bilateral point of view, Japan's restrictions have not
been worse than the position of her partners, because there have
been sizeable discriminatory restrictions toward Japan, and Japan
has no bilateral discriminatory restrictions. Relaxation of what
controls have existed or do now exist will also call for industrial
adjustment.

Adjustment in the form of industrial conversion takes place when-
ever the labor, capital, technology, land or the main products which
compose an enterprise change to meet a new situation. However, our
data only show when an enterprise changes its product. Data relat-
ed to industrial adjustment are included in the Basic Integrated
Survey of Medium and Small Enterprises and the Census of Manufactures.
As the "Medium and Small Enterprises Survey" attempts to clarify
the special features of medium and small enterprises, it clarifies
the features of enterprises of all sizes and is, therefore, useful
when studying the state of industrial adjustment. However, the sur-
vey applies only to a limited period.

On the other hand, Census of Manufactures are tabulated contin-
uously, but the items relating to industrial adjustment were added
only quite recently. Consequently, Census of Manufactures also cov-
ers only a limited period. However, the items in the Census of
Manufactures almost coincide with those in the Medium and Small En-
terprises Survey, so that one can study a fairly long period by com-
bining the two. We have, in this way, estimated conversion statis-
Of course, there is no total item concerning industrial conversion shown in the ordinary publication of Census of Manufactures. So, we have retotalled every inquiry sheet and results are utilized in this article.

These data are rarely found in any country and are quite valuable, because they can be used to trace the change of activity of businesses in the manufacturing industry. However, entry from other industries into manufacturing industry and exit from manufacturing industry to other industries is, unfortunately, not traceable. Also, since there exists no statistical survey on the non-manufacturing industries, we have only been able to use fragmentary questionnaires in that area.

The problem of the industrial adjustment is not only a problem of manufacturing industry, but also of agriculture, and of the tertiary industry.

Utilizing this fragmentary information, I will outline the conversion problems of non-manufacturing industries to make clear the characteristics seen in the adjustment of Japanese manufacturing industry.

1-1. Conversion in agriculture

Professor Hemmi is to report on Japanese agriculture, so I will outline only the essential features seen in the conversion of work in agriculture.

The adjustment problems in Japan's agriculture and that in America's are quite different. The biggest difference between Japan and America lies in the fact that younger members of a Japanese farming family leave home in search of a new work in urban districts while other family members stay behind to continue their work; in the American farming family, if the father leaves all the family members will follow him. This is the usual case in America and the conversion of work is performed at a time and not over time. D.G. Johnson found that 80 percent of those leaving their farms are leaving with their all family members, and this rate is far higher than Johnson expected.

The following reasons might be given for this difference: (1) Reforms in Japan after World War II made all farmers landowners. Partly, perhaps, because of an increase in the value of farm land,
the whole family often does not want to leave the farm. (2) As a result of agricultural policy, the prices of agricultural products have been artificially supported. Also, as a result of Japan's economic growth, the extra income from non-farming work has increased. Thus, farmers' incomes tend to exceed those of non-farmers.

Although many opportunities for part-time employment exist for farmers willing to commute, young people and those unable to find employment near their farms often leave home to work. Such work may involve seasonal labor as construction workers when the farm does not require intensive labor (off farming season), or it may involve work in the manufacturing industry.

How Japanese agriculture in 10-20 years will be affected by the present movement of young people to the cities will very much depend on future policies concerning agriculture.

This movement of conversion over time or adjustment accompanying the change in generation, in turn, affects, directly or indirectly, adjustment in other industries.

1-2. Adjustment in manufacturing industry

The rate of conversion in manufacturing industry by sectors is shown in Table 7. Data on the 1960-62 and 1964-67 periods are from The Medium and Small Enterprises Survey and data on the 1967-69 period are from the Census of Manufactures. Though the sources of statistics differ, we can conclude that there is rising trend of rate of conversion in Japanese manufacturing industry.

When we look at the rate of conversion every two years, we find it rising. Rates of conversion are: 1960-62, 9.6 percent; 1964-66, 12.7 percent; 1967-69, 15.1 percent. The way in which these rates are obtained can be seen in the following example. From 1967 through to 1969, 49,024 enterprises in manufacturing industry converted production, and, during the same period, 325,625 manufacturing enterprises continued in the same business. The work conversion rate is thus 15.1 percent (49,024/325,625).

Conversion rates in the manufacturing field differ according to the kind of industry. Among industries which have high work conversion rates (above 12 percent) are transportation machinery, electric machinery, industrial machinery, precision machinery; among those which have rather high rates (12 percent - 6.2 percent) are non-
ferrous metals, iron and steel, rubber, chemicals, leather; some which have rather low rates (6.2 percent - 3 percent) are clothing, oil, coal, furniture, paper, pulp, timber; and some of those with quite low rates (3 percent and below) are provisions, textiles, publishing, printing, and ceramics.

There is some relation between the conversion rate of a certain industry and its growth rate. Among those industries with high conversion rates, the growth-rate is high in all except iron and steel and rubber, while those which have low conversion rates, with the exception of furniture and ceramics, have a low growth rate. Generally speaking, conversion is active in growing industries and sluggish in stagnant industries.

We traced the fields into which the 23,386 establishments (offices, factories etc. not always the enterprises themselves) which converted their business from 1968 through 1969 went. In the provisions, rubber, leather and ceramics industries, destinations are irregular, but the following industries tended to go into the fields to which the arrows point: textiles - clothing; timber - furniture or other manufacturing industries such as paper and pulp; paper, pulp - publishing, printing and other manufacturing industries; iron and steel - metal, machinery; non-ferrous metal - metal, industrial machinery, electric machinery, transportation machinery; industrial machinery - metal, transportation machinery, electric machinery; electric machinery - metal, industrial machinery; transportation machinery - metal, industrial machinery; precision machinery - electric machinery, metal, industrial machinery.

These conversions might be classified into two general categories. In cases such as textile - clothing or timber - furniture, industries moved vertically into fields requiring more processing or intensified information. In the conversion of machinery manufacturing enterprises, the aim might have been to further development of a division in the enterprise. Conversion on establishment-base is the development of division of business seen on enterprise-base.

There are a few cases which appear to be the reverse of the above: something like "clothing - textile". They are, however, exceptions to what seems to be a justifiable rule.

When conversion aims at the progress of processing and development of division of business, as mentioned above, it is not incon-
sistent to find that the conversion rate is high in the highly developed growing sectors and low in the sectors with low growth rate. However, we have no information about firms which have retired from manufacturing industry to non-manufacturing industry. This is a serious weakness in the survey as was mentioned previously. If conversion from manufacturing to non-manufacturing sector is undertaken, it was probably from a low growing sector rather than from a high growing one, but there are no statistics to prove this.

Twenty industries are classified according to their growth rate and a matrix of exit and entry between different kinds of industries made. This matrix is shown in Figure 1. It is a percentage distribution chart with a total exit number of 100. Every section with a dot shows 10 percent and blank sections less than 10 percent. One has to observe the efforts of the enterprises in low-growth industries to transform themselves into highly processing industries and also the successes of the enterprises in high-growth industries to become multifarious conglomerate-type enterprises. However, conversion has its limits and the new business or an enterprise usually has a close relation to its previous business.

The survey of the actual conditions of medium and small enterprises which undertook conversion were compiled by the Medium and Small Enterprises Agency in December, 1971 produced the following results: (1) Equipment: Using old, 54.0 percent; Using part of old, 34.9 percent; Using totally new, 11.1 percent. (2) Technology: Using old, 40.8 percent; Using part of old, 44.9 percent; Using totally new, 14.3 percent. (3) Customers: Almost no change, 25.7 percent; Partly changed, 54.1 percent; Totally changed, 20.2 percent.

This survey was supposed to have focussed on enterprises which had strong prospects for work conversion, so production technology and customers total renovation of each item of equipment is thought to have been pushed ahead strongly. Inspite of this upward bias the results show that these enterprises still hung on the old shadows of their previous business activities.

As mentioned previously, in the provisions, rubber, leather, and ceramic industries the destinations of conversion are comparatively irregular, which means that it is hard to find an activity into which it is suitable to convert. In conversion by means of a generation change from agriculture, there is no regular destination either.
As to conversion performance the following evidence is available.

Using data from the *Medium and Small Scale Enterprises Movement Analysis* put out by the Medium and Small Scale Enterprises Agency, we compared the rate of growth of value added per ten employees of enterprises which stayed in the same business and converted enterprises during the period 1967-69. We found that the rate of growth in only three manufacturing industries (paper-pulp, oil-coal, iron-steel) out of 20, were higher in the former enterprises than the latter. In the remaining 17 industries, converted enterprises were doing better than those following the same line of business. Generally speaking, the conversion of these enterprises can be considered successful.

Conversion to a highly developed industry is said to have shown a growth rate on the average 23 percent higher than conversion to a low-growth industry. However, an irregular growth rate was found in highly developed industries in which there is much competition (statistically the standard deviation is much higher).

1-3. Conversion in the service industry

In the service industry, the change of demand structure, flow of distribution, competition and other factors are the chief causes of conversions.

We have no authentic statistical survey on these cases, but some inquiry survey and case study results compiled by the Medium and Small Enterprises Promotion Association and the Kyoto Prefectural Office give us an idea of conversion in the industry.

An increasingly large variety of articles are handled in wholesale business. Also, wholesale establishments may convert to retail business handling the same kinds of articles. The following conversions were seen: textile goods wholesale → restaurant, hotel, clothing; personal effects wholesale → restaurant, transportation; textile article wholesale → paper processed article manufacture, agricultural and livestock products; marine products wholesale → provision manufacture; construction materials wholesale → timber, wooden articles manufacture. Conversions from service industry to manufacturing industry, like cases of conversions within manufacturing industries, show the tendency of enterprises to enter fields related to that in which they had dealt previously.
Also, enterprises are often converted into restaurants.

Examples of conversions of retailers are: drapery and bedding - provisions retail, motor car maintenance; shoes and other footwear - restaurant, furniture, utensils; provisions + restaurant, clothing, personal effects; fish-restaurant, clothing, personal effects; confectionary, bakery + restaurant.

Generally speaking, a retail business is easy to open and, in consequence, it is apt to face competition. When articles retailers handle are low-growth or sunset articles, conversion is necessary. In this case, quite often one sees conversion caused by generation change as seen in agriculture, but if the proprietor is not retiring he will try to convert his business to any other retail business or restaurant.

Examples of conversions in various service industries are: restaurant + hotel, game center or pin-ball hall; freight car transportation + car maintenance; barber + furniture, utensil retail; movies + provisions retail, restaurant, game center or pin-ball hall.

These cases make Japanese feel the reality of gigantic social changes. At the base of these conversions are changes of social customs which mark the coming of a new age.

Conversions to the service industries and conversion within the service industries require further clarification because of lack of data. This is not the case only in Japan, but also throughout the world. It would be worth proceeding with the analysis by taking into consideration such fundamental currents as the progress of the distribution revolution, the evolution of the leisure industry, the influence of the progress of so-called informationization. The leading sector of an economic development and the straggler in a social adjustment exist alongside each other in the so-called service industry and offer challenging subjects for policy-making.

2. Problems of Industrial Adjustment by Scale of Firm

2-1. Conversion of medium size firm

According to the survey by the Medium and Small Enterprises Agency shown in Table 8, the number of employees is decreasing in enterprises with 10-49 employees, and the number of employees is increas-
ing in enterprises with 200-999 employees.

These data on changes in the size of enterprises were based on enterprises which have not converted production. They can, however, be used to forecast the chance of success in conversions by scale of the firm.

According to the survey made by the Medium and Small Enterprises Promotion Association in 1967, conversions of comparatively large firms are said to have a higher chance of success. The critical scale for decreases or increases in size differs according to the kind of industry. For example, in the provision industry, 50-99 employees is considered the critical scale. Enterprises having fewer than 50 employees are apt to decrease the number of employees, and those with more than 99 employees are apt to increase the number of employees. In clothing industry, 30-49 employees is the critical scale.

The importance of size in industrial adjustment can be seen in the case of branch factories established by clothing manufacturers of Gyoda City, Saitama Pref. Gyoda City was once the chief district for production of a special type of Japanese socks (Tabi). In answer to a change in demand, the enterprises converted their time-honored manufacture of Japanese socks to the manufacture of children's clothes, school uniforms and work clothes, a conversion which was highly successful. What attracts attention here is the fact that several enterprises of Gyoda have, or are now constructing, branch factories in the Tohoku region, an area where surplus labor for sewing can still be found. K Company is constructing a branch factory for 100 workers in Akita Pref. L Company has a factory with 100 workers in Miyagi Pref. and K Company has a factory with 80 workers in Iwate Pref. Success would not have been possible for these companies with a smaller number of employees in each branch factory.

In short, technology, capital, market exploitation, etc. are necessary for conversion, and the chance of success is higher in larger enterprises.

2-2. Conversion of small firm

According to the recalculated data of the Census of Manufactures, in every manufacturing industry, without exception, linear ratios exist between the size of an enterprise, the rate of capital accumu-
lation per worker and the size of value added per worker. Thus, when the firm is small, neither technology nor capital are intensive; value added per worker is low and, in consequence, wages are also low. Low productivity (value added per worker) is the result of the difference of the bargaining power between small and big firms, and of low physical productivity.

In the process of economic growth rising wage levels place small enterprises in a difficult position. There is pressure to small enterprises to convert and many conversions take place. Through the new entry of former employed workers who became independent and also of the falls from large size enterprises the absolute number of small enterprises will never decrease. On the other hand average plants in manufacturing industries will keep growing in size (Table 9).

When these small enterprises convert themselves, what forms would they take?

To show the direction in which one small enterprise industry converted, we might consider the case of artificial flower. The artificial flower manufacturing industry was dealt a hard blow by the entry of flowers from Hong Kong into the Japanese market. The number of members of the association of the industry in 1968 was 181, but from 1959 to 1968, 117 had left the association. The breakdown of those leaving was: close of business, 52; change of work, 38; others, 27. Conversion destinations of provision retail, hotel, real estate, recreation service, and apartment house management were reported. The destinations were all, in a broad sense, service industries. Most enterprises converted during the period 1961-63 when the industry was strongly affected by the import of flowers from Hong Kong.

The textile industry offers another example, as the industry was severely affected by the Japan-America Textile Agreement and many textile enterprises were obliged to change their production. The new fields entered were as follows: white-collar workers in companies, 22 percent; business related to the textile industry (secondary processing and retail), 16 percent; agriculture, 14 percent; service 8 percent; other manufacturing business, 5 percent; retire from business and others, 3 percent; undecided, 25 percent. Converted textile manufacturers were small enterprises.
A quarter of converted manufacturers of textile goods changed to other businesses within the manufacturing industry, and the remaining three-fourths converted into other areas. The fact that 14 percent of the employees of the textile industry turned to farm work shows that textile manufacture is highly localized and that textile manufacturers and farmers had certain close ties before the conversion. Through agriculture, in the final analysis the conversion is by the process of generation change.

When small manufacturers try to change their work, they eventually tend to go into the service industry or other industries other than manufacturing. For instance, in the case of machine processing subcontractors, conversion involves a change to secondary subcontraction work, then tertiary subcontraction work and finally factory work (or other work in the manufacturing or service industries). Generally, conversion converges to the conversion by the process of generation alteration.

2-3. Conversion of large scale firm

Large enterprises have become increasingly multifarious, as they often must develop into conglomerates in their search for survival opportunities. Enterprises to which they turn are usually in non-manufacturing industries; leisure, real estate, housing, city building industry, etc. On some occasions a bank may establish a new company, taking the initiative to let a large manufacturing enterprise enter a new field.

The conversion of a large enterprise is a very serious problem. This paper which aims to examine industrial adjustment problems in connection with the development of international economic relation, is not mainly concerned with this problem, so it will be left aside here.

The Outline of Government Policies

Japan follows two broad policies for the furtherance of industrial conversion. First of all, the government exerts its influence on the decisions of entrepreneurs and other businessmen by its long-, medium-, and short-range forecasts.

The government and large enterprises in a modern industrial country, from their respective points of view often make such economic forecasts. The forecasts can then be coordinated implicitly (as in
case of the United States and the Federal Republic of Germany) or explicitly and institutionally (as in case of Japan and France). The coordination formula adopted in the latter case is the so-called *l'économie concertée* formula. The Japanese and French coordination systems, implemented according to this formula, resemble each other to a fairly large extent, in the organization of coordinating public and private forecasts and the content of deliberations made on these forecasts. The fundamental difference is that the chairmanship of a French council for such deliberations is assumed by a government representative and its reporters are also government officials, whereas a similar Japanese council is chaired by a private sector representative and its reporters are also people from private circles. In a sense, the Japanese private sector charts its own economic course. In this sense the concept of "Japan Inc." is illusory to some extent. As is pointed out in a report by the Department of Commerce of the United States, the government can play leadership in a restricted field. Deliberations are carried out more democratically than in France as noted above, relating to the coordination of public and private opinions and predictions, and the chances that the private sector will be affected by the coordination are higher.

The second broad policy is that which aims at furthering industrial adjustment. This includes financing by the government financial organisations and tax prerogatives. Among the organisations involved are the Japan Development Bank, the Small Enterprise Finance Corporation, and the People's Finance Corporation. The Small Enterprise Promotion Corporation also provides low-interest loans to small enterprises capable of meeting the specified requirements.

The tax prerogatives include accelerated depreciation (according to the Small Enterprise Modernization Promotion Law, the Law Concerning Provisional Measures for Small Business Against Preferential Tariffs, and the Law on Provisional Measures for Small Business Concerning the Enforcement of International Economic Adjustment Measures) and a system to provide reserves of fund for the structural modernization of the small business sector (according to the Small Business Modernization Subsidization Law).

These policy measures are virtually directed, as far as industrial adjustment is concerned, for small enterprises: and, with re-
spect to large enterprises, they mainly rely on the guidelines
delineated in general accordance with the first broad policy. This
can be attributed to the fact that while the rapidly growing Japan-
ese economy could, in general, afford industrial conversion, the
large business sector could overcome difficulties rather easily,
but the small business sector could not always do so.

The following section will furnish noteworthy examples of the
support provided by the Japanese Government for industrial adjust-
ment, and through these examples the main features of adjustment
assistance policies will be clarified.

3. Policies to Handle Adjustment Problems

In Japan, the problem of industrial conversion is taken as a
structural problem for each industrial sector. In the United States,
it is taken as the direct problem of each enterprise and its work-
ers.

Section 2 above touched on the problem of industrial conversion,
and discussed the characteristic of the problem. Yet the observa-
tions made in that section remained mainly on a macro economic
level, and did not go into the depths of the peculiarities of Japa-
nese industrial adjustment. Hence here in this section, two model
cases will be cited to demonstrate more concretely how the industrial
adjustment problem is handled in Japan and what policies are taken
to solve the problem. The cases relate to the textile sector and
the mining sector (Here, coal mining and sulfur mining). They will
not only serve as the prime examples of industrial adjustment in
Japan, but also as rare cases allowing international comparison.

3-1. Industrial adjustment in the mining sector

The main industrial adjustment problems in the mining sector re-
sult from the development and dissemination of new energies (the
energy revolution), the competition of some products (like sulfur)
with by-products due to the enforcement of anti-pollution measures,
the drain of energy resources, and the pollution caused by some
products (like copper). Take sulfur as an example. It has been
most heavily influenced by the changes in external situation.

3-1-1. Adjustment in sulfur mining
Production of recovered sulfur in Japan started in 1955 with 5,000 tonnes (metric tons). Along with the full-scale enforcement of antipollution measures and resort to the method of desulfurization with heavy oil, the output of recovered sulfur made a steep climb to 379,000 tonnes in 1971. This was more than 90 per cent of Japan's total sulfur output (419,000 tonnes). (Japan's recovered sulfur output rose from 46,000 tonnes in 1965 to 88,000 tonnes in 1968 and increased more than fourfold from 1968 to 1971.)

On the other hand, Japan's output of mine sulfure reached 258,000 tonnes or a new high in 1957, was on the decrease due to a business depression, to 214,000 tonnes or a new low in 1965. In step with business recovery, output turned for the better, and reached 260,000 tonnes in 1967. Affected by the sharp rise of the recovered sulfur output, mine sulfur output dropped sharply to only 43,000 tonnes in 1971.

To cope with this situation, the Mining Council, an advisory organ to the Minister of International Trade and Industry, submitted report "On Policy Measures for the Sulfur" to the minister in July 1968. In July 1969, the Commerce and Industry Committee of the House of Representatives adopted a resolution calling for the "Establishment of Policy for Sulfure". In response to these steps, the Government took such measures as (1) the formulation of a sulfur demand-and-supply program, (2) the promotion of sulfur exports with emphasis placed on recovered sulfur, and (3) the subsidization of sulfur mines for the rationalization of their operations. (Government expenditures made for this purpose from 1968 to 1970 totaled 38,690,000 yen).

Despite this, affected by declining sulfur exports and spiralling labor costs, one sulfur mine after another was closed down. The number of employees continued to decrease from 6,000 in 1965 to 2,700 in 1970, and the decrease is still going on.

The emphasis of government policy for the sulfure mines, many of which were closed down, was on the maintenance of reserves for retirement allowances. When the Matsuo Sulfur Mine, the biggest in Japan, was closed down, the oil refineries, at the Government's request, contributed 150 million yen for allowances for retiring sulfur miners. At the closing-down of such sulfur mines as Horobetsu, Ogushi, Ishizu and Kokonoe, the Government asked the oil refin-
eries to contribute 22,000 tonnes of recovered sulfur (worth 154 million yen), and appropriated the sum thus raised for retirement allowances. When the Matsuo Mine converted its sulfur mining operations into pyrite mining operations, the non-ferrous metal producers contributed 60 million yen in support of the conversion.

In this way the conversion (or closing-down) of sulfur mines was realized with the cooperation of affiliated industries rather than by disbursements from the Treasury. It attests, in a sense, to the competence of the industrial policy-making authorities that the difficulties of the sulfur mining companies were overcome not by the appropriation of taxes, a contribution by the general public, but by contributions from affiliated industries.

In addition, it is likely that the sulfur problem will develop into a more complex one as the products of waste gas emitted by non-ferrous metal producers, pyrite, and recovered sulfur compete to become a resource for the production of sulfuric acid. It is also anticipated that there will arise competition between the gypsum produced as a by-product of sulfuric acid and mine gypsum. These problems are now under the deliberation by the Government.

3-1-2. Adjustment in coal mining

Japan's coal output reached 55,410,000 tonnes or a new high in fiscal 1961, then went down because of the energy revolution. The figure for fiscal 1972 is estimated at 27,500,000 tonnes. The regular workers employed by the coal mines totalled 366,000 in fiscal 1952 (the output for the fiscal year was 43,750,000 tonnes), a new high, but the figure dropped to 34,000 in fiscal 1972, or less than 10 percent of the peak figure.

Japan's coal mines passed from the so-called "priority production" period right after the end of World War II to a period of increased and efficient production, and now entered a period of decreased but efficient production.

The fact that while employment in the coal mines dropped after 1952, output continued to rise till 1961 demonstrates that the period was one of increased and efficient production. In that period output rose by 11,670,000 tonnes, but employment dropped by 154,000 as per capita (monthly) output rose from 9.9 tonnes to 21.7 tonnes. The weight carried by coal in the distribution of energies dropped
from 47 to 31 percent. During the period of decreased but efficient production from 1962, conversion or the closing-down of coal mines was going at full swing. The coal output for 1967 was 47,060,000 tonnes, or just short of 50-million-tonnes, and employment was 92,000 just short of 100,000. Both output and employment continued to drop steeply to 27,500,000 tonnes and 34,000 workers in 1971. In terms of per capita coal output, Japan ranks above France and the United Kingdom, but below the German Federal Republic.

Japan's coal output for 1975 is expected to be 20 million tonnes. It is anticipated that the figure for 1980 will be short of the 10-million-tonnes because of the difficulty of recruiting a sufficient labor force and other difficulties. The labor force available at that time will be no more than 10,000. Young coal miners below 35 of age accounted for only 2.5 percent (8,500 miners) of Japan's total coal miners as of March 1972 compared with 52.6 percent (140,000 miners) in December 1958. West European countries are also making adjustment in the area of coal mines. The United Kingdom which has maintained its coal output at a comparatively high level estimates its output for 1975 will run at 118 million tonnes as against 154.3 million tonnes for 1970. The German Federal Republic estimates coal consumption for 1975 at 80 million tonnes as against the 88.7 million-tonnes for 1970 (97.5 million tonnes consumed and 8.8 million tonnes imported). Considering the increasing coal imports, the German Federal Republic's coal output for 1975 might well be around 60 million tonnes. France estimates its coal output for 1975 at 25 million tonnes as against 39.9 million tonnes for 1970. France's estimated production in 1975 is, thus, closest to that estimated for Japan.

The production of coal mines in Europe and Japan will be inevitably reduced as other sources of energy gain in importance.

Next compare the Japanese and European performance in the adjustment of their coal mines. It is considered appropriate to compare them in terms of the per-ton cost of conversion and closing-down, the contribution to regional reforms and development, and the efficiency of conversion.

In comparing the costs incurred in conversion and closing-down, a difficulty arises in that expenditure accounts on conversion and closing down vary from country to country. To make a comparison of
the actual government expenditures for coal mines, the per-ton expenditures in France and Japan are respectively 2,460 yen (for 1970) and 2,200 yen (for 1972). The Japanese figure for 1970 was 1,827 yen. Since there was, a per ton 250 yen loss on the Japanese coal mines in the same year, from the calculation above one can conclude that the Japanese 1970 figure may actually have been slightly less than the French figure. The per-ton coal price of the German Federal Republic is higher by about 1,500 yen than the Japanese price, because of the tariff quota and the fuel consumption tax in the Republic. There was an expenditure of 600 yen per ton in 1971 and a loss of 1,450 yen per ton on Ruhr Coal, a joint stock company. It can therefore be said that the social cost on the maintenance of Japanese coal mines is slightly less than the German cost.

As regards the regional performance, Japanese coal mines in general are not well located to make a contribution to regional reforms and development of the high-rate of economic growth and also the coal-producing regional development projects (implemented from 1962 to 1971 at the total expense of 89,600 million yen). But it may be said that the regional problems were kept from becoming worse.

Concerning the efficiency of conversion, the conversion and closing-down of Japanese coal mines might have helped promote the high rate of economic growth.

Some coal mining companies (like P.J.M.) started full preparations for conversion as early as 1965, began to branch into new industrial lines, and separated their coal mining departments from 1969 to 1970 in consideration of the timing and other conditions for going into new lines. The new lines were mostly in the tertiary-industry category, involving real estate development (the construction of housing units), tourism, the refining of non-ferrous metals (as joint enterprises with affiliated companies), and other areas in which coal mining companies could make use of their specialized technologies. A case in point is Taiheiyo Coal Mining Company, a company which is not an affiliate of a Zaibatsu group. Since 1960 or so, the company had been creating subsidiaries producing raw concrete, oil products, and air-conditioning equipment. In 1967 the company established Taiheiyo Kohatsu Kaisha for real estate development. The new company made smooth development. So the company made
its coal mining department independent, and absorbed and merged Taiheiyo Kohatsu and another subsidiary. At the same time the company was renamed Taiheiyo Kohatsu Kaisha, by assuming the name of the subsidiary in real estate development. In one year after the restart, the company's real estate development department returned 4,300 million yen including 300 million yen in profits. Its coal sales department returned 13,900 million yen with no profit. It proved a plus factor that agreement had been reached between the management and the union on the conversion. Conversion is often delayed when labor and management are pitted against each other.

It can be said that the conversion of Japanese coal mining companies is going smoothly thanks to their own efforts, an appropriate government conversion policy, and a high-rate of economic growth.

3-2. Adjustment problems of the textile sector

The Government has thus far taken four major policies for structural improvement of the Japanese textile sector. The first policy was implemented according to the Law concerning Provisional Measures on Equipment of Textile Industry of 1956 (old law). The second was implemented by the Law Concerning Provisional Measures on Equipment Textile Industry (revised of the former law) of 1964. The third was based on the Law concerning Provisional Measures on the Structural Improvement of Specially Designated Textile Industries of 1967, and the fourth was the Provisional Special Policy for the Textile Industry of 1971, which was implemented according to the governmental textile agreement concluded between Japan and the United States. Since 1970, an additional policy according to the Small Enterprise Modernization Promotion Law has been implemented for the small business sector. (Also, several recommendations on operational curtailment and depression cartels were adopted as business adjustment measures.)

The policies taken in 1956 and 1964 were basically aimed at disposing of surplus equipment. For this purpose an equipment registration system was adopted so that only the registered equipment might be used. Surplus equipment was to be stored, sealed, or scrapped. The storing, sealing and scrapping costs were, in principle, covered by related enterprises with no aid from the Government. The latter policy differed from the former in two ways: a scrap-and-build system was adopted to encourage the voluntary scrapping of
surplus equipment and surplus equipment for chemical and synthetic textiles was disposed of through the cooperation of "concerted economy" between Government and the industry.

The 1967 policy was adopted to allow the textile sector to recover from the effects of the structural improvement of the industry's counterparts in advanced countries, the American long-term-agreement formula, the rapid strides of developing countries in this field, the slowing-down of demand, and the labor shortage. Its aims were (1) the disposal of surplus equipment, (2) equipment modernization, and (3) enlargement of scale to enable them to cope with larger enterprises, and the grouping of small enterprises. The following are the rates of achievement in structural improvement in various industries of the textile sector. The spinning industry achieved 68 percent in equipment modernization, and 100 percent in disposal of surplus equipment. Nine groups were formed in the industry. The weaving industry achieved 69.6 percent in equipment modernization, 23 percent in disposal of surplus equipment, and 67.9 percent in the grouping of weaving enterprises. The knit goods industry achieved 17.4 percent in the grouping of enterprises and 20.7 percent in equipment modernization. The dyeing industry achieved 17.5 percent in the grouping of enterprises and 56 percent in equipment modernization. The rates were measured in 1971 against the annual structural improvement programs framed for the industries from 1969 to 1973.

By and large, the achievement rates for equipment modernization are high, whereas the rates for disposal of surplus equipment and the grouping of enterprises are low. The surplus equipment of the spinning industry was disposed of as scheduled by the programs, because the industry consists mostly of large enterprises. It is difficult to step up the disposal of surplus equipment in an industry composed of small enterprises. For example, some small enterprises in the weaving industry are concurrently engaged in farming. They can make do with small profits and are unwilling to dispose of their equipment.

The Law concerning Provisional Measures on the Structural Improvement of Specially Designated Textile Industries specified that the government would provide low-interest loans for equipment modernization. As an encouragement for equipment disposal, those enterprises in the weaving industry which had suspended more operations than
scheduled were eligible for a subsidy equal to half the excess cost incurred on the part of the suspension over the planned level. The subsidy was small, and a greater part of the cost not to be covered by the subsidy was borne by enterprises in proportion to number of looms held by them. According to the laws of 1964 and 1967, government subsidies were granted in exceptional cases, and the cost incurred on structural modernization was mainly covered by the enterprises. The Government was willing to give advice rather than money.

However, things have changed since textiles became a problem between Japan and the United States. Even before the conclusion of the Japan-U.S. textile agreement, it was decided by the government to subsidize 90 percent of the cost of the scrapping to lessen the damage incurred by the decrease of export to United States, and after the conclusion of the agreement, percentage was advanced to 100. Why government gave such subsidies? This is because the textile issue was settled by a governmental agreement.

Such a subsidy was granted also on the grounds that final beneficiary of such subsidy is the exporters of developing countries, because they can increase their export at the expense of Japanese enterprises to whom subsidy was granted. The government subsidies thus provided by September 1972 amounted to 26,564 million yen.

In view of the fact that the 1967 law is to lose effect in 1974, the Government is now studying a plan for the textile sector. The plan will be (1) to develop the sewing industry so as to make it branch off into the manufacture of garments, (2) to integrate the spinning industry (materials), the weaving industry (finished textiles), and the secondary textile product industry so as to reorganize the whole textile sector, and (3) to upgrade, diversify and fashion secondary products according to modern tastes. It is anticipated that new adjustment problems will crop up as the textile industry progresses in this new direction. What will become of the government subsidy that has greatly been increased by the Law concerning Provisional Measures on the Structural Improvement of Specially Designated Textile Industries? The Japanese textile producers have learned much from the import restrictions imposed on themselves, and there is the possibility that they will claim such restrictions of import on their own behalf. It seems that the only alternative to import restriction is adjustment assistance, as pointed out in the Culvert Report of the Foreign Economic Policy Subcommit-
tee, Foreign Relations Committee of the U.S. Senate.

And after U.S.-Japan textile issue, it seems that such an idea has been accepted gradually in Japan. In this way, the harmonization of the producers' interest and taxpayers' will become important.

4. International Industrial Adjustment and International Economic Policy

In discussing the problems of industrial adjustment in Japan, we have just explained the case of textile industry. To discuss the problem, one has to face the issue of international industrial adjustment as a part of international economic policy of which the other part is occupied by international monetary adjustment.

4-1. International industrial adjustment and international economic system

As the maintenance of harmonious relations between the currency system and the industrial organization of a country is the minimum requirement for ensuring its economic development, so the maintenance of smooth relations between the international currency system and the international industrial organization is the minimum requirement for ensuring the healthy development of the world economy.

It is desirable that the present international currency system be reformed by the adoption of the Special Drawing Right standard and the so-called "crawling-peg" system. Businessmen as well as economists, are beginning to see the necessity of this reform, and it is likely that the reform will be realized.

On the other hand, for smooth operation of the international industrial system, safeguards against the disruption of international industrial activities and the establishment of an Industrial Conversion Fund within each advanced country must be proposed.

The international adjustment of national industries must be carried out with an understanding of changes in the conditions of competitiveness between the advanced countries and the developing countries. Various factors must be considered such as differences in factor proportions, the transfer of technology and capital, and the literacy of the peoples involved, etc.

In an industry in which developing countries can have roughly
the same conditions as advanced countries with respect to raw materials and technology, for instance, in the cotton industry, there is a limit to advanced countries' absorption of the wage gap with the productivity gap. Imported cotton goods accounted for 2.1 percent of America's domestic consumption in 1955, but this percentage increased to 6 percent in 1960. This caused the conclusion of the Long-Term Agreement on Cotton Goods.

When the United States was making an issue of competition with low-price countries such as developing countries, in cotton goods, the EEC was making an issue of competition with low-price countries in textile goods, chinaware, sewing machines and metal toys. The "GREMZE Report" issued in April 1960 and named after the Chief of the Textile Affairs Section of Germany's Ministry of Economy, schemed to counter low-price countries by adopting a mixed tariff system - the system of imposing specific duties on low-price commodities, as its formal title "Tariffs as Trade Policy Measures Against Low-Price Countries" indicated. (This plan was not realized after all.)

This question of "low-price commodities", which accompanies the industrialization of developing countries, raised a new problem for GATT. At its 15th general meeting (Tokyo) in the autumn of 1959, U.S. Undersecretary of State DILLON proposed that effective countermeasures against it be considered.

In response to this proposal, the definition of "market disruption" was decided. According to this definition, the following factors constitute market disruption:

1. A sharp and substantive increase, or the possibility thereof, in the import of a specific product from a specific source.
2. Offering at a price considerably lower, in reality, than the dominating price of a comparable, similar product on the market of an importing country.
3. Grave injury, or the danger thereof, to producers in an importing country.
4. The price differential in 2 is not attributable to the Government's interference with price formation or price decision, nor to a dumping practice.

Defining market disruption thus (November 19, 1960), GATT decided to establish a Committee on Market Disruption. This Committee was supposed to implement action plans not detrimental to right-duty
relations of GATT, by securing a multilateral approach and yet without causing injury to third countries and incurring trade restrictions. It was plain, however, that this move was designed to impose discriminatory restrictions on developing countries and Japan. It was the cotton industry that was feeling then the need for such action plans most strongly and concretely. The Long-Term Agreement on Cotton Goods materialised in February 1962. So, the Committee on Market Disruption ended without actually conducting its activities.

Thus, the question of safeguard has the role of advanced countries' counteraction against the promotion of developing countries' industrialization besides the role of a safety valve against the promotion of liberalization.

In view of the fact that such a tendency is very harmful for the sound development of the international economy, we feel the need to grope toward desirable safeguard measures.

Safeguard should be given the position of one nucleus in international economic policies. By "one nucleus" I mean not that safeguard measures will settle all problems but that while safeguard measures are to play an important role, various countries should be requested to take such forward-looking measures as tariff reduction and the abolition of quantitative restrictions and other non-tariff barriers (NTB) for the forward-looking development of the international economy. In other words, when these liberalization measures make headway, new safeguard measures will display their real value, keeping in step with this march forward.

New safeguards must achieve the following policy goals:

1. Promotion of industrial rationalization and conversion in advanced countries.
2. Promotion of developing countries' economic growth by pushing their industrialization.
3. Effective distribution of resources in the world by means of 1 and 2.

Of these policy goals, no advanced country should adopt a negative approach "promotion of industrial rationalization and conversion in advanced countries", but we can hardly say that this is making progress in reality. Is this due to fund restrictions or to the strong protectionist tendency in the world economy in general?
As for 2, industrialization of developing countries, UNCTAD pushed to the fore the "preferential treatment" approach under the influence of PREBISCH's fondness of Latin-type political splendor. But cool observation of the reality makes it clear that a more effective method is for advanced countries to promote industrial conversion and to refrain from import restrictions. One effective method, therefore, will be for UNCTAD to pass a resolution providing that advanced countries set aside a certain portion of their GNP (e.g. 0.1 percent) as industrial conversion funds.

Developing countries will not oppose this, because 1 percent of the GNP will be used for aid to themselves. Neither will advanced countries be able to oppose it, because the funds will be used for their own industrial conversion. The existence of such funds will build up a mood for promoting conversion in itself.

Lastly, concerning 3, effective distribution of resources in the world, the problem is that agricultural difficulties can hardly be streamlined by countermeasures. However, effective distribution of resources centering on secondary industries has been pushed considerably, and this is expected to exert good effects on tertiary and primary industries.

I think that the framework of new safeguards for achieving these policy goals should consist of the following points:

1. Condition for invocation

The condition for invoking a safeguard is market disruption, as explained earlier.

What is important is whether or not it is possible to determine objectively the four factors constituting market disruption. For instance, as for the first factor, a sharp and substantive increase in imports, an increase in imports may well be a relative increase as compared with an importing country's domestic production, if not an absolute increase over the previous year, according to the interpretation of Article 19 of GATT. This leaves considerable latitude for judgment. The second factor (price differential) and the third factor (non-existence of the Government's interference and dumping) can be determined relatively objectively, but there is a considerable limit to the objective determination of the third factor, serious injury or the danger thereof. It is possible to use various related indices, such as the rate of imports against domestic con-
sumption, an increase or decrease in employment in the industry concerned, an increase or decrease in domestic production, price fluctuations, and an increase or decrease in earnings, but it is impossible to formulate an objective general rule applicable to all industries.

Despite this question, I will take market disruption as the condition for invocation. The question of subjectivity in making a judgment will be left to be covered by other various factors.

2. Forms of invocation

As the forms of invocation, various cases can be considered such as (a) unilateral invocation in an emergency, but consultations afterward, (b) invocation after prior notice and prior consultations, and (c) invocation only with prior notice and without consultations or even in case consultations have fallen through. Such cases are provided for in Article 19 of GATT. As a rule, invocation should be with prior notice and prior consultations (b). In short, the governments of various countries in the world should conduct constant and careful studies on the industries in their own countries and competitive countries lest they should be surprise-attacked by a sharp increase in imports.

3. Concrete measures for invocation

As a concrete measure for invoking a safeguard, either a tariff rise or quantitative restrictions can be taken. This concurs with the provisions of Article 19 of GATT. According to the examples of invocation of Article 19 of GATT, a little less than 40 percent of the whole adopted quantitative restrictions and a little more than 60 percent raised tariffs (or withdrew concessions).

4. Guarantee of access

A safeguard-invoking country must guarantee access to its own market by a country, against which it is invoked. What comes into question in this case is how to determine the standard period (standard quantity) for assuring access and how to determine the growth rate in the future. As the standard period, one year back to six months before the date when the problem is alleged to have appeared, is taken, and the import amount during that one year is taken as the standard quantity. With regard to the growth rate in the future,
the actual growth rate in three years up to the standard period is taken as the minimum. In case this rate is minus, the minimum is levelling-off. The standard period and standard growth rate are general rules. Depending on the concrete situation, they can naturally be changed after consultation. In case the concrete form of invoking safeguard is a rise in tariffs, the concrete form of guaranteeing access will be a tariff quota, under which the quantity in the standard year or the tariff rates before the tariff increase are to be applied, and the tariff quota amount is to be increased at a certain rate. When the concrete form of invoking safeguard is quantitative restrictions, the quantity in the standard year is to be taken as the standard, and this restricted quantity is to be increased at a certain rate.

5. Retaliatory measures

One of the difficult problems of safeguard measures is the handling of retaliatory measures.

The retaliatory measures provided for by the LTA are indirect. Article 7 of this Agreement provides that a country affected by import restrictions can request the other party to conduct consultations. In case consultations have broken down, the question can be referred to the Cotton Goods Committee. The opinion of this Cotton Goods Committee is to be taken into consideration by a group of contracting parties when the problem is referred to this group through the procedures stipulated in Article 23 of GATT. Inasmuch as Article 23 of GATT provides for remedy in the case of nullification or violation of GATT-granted interests, it will be possible to take retaliatory measures at this stage, depending on the situation.

On the other hand, bilateral safeguard provisions invariably provide for retaliatory measures. For instance, the safeguard provisions between Japan and France and between Japan and Benelux permit an importing country to impose quantitative import restrictions under certain conditions and provide that an exporting country can impose quantitative import restrictions, as a countermeasure, within the limit of not exceeding the effect of the measures taken by the importing country. The safeguard between Japan and Britain does not specify the measures to be taken by an importing country, unlike the cases of Japan-France and Japan-Benelux. It does not specify either the countermeasures to be taken by an exporting country.
These are the provisions for countermeasures under the existing safeguards. How should countermeasures be under a new safeguard system? To prevent the abuse of safeguards, countermeasures should be recognized. But it is too much, we may say, to recognize countermeasures even in the case of industrial adjustment compelled by developing countries' growth. As a consequence, as an intermediate plan between these two, I propose that an importing country offer compensation unilaterally, without recognizing an exporting country's countermeasures. The propriety of this compensation will be subject to scrutiny and recommendation by a safeguard committee.

6. Term of safeguard

Varied terms of validity of safeguard should be set up for individual industries. The term of safeguard should be determined by whether or not rationalization and conversion of the industry concerned is difficult. As the concrete standards, the labor-capital equipment ratio, the most appropriate technical scale, the degree of popularization of technology and the novelty of the industry concerned should be referred to. For determining this term, two- or three-year long concentrated preparatory work by a panel of first-rate economists and administrators will be necessary. The term of safeguard is the period of continuous application of safeguard, for instance, one year for cotton spinning, 1.5 years for chemical fibre spinning, two years for chemical fertilizer and three to four years for iron and steel etc. To determine it will be extremely difficult, but to do such work will greatly improve the contents of economics as a positive science.

7. Prohibition of extension, conditions for re-invocation

When safeguard is invoked, extension thereof after the expiration of the term mentioned in 6 will not be permitted.

Safeguard for one and the same industry cannot be re-invoked at least before the same length of time as the safeguard term for that industry (or 1.5 times thereof) passes after the expiration of its safeguard term.

Any violation of this will become an object of a penalty to be determined separately.

8. Preparation of rationalization plan and conversion plan
A country that has invoked safeguard is to prepare a rationalization plan and a conversion plan for the industry concerned and release them within three months after invocation. Funds for these rationalization and conversion plans will be disbursed out of the Industrial Conversion Fund. These plans will be revised periodically, if need be.

9. Safeguard Committee's investigation and recommendations

In case safeguard is invoked, the Safeguard Committee will examine the rationalization and conversion plans mentioned in 8 and will make recommendations thereon, if necessary. It will meet periodically, analyze the development of various conditions surrounding the safeguard invoked and make recommendations, if necessary.

10. Non-discriminatory application

Application of safeguard measures should be non-discriminatory; discriminatory application will not be permitted. This is necessary for preventing misuse.

That is the outline of new safeguard measures. As can be seen, the safeguard measures themselves have built-in factors not only for protection but also for promoting industrial conversion. In other words, they are aimed at promoting conversion of protected infantile industries in developing countries into new export industries, at allowing advanced countries minimum time required for their efforts to convert or rationalize their affected industries and at pushing rational and progressive development of the industrial structure in the world economy.

This, coupled with the above-mentioned Industrial Conversion Fund based on an UNCTAD resolution, will control the spread of the protectionist tendency in the world and will enable forward-looking thinking to gain strength in five to ten years to come.

Under present political conditions, it appears that import restrictions are more favorably accepted than industrial adjustment, but import restrictions must be avoided by all means.

The U.S. Congress gave no approval to the Administration's 1970 trade bill to make more flexible the applicable standards of the Trade Expansion Act relating to adjustment aid, but it is said that the U.S. Tariff Commission is adopting the spirit of the 1970 bill.
Determinations made by the commission in 1969 on alleged damages amounted to 4, although no determinations of this kind had been made until that year. The figure rose to 9 in 1970. The determinations mostly related to the workers' eligibility to damages, but it seems that adjustment assistance of the United States has just got under way. The Congressional appropriations for industrial adjustment increased from $26 million in fiscal 1971 to $110 million in fiscal 1972.

On the other hand, OECD in Chapter 5 of the Report by the High Level Group on Trade and Related Problems maintains that, in view of the great significance of the safeguards clause of the report relating to the adjustment problem, common rules and procedures should be established. The report in its spirit basically agrees with the proposals made in this paper. It is our hope that the proposals will be used as reference material for bringing the report into effect.
### Table 1: International Comparison in the Growth Rate of Real GNP and Industrial Production

(Unit: Percentage at annual rate)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Period</th>
<th>Prewar period</th>
<th>Postwar period</th>
<th>GNP in 1970 (100 millions of dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>3.8</td>
<td>4.4</td>
<td>11.1</td>
<td>1,962</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>3.9</td>
<td>4.3</td>
<td>4.1</td>
<td>9,741</td>
</tr>
<tr>
<td>U.K.</td>
<td>1.9</td>
<td>1.9</td>
<td>2.8</td>
<td>1,210</td>
</tr>
<tr>
<td>France</td>
<td>1.1</td>
<td>0.9</td>
<td>(60-69)5.8</td>
<td>(69) 1,415</td>
</tr>
<tr>
<td>West Germans</td>
<td>-</td>
<td>-</td>
<td>4.8</td>
<td>1,855</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Countries</th>
<th>Period</th>
<th>1880-1910</th>
<th>1910-1930</th>
<th>1960-1970</th>
<th>Industrial production (100 millions of dollar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>20.9</td>
<td>8.0</td>
<td>14.4</td>
<td>1,920</td>
<td></td>
</tr>
<tr>
<td>U.S.A.</td>
<td>4.3</td>
<td>2.4</td>
<td>4.9</td>
<td>6,400</td>
<td></td>
</tr>
<tr>
<td>U.K.</td>
<td>1.6</td>
<td>0.8</td>
<td>2.9</td>
<td>960</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>-</td>
<td>-</td>
<td>6.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Germans</td>
<td>4.4</td>
<td>0</td>
<td>6.0</td>
<td>1,430</td>
<td></td>
</tr>
</tbody>
</table>


### Table 2: Change in Work Force

(Unit: Thousands of persons, percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population</th>
<th>Work force</th>
<th>Percentage composition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary industry</td>
<td>Secondary industry</td>
</tr>
<tr>
<td>1880</td>
<td>36,649</td>
<td>16,076</td>
<td>1,092</td>
</tr>
<tr>
<td>1900</td>
<td>43,847</td>
<td>17,331</td>
<td>3,427</td>
</tr>
<tr>
<td>1920</td>
<td>55,391</td>
<td>14,441</td>
<td>5,576</td>
</tr>
<tr>
<td>1940</td>
<td>72,500</td>
<td>14,192</td>
<td>8,419</td>
</tr>
</tbody>
</table>
Table 2 Change in Work Force (Continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total population</th>
<th>Work force</th>
<th>Percentage composition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Primary industry</td>
<td>Secondary industry</td>
</tr>
<tr>
<td>1947</td>
<td>78,101</td>
<td>17,812</td>
<td>7,427</td>
</tr>
<tr>
<td>1950</td>
<td>83,200</td>
<td>17,208</td>
<td>7,812</td>
</tr>
<tr>
<td>1960</td>
<td>93,900</td>
<td>14,346</td>
<td>12,731</td>
</tr>
<tr>
<td>1970</td>
<td>103,356</td>
<td>10,066</td>
<td>17,651</td>
</tr>
</tbody>
</table>

Principal countries

|                       | U.S.A. (1969)    | 203,213      | 3,606        | 24,225          | 50,071 | 77,902 | 4.6  | 31.1 | 64.3 | 100.0 |
|                       | U.K. (1965)      | 55,283       | 423          | 10,835          | 13,625 | 24,883 | 1.7  | 43.5 | 54.8 | 100.0 |
|                       | France (1965)    | 49,920       | 3,121        | 7,796           | 8,824  | 19,741 | 15.8 | 39.5 | 44.7 | 100.0 |
|                       | W. Germany (1969)| 58,707       | 2,533        | 12,936          | 11,353 | 26,822 | 9.4  | 48.2 | 42.3 | 100.0 |

Source: As for Table 1.

Table 3 Changes in the Distribution of National Income by Industry
(Unit: percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>Primary industry</th>
<th>Secondary industry</th>
<th>Tertiary industry</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1880</td>
<td>41.9</td>
<td>17.9</td>
<td>40.2</td>
<td>100.0</td>
</tr>
<tr>
<td>1900</td>
<td>33.8</td>
<td>24.4</td>
<td>41.8</td>
<td>100.0</td>
</tr>
<tr>
<td>1920</td>
<td>28.7</td>
<td>26.9</td>
<td>44.4</td>
<td>100.0</td>
</tr>
<tr>
<td>1940</td>
<td>24.2</td>
<td>35.8</td>
<td>40.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1947</td>
<td>35.4</td>
<td>28.6</td>
<td>36.0</td>
<td>100.0</td>
</tr>
<tr>
<td>1950</td>
<td>26.0</td>
<td>31.8</td>
<td>42.2</td>
<td>100.0</td>
</tr>
<tr>
<td>1960</td>
<td>15.6</td>
<td>37.5</td>
<td>46.9</td>
<td>100.0</td>
</tr>
<tr>
<td>1970</td>
<td>8.9</td>
<td>39.2</td>
<td>51.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table 3  Changes in the Distribution of National Income by Industry (Continued)

<table>
<thead>
<tr>
<th>Year</th>
<th>Primary industry</th>
<th>Secondary industry</th>
<th>Tertiary industry</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>U. S. A. (1969)</td>
<td>3.2</td>
<td>35.8</td>
<td>61.0</td>
</tr>
<tr>
<td></td>
<td>U. K. (&quot; )</td>
<td>3.1</td>
<td>43.5</td>
<td>53.4</td>
</tr>
<tr>
<td></td>
<td>France (&quot; )</td>
<td>6.1</td>
<td>46.3</td>
<td>47.8</td>
</tr>
<tr>
<td></td>
<td>W. Germany (&quot; )</td>
<td>3.6</td>
<td>54.4</td>
<td>42.0</td>
</tr>
</tbody>
</table>

Source: As for Table 1.

Table 4  Changes in the Composition of Industrial Production
(Unit: percentage)

<table>
<thead>
<tr>
<th>Year</th>
<th>Foodstuff</th>
<th>Light-Industry</th>
<th>Heavy-Industry</th>
<th>Grand total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Foodstuff</td>
<td>Textiles</td>
<td>Wood products</td>
<td>Total</td>
</tr>
<tr>
<td>---------</td>
<td>-----------</td>
<td>----------------</td>
<td>----------------</td>
<td>-------------</td>
</tr>
<tr>
<td>1900</td>
<td>18.4</td>
<td>50.6</td>
<td>2.7</td>
<td>80.4</td>
</tr>
<tr>
<td>1920</td>
<td>13.4</td>
<td>44.4</td>
<td>3.4</td>
<td>72.8</td>
</tr>
<tr>
<td>1930</td>
<td>16.1</td>
<td>38.0</td>
<td>2.8</td>
<td>64.6</td>
</tr>
<tr>
<td>1940</td>
<td>9.1</td>
<td>18.4</td>
<td>3.8</td>
<td>30.0</td>
</tr>
<tr>
<td>1947</td>
<td>9.8</td>
<td>11.7</td>
<td>9.4</td>
<td>43.5</td>
</tr>
<tr>
<td>1950</td>
<td>13.5</td>
<td>23.2</td>
<td>4.6</td>
<td>55.8</td>
</tr>
<tr>
<td>1960</td>
<td>12.4</td>
<td>12.4</td>
<td>4.5</td>
<td>43.6</td>
</tr>
<tr>
<td>1970</td>
<td>10.3</td>
<td>7.7</td>
<td>4.2</td>
<td>37.8</td>
</tr>
</tbody>
</table>
Table 5  Changes in the Composition of Industrial Production
(Unit: percentage)

<table>
<thead>
<tr>
<th>Countries</th>
<th>Year</th>
<th>Light-Industry</th>
<th></th>
<th>Heavy-Industry</th>
<th></th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Foodstuff Textiles Wood Total</td>
<td>Machinery Metals Chemicals Total</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U. S. A.</td>
<td>1939 (1)</td>
<td>15.7 14.6     4.9 55.6</td>
<td></td>
<td>25.2 8.9 10.3 44.4</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>1953 (1)</td>
<td>13.5 7.7      4.0 45.6</td>
<td></td>
<td>29.0 14.9 8.7 54.4</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>1967 (2)</td>
<td>10.9 6.9      3.5 41.2</td>
<td></td>
<td>33.1 14.4 9.0 58.6</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>U. K.</td>
<td>1935 (1)</td>
<td>15.6 19.0     3.3 56.4</td>
<td></td>
<td>28.2 7.3 8.1 43.6</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>1954 (3)</td>
<td>10.4 14.7     3.0 42.9</td>
<td></td>
<td>34.2 14.3 8.6 57.1</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>1963 (3)</td>
<td>11.7 10.9     2.8 41.2</td>
<td></td>
<td>35.7 13.4 9.7 59.8</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td>W. Germany</td>
<td>1936 (4)</td>
<td>19.3 14.7     4.2 49.5</td>
<td></td>
<td>20.9 22.0 7.7 50.6</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>1955 (4)</td>
<td>15.3 12.0     3.8 45.4</td>
<td></td>
<td>25.6 19.1 7.9 54.6</td>
<td></td>
<td>100.0</td>
</tr>
<tr>
<td></td>
<td>1967 (4)</td>
<td>15.7 7.7      3.2 39.9</td>
<td></td>
<td>28.6 16.1 10.4 60.1</td>
<td></td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: As for Table 1.
Note: * means that these figures for U.S.A. are the figures for primary metal products.

Table 6  Changes in the Composition of Exports, by Commodity
(Unit: percentage)

<table>
<thead>
<tr>
<th>Item</th>
<th>Year</th>
<th>1850</th>
<th>1900</th>
<th>1920</th>
<th>1930</th>
<th>1955</th>
<th>1960</th>
<th>1965</th>
<th>1970</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food and tabacco</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.4</td>
</tr>
<tr>
<td>(Tea)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.0)</td>
</tr>
<tr>
<td>Crude Materials and fuels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>Textiles</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.6</td>
</tr>
<tr>
<td>Raw-silk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.0)</td>
</tr>
<tr>
<td>Cotton yarns &amp; thread</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(0.0)</td>
<td></td>
</tr>
<tr>
<td>Cotton fabrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(1.0)</td>
</tr>
</tbody>
</table>
Table 6 Changes in the Composition of Exports, by Commodity (Continued)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rayon and Spun Rayon fabrics</td>
<td>( - )</td>
<td>( - )</td>
<td>( - )</td>
<td>( 2.4)</td>
<td>( 7.1)</td>
<td>( 4.3)</td>
<td>( 1.9)</td>
<td>( 0.5)</td>
</tr>
<tr>
<td>Synthetic fabrics</td>
<td>( - )</td>
<td>( - )</td>
<td>( - )</td>
<td>( - )</td>
<td>( - )</td>
<td>( 0.8)</td>
<td>( 2.2)</td>
<td>( 3.3)</td>
</tr>
<tr>
<td>Clothing</td>
<td>(0.1)</td>
<td>( 3.0)</td>
<td>( 4.0)</td>
<td>( 4.1)</td>
<td>( 5.3)</td>
<td>( 5.5)</td>
<td>( 3.4)</td>
<td>( 2.4)</td>
</tr>
<tr>
<td>Non-metallic mineral manufacture</td>
<td>1.9</td>
<td>1.7</td>
<td>3.4</td>
<td>3.3</td>
<td>6.4</td>
<td>4.2</td>
<td>3.1</td>
<td>1.9</td>
</tr>
<tr>
<td>China ware</td>
<td>(1.7)</td>
<td>( 1.2)</td>
<td>( 1.6)</td>
<td>( 1.9)</td>
<td>( 2.1)</td>
<td>( 1.7)</td>
<td>( 1.0)</td>
<td>( 0.7)</td>
</tr>
<tr>
<td>Cement</td>
<td>( - )</td>
<td>( 0.1)</td>
<td>( 0.5)</td>
<td>( 0.7)</td>
<td>( 1.1)</td>
<td>( 0.6)</td>
<td>( 0.3)</td>
<td>( 0.2)</td>
</tr>
<tr>
<td>Paper &amp; manufacture thereof</td>
<td>0.4</td>
<td>0.9</td>
<td>1.9</td>
<td>2.3</td>
<td>0.9</td>
<td>1.3</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>Others</td>
<td>4.4</td>
<td>9.4</td>
<td>7.3</td>
<td>7.0</td>
<td>7.5</td>
<td>11.5</td>
<td>9.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Toys</td>
<td>( - )</td>
<td>( 0.2)</td>
<td>( 1.1)</td>
<td>( 0.8)</td>
<td>( 2.1)</td>
<td>( 2.2)</td>
<td>( 1.2)</td>
<td>( 0.7)</td>
</tr>
<tr>
<td>Plywood</td>
<td>( - )</td>
<td>( - )</td>
<td>( - )</td>
<td>( 0.04)</td>
<td>( 0.2)</td>
<td>( 1.5)</td>
<td>( 0.8)</td>
<td>( 0.4)</td>
</tr>
</tbody>
</table>

| Heavy-Industry                  |      |      |      |      |      |      |      |      |
| Machinery and equipment         | 0   | 0.3 | 3.1 | 3.1 | 13.8| 25.6| 35.4| 45.6 |
| Vessels                         | ( - )|( 0.0)|( 0.8)|( 0.3)|( 3.9)|( 7.2)|( 8.9)|( 7.3)|
| Motor Vehicles                  | ( - )|( - )|( - )|( - )|( 0.3)|( 1.9)|( 2.8)|( 7.0)|
| T.V. Receivers                  | ( - )|( - )|( - )|( - )|( - )|( 0.07)|( 1.0)|( 2.0)|
| Textile machines                | ( - )|( 0.0)|( 0.2)|( 0.3)|( 1.3)|( 1.2)|( 1.0)|( 1.0)|
| Watches and clocks              | ( - )|( 0.1)|( 0.07)|( 0.1)|( 0.09)|( 0.09)|( 0.3)|( 0.2)|
| Metal products                  | 4.0 | 7.1 | 3.5 | 3.8 | 19.3| 14.1| 20.5| 19.9 |
| Iron & steel products           | ( - )|( - )|( 0.7)|( 0.6)|(12.9)|( 9.6)|(15.4)|(14.9)|
| Chemicals                       | 4.2 | 4.9 | 4.7 | 2.5 | 4.7 | 4.5 | 6.5 | 6.5 |
| Fertilizers                     | ( - )|( - )|( 0.1)|( 0.1)|( 2.1)|( 1.5)|( 1.9)|( 0.8)|
| total                           | 8.2 |12.3 |11.3 | 9.4 |37.8 |44.2 |62.4 |73.0 |
| Grand Total (millions of yen)   | 27.9|200.2|1,915.9|1,434.6|720,966|1,454,320|3,025,293|6,898,729|
Table 7 Rate of Conversion in Manufacturing Industry by Sector

(Unit: %)

<table>
<thead>
<tr>
<th></th>
<th>1960-62 rate of conversion</th>
<th>64-66 rate of conversion</th>
<th>67-69 rate of conversion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing industry Total</td>
<td>9.6</td>
<td>12.7</td>
<td>15.6</td>
</tr>
<tr>
<td>Foods</td>
<td>2.8</td>
<td>3.4</td>
<td>5.9</td>
</tr>
<tr>
<td>Textiles</td>
<td>5.0</td>
<td>8.7</td>
<td>7.3</td>
</tr>
<tr>
<td>Clothes</td>
<td>6.6</td>
<td>11.3</td>
<td>16.1</td>
</tr>
<tr>
<td>Lumber and products</td>
<td>4.2</td>
<td>9.9</td>
<td>9.7</td>
</tr>
<tr>
<td>Furniture</td>
<td>5.3</td>
<td>9.5</td>
<td>16.8</td>
</tr>
<tr>
<td>Paper and Pulp</td>
<td>6.0</td>
<td>12.2</td>
<td>17.1</td>
</tr>
<tr>
<td>Printing and Publishing</td>
<td>4.0</td>
<td>7.3</td>
<td>9.2</td>
</tr>
<tr>
<td>Chemicals</td>
<td>2.4</td>
<td>11.9</td>
<td>15.1</td>
</tr>
<tr>
<td>Petroleum and Coal</td>
<td>4.0</td>
<td>5.0</td>
<td>21.0</td>
</tr>
<tr>
<td>Rubber</td>
<td>4.5</td>
<td>14.0</td>
<td>19.9</td>
</tr>
<tr>
<td>Leather</td>
<td>3.4</td>
<td>11.5</td>
<td>18.9</td>
</tr>
<tr>
<td>Ceramics</td>
<td>4.0</td>
<td>7.4</td>
<td>9.0</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>13.3</td>
<td>21.2</td>
<td>19.3</td>
</tr>
<tr>
<td>Non ferrous metals</td>
<td>13.4</td>
<td>20.6</td>
<td>22.1</td>
</tr>
<tr>
<td>Metals</td>
<td>10.7</td>
<td>25.4</td>
<td>25.8</td>
</tr>
<tr>
<td>Industrial Machinery</td>
<td>21.3</td>
<td>34.3</td>
<td>25.3</td>
</tr>
<tr>
<td>Electric Machinery</td>
<td>21.8</td>
<td>32.2</td>
<td>27.6</td>
</tr>
<tr>
<td>Transportation Machinery</td>
<td>11.7</td>
<td>27.4</td>
<td>38.6</td>
</tr>
<tr>
<td>Precision Machinery</td>
<td>12.9</td>
<td>21.4</td>
<td>26.8</td>
</tr>
<tr>
<td>Other manufactures</td>
<td>5.9</td>
<td>13.9</td>
<td>21.7</td>
</tr>
</tbody>
</table>

Table 8 Manufacturing Industry Conversions by Scale of Firm
(Unit: percentage)

<table>
<thead>
<tr>
<th>1966</th>
<th>Total</th>
<th>1-3 person</th>
<th>4-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-999</th>
<th>300-999</th>
<th>500-999</th>
<th>more than 1,000 persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1964</td>
<td>520,137</td>
<td>29.2</td>
<td>25.9</td>
<td>10.4</td>
<td>3.6</td>
<td>2.8</td>
<td>2.0</td>
<td>0.9</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
</tr>
<tr>
<td>1-3</td>
<td>212,340</td>
<td>63.8</td>
<td>9.1</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4-9</td>
<td>186,186</td>
<td>8.7</td>
<td>58.4</td>
<td>99.1</td>
<td>0.3</td>
<td>0.2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>10-19</td>
<td>55,062</td>
<td>0.5</td>
<td>11.2</td>
<td>57.0</td>
<td>6.7</td>
<td>0.9</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>20-29</td>
<td>25,896</td>
<td>0.2</td>
<td>1.4</td>
<td>18.6</td>
<td>44.2</td>
<td>11.2</td>
<td>0.8</td>
<td>0.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>30-49</td>
<td>18,399</td>
<td>0.1</td>
<td>0.4</td>
<td>2.2</td>
<td>13.2</td>
<td>50.8</td>
<td>10.1</td>
<td>0.3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>50-99</td>
<td>12,630</td>
<td>-</td>
<td>0.1</td>
<td>0.4</td>
<td>1.5</td>
<td>10.8</td>
<td>58.1</td>
<td>6.7</td>
<td>0.1</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>100-199</td>
<td>5,390</td>
<td>-</td>
<td>0.1</td>
<td>0.2</td>
<td>0.3</td>
<td>1.2</td>
<td>13.3</td>
<td>57.6</td>
<td>5.8</td>
<td>0.7</td>
<td>0.1</td>
<td>-</td>
</tr>
<tr>
<td>200-999</td>
<td>1,688</td>
<td>-</td>
<td>0.1</td>
<td>0.1</td>
<td>0.1</td>
<td>0.3</td>
<td>1.5</td>
<td>20.3</td>
<td>42.6</td>
<td>14.9</td>
<td>0.9</td>
<td>0.1</td>
</tr>
<tr>
<td>300-999</td>
<td>1,150</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.2</td>
<td>0.3</td>
<td>0.4</td>
<td>3.7</td>
<td>14.6</td>
<td>56.7</td>
<td>7.0</td>
<td>-</td>
</tr>
<tr>
<td>500-999</td>
<td>760</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.7</td>
<td>2.2</td>
<td>15.4</td>
<td>60.8</td>
<td>5.9</td>
<td>-</td>
</tr>
<tr>
<td>more than 1,000 persons</td>
<td>641</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.6</td>
<td>7.2</td>
<td>77.8</td>
<td>-</td>
</tr>
</tbody>
</table>


Note: The category "Others" consist of four cases: (1) the cessation of the business, (2) firms converted to non-manufacturing industry, (3) firms which converted to cooperatives or were absorbed by other firms, (4) firms which changed the place of their head office to other towns or cities.
### Table 9 Establishment in Manufacturing Industry (Annual rate of growth)

<table>
<thead>
<tr>
<th></th>
<th>59-61</th>
<th>61-65</th>
<th>65-69</th>
<th>57-69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing, Total</td>
<td>1.48</td>
<td>3.21</td>
<td>3.76</td>
<td>2.82</td>
</tr>
<tr>
<td>Medium and Small Scale (1-299)</td>
<td>1.43</td>
<td>3.21</td>
<td>3.76</td>
<td>2.80</td>
</tr>
<tr>
<td>1 - 9</td>
<td>0.08</td>
<td>4.16</td>
<td>4.07</td>
<td>2.76</td>
</tr>
<tr>
<td>10 - 19</td>
<td>3.32</td>
<td>0.44</td>
<td>4.50</td>
<td>2.74</td>
</tr>
<tr>
<td>20 - 99</td>
<td>6.59</td>
<td>0.92</td>
<td>0.86</td>
<td>2.75</td>
</tr>
<tr>
<td>100 - 299</td>
<td>10.67</td>
<td>3.72</td>
<td>3.80</td>
<td>6.01</td>
</tr>
<tr>
<td>Large Scale (more than 300)</td>
<td>10.82</td>
<td>3.39</td>
<td>3.93</td>
<td>6.00</td>
</tr>
</tbody>
</table>

Source: MITI, Census of Manufactures

### Table 10 Moving out - Conversion Rate by Scale of Work Force

<table>
<thead>
<tr>
<th>industry</th>
<th>4-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-499</th>
<th>500-999</th>
<th>more than 1,000</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Foods</td>
<td>0.6</td>
<td>0.5</td>
<td>0.7</td>
<td>0.6</td>
<td>0.4</td>
<td>0.5</td>
<td>0.3</td>
<td>0.4</td>
<td>0.3</td>
<td>5.9</td>
<td>0.6</td>
</tr>
<tr>
<td>20 Textiles</td>
<td>2.1</td>
<td>2.7</td>
<td>2.0</td>
<td>1.6</td>
<td>2.1</td>
<td>1.5</td>
<td>0.4</td>
<td>0.4</td>
<td>0.5</td>
<td>1.3</td>
<td>2.0</td>
</tr>
<tr>
<td>21 Clothes</td>
<td>5.8</td>
<td>5.7</td>
<td>4.8</td>
<td>3.8</td>
<td>4.7</td>
<td>3.1</td>
<td>4.3</td>
<td>4.0</td>
<td>0.0</td>
<td>0.0</td>
<td>5.5</td>
</tr>
<tr>
<td>22 Lumber and products</td>
<td>3.5</td>
<td>2.5</td>
<td>1.7</td>
<td>3.0</td>
<td>2.9</td>
<td>2.2</td>
<td>2.2</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>3.0</td>
</tr>
<tr>
<td>23 Furniture</td>
<td>4.9</td>
<td>7.2</td>
<td>6.0</td>
<td>6.1</td>
<td>6.6</td>
<td>5.0</td>
<td>0.0</td>
<td>5.1</td>
<td>0.0</td>
<td>0.0</td>
<td>5.5</td>
</tr>
<tr>
<td>24 Pulp, paper and paper products</td>
<td>6.4</td>
<td>6.9</td>
<td>5.7</td>
<td>3.6</td>
<td>3.4</td>
<td>3.4</td>
<td>0.0</td>
<td>2.0</td>
<td>0.0</td>
<td>0.0</td>
<td>5.9</td>
</tr>
<tr>
<td>25 Printing, publishing</td>
<td>2.6</td>
<td>2.4</td>
<td>2.0</td>
<td>1.9</td>
<td>1.8</td>
<td>3.4</td>
<td>1.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.5</td>
</tr>
<tr>
<td>26 Chemicals</td>
<td>9.0</td>
<td>7.7</td>
<td>5.1</td>
<td>5.4</td>
<td>3.0</td>
<td>3.2</td>
<td>2.7</td>
<td>0.0</td>
<td>1.7</td>
<td>1.2</td>
<td>6.2</td>
</tr>
<tr>
<td>27 Petroleum and coal products</td>
<td>9.5</td>
<td>4.7</td>
<td>1.5</td>
<td>7.5</td>
<td>1.7</td>
<td>0.0</td>
<td>0.0</td>
<td>9.1</td>
<td>0.0</td>
<td>0.0</td>
<td>5.5</td>
</tr>
<tr>
<td>28 Rubbers</td>
<td>9.4</td>
<td>9.5</td>
<td>7.3</td>
<td>6.5</td>
<td>7.2</td>
<td>4.7</td>
<td>13.9</td>
<td>7.3</td>
<td>2.6</td>
<td>3.4</td>
<td>8.7</td>
</tr>
</tbody>
</table>
### Table 10 Moving-out - Conversion Rate by Scale of Work Force (Continued)

<table>
<thead>
<tr>
<th>Industry</th>
<th>4-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-499</th>
<th>500-999</th>
<th>more than 1,000</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 Leather</td>
<td>7.3</td>
<td>5.6</td>
<td>8.6</td>
<td>6.5</td>
<td>5.2</td>
<td>5.6</td>
<td>11.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.9</td>
</tr>
<tr>
<td>30 Ceramics, stone and clay products</td>
<td>2.1</td>
<td>2.8</td>
<td>2.6</td>
<td>2.6</td>
<td>1.7</td>
<td>1.9</td>
<td>1.4</td>
<td>0.0</td>
<td>0.0</td>
<td>3.7</td>
<td>2.3</td>
</tr>
<tr>
<td>31 Iron &amp; steel</td>
<td>15.8</td>
<td>10.5</td>
<td>6.4</td>
<td>5.3</td>
<td>5.3</td>
<td>6.1</td>
<td>1.8</td>
<td>0.0</td>
<td>1.4</td>
<td>0.0</td>
<td>9.4</td>
</tr>
<tr>
<td>32 Non-ferrous metals and products</td>
<td>13.6</td>
<td>11.3</td>
<td>7.5</td>
<td>6.5</td>
<td>5.5</td>
<td>5.4</td>
<td>2.0</td>
<td>0.0</td>
<td>4.3</td>
<td>0.0</td>
<td>10.4</td>
</tr>
<tr>
<td>33 Metals</td>
<td>11.2</td>
<td>11.7</td>
<td>8.9</td>
<td>9.1</td>
<td>9.6</td>
<td>9.0</td>
<td>5.4</td>
<td>3.6</td>
<td>6.9</td>
<td>8.3</td>
<td>10.9</td>
</tr>
<tr>
<td>34 Industrial machinery</td>
<td>15.1</td>
<td>14.7</td>
<td>10.9</td>
<td>8.5</td>
<td>8.6</td>
<td>6.2</td>
<td>3.0</td>
<td>2.9</td>
<td>3.7</td>
<td>3.2</td>
<td>13.2</td>
</tr>
<tr>
<td>35 Electric machinery</td>
<td>18.5</td>
<td>14.2</td>
<td>11.3</td>
<td>7.5</td>
<td>7.0</td>
<td>3.4</td>
<td>3.3</td>
<td>1.2</td>
<td>1.1</td>
<td>3.6</td>
<td>13.0</td>
</tr>
<tr>
<td>36 Transportation machinery</td>
<td>24.5</td>
<td>24.8</td>
<td>16.7</td>
<td>13.5</td>
<td>13.2</td>
<td>10.4</td>
<td>4.3</td>
<td>4.5</td>
<td>2.7</td>
<td>2.2</td>
<td>20.8</td>
</tr>
<tr>
<td>37 Precision machinery</td>
<td>13.5</td>
<td>12.3</td>
<td>9.3</td>
<td>9.6</td>
<td>9.2</td>
<td>7.6</td>
<td>4.8</td>
<td>4.3</td>
<td>4.8</td>
<td>3.7</td>
<td>12.0</td>
</tr>
<tr>
<td>39 Others</td>
<td>8.4</td>
<td>9.2</td>
<td>10.3</td>
<td>8.0</td>
<td>7.0</td>
<td>8.1</td>
<td>4.1</td>
<td>2.7</td>
<td>2.5</td>
<td>15.4</td>
<td>8.6</td>
</tr>
<tr>
<td>Manufacturing Industry</td>
<td>6.3</td>
<td>7.0</td>
<td>5.7</td>
<td>5.2</td>
<td>5.2</td>
<td>4.3</td>
<td>2.6</td>
<td>1.7</td>
<td>2.0</td>
<td>2.3</td>
<td>6.2</td>
</tr>
</tbody>
</table>

### Table 11 Moving-in - Conversion by Scale of Works Force

<table>
<thead>
<tr>
<th>Industry</th>
<th>4-9</th>
<th>10-19</th>
<th>20-29</th>
<th>30-49</th>
<th>50-99</th>
<th>100-199</th>
<th>200-299</th>
<th>300-499</th>
<th>500-999</th>
<th>more than 1,000</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 Foods</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>0.7</td>
<td>0.7</td>
<td>0.3</td>
<td>0.0</td>
<td>0.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.5</td>
</tr>
<tr>
<td>20 Textiles</td>
<td>1.8</td>
<td>2.3</td>
<td>1.7</td>
<td>1.8</td>
<td>1.9</td>
<td>1.6</td>
<td>1.5</td>
<td>1.3</td>
<td>1.0</td>
<td>1.3</td>
<td>1.9</td>
</tr>
<tr>
<td>21 Clothes</td>
<td>6.9</td>
<td>5.6</td>
<td>4.7</td>
<td>4.6</td>
<td>4.3</td>
<td>3.7</td>
<td>2.9</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>6.1</td>
</tr>
<tr>
<td>22 Lumber and products</td>
<td>3.2</td>
<td>2.3</td>
<td>1.7</td>
<td>2.0</td>
<td>2.4</td>
<td>4.4</td>
<td>1.1</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>2.8</td>
</tr>
<tr>
<td>23 Furniture</td>
<td>4.5</td>
<td>5.4</td>
<td>6.0</td>
<td>6.9</td>
<td>7.0</td>
<td>2.2</td>
<td>4.3</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Industry</td>
<td>Work Force</td>
<td>4-9</td>
<td>10-19</td>
<td>20-29</td>
<td>30-49</td>
<td>50-99</td>
<td>100-199</td>
<td>200-299</td>
<td>300-499</td>
<td>500-999</td>
<td>More than 1,000</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------</td>
<td>-----</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>----------------</td>
</tr>
<tr>
<td>24 Pulp, paper and paper products</td>
<td></td>
<td>4.8</td>
<td>6.2</td>
<td>5.1</td>
<td>3.2</td>
<td>3.5</td>
<td>3.1</td>
<td>3.7</td>
<td>4.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>25 Printing, publishing</td>
<td></td>
<td>3.4</td>
<td>2.9</td>
<td>2.5</td>
<td>1.5</td>
<td>1.8</td>
<td>1.9</td>
<td>0.0</td>
<td>1.8</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>26 Chemicals</td>
<td></td>
<td>9.0</td>
<td>6.3</td>
<td>4.1</td>
<td>2.3</td>
<td>3.3</td>
<td>1.3</td>
<td>1.1</td>
<td>2.6</td>
<td>0.8</td>
<td>2.4</td>
</tr>
<tr>
<td>27 Petroleum and coal products</td>
<td></td>
<td>7.5</td>
<td>5.2</td>
<td>4.6</td>
<td>9.0</td>
<td>1.7</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>28 Rubbers</td>
<td></td>
<td>8.1</td>
<td>8.7</td>
<td>5.5</td>
<td>4.5</td>
<td>7.3</td>
<td>9.3</td>
<td>2.8</td>
<td>0.0</td>
<td>2.6</td>
<td>0.0</td>
</tr>
<tr>
<td>29 Leather</td>
<td></td>
<td>5.3</td>
<td>6.7</td>
<td>6.6</td>
<td>2.2</td>
<td>3.7</td>
<td>8.3</td>
<td>5.6</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>30 Ceramics, stone and clay products</td>
<td></td>
<td>2.1</td>
<td>2.3</td>
<td>2.5</td>
<td>1.4</td>
<td>1.7</td>
<td>2.9</td>
<td>0.7</td>
<td>1.1</td>
<td>4.7</td>
<td>0.0</td>
</tr>
<tr>
<td>31 Iron and steel</td>
<td></td>
<td>14.6</td>
<td>14.9</td>
<td>6.2</td>
<td>6.1</td>
<td>5.4</td>
<td>5.8</td>
<td>0.9</td>
<td>2.1</td>
<td>4.3</td>
<td>0.0</td>
</tr>
<tr>
<td>32 Non-ferrous metals and products</td>
<td></td>
<td>12.6</td>
<td>15.4</td>
<td>9.1</td>
<td>7.6</td>
<td>8.3</td>
<td>4.6</td>
<td>4.0</td>
<td>0.0</td>
<td>4.3</td>
<td>3.0</td>
</tr>
<tr>
<td>33 Metals</td>
<td></td>
<td>15.2</td>
<td>16.1</td>
<td>13.3</td>
<td>11.6</td>
<td>13.2</td>
<td>10.4</td>
<td>6.8</td>
<td>0.9</td>
<td>6.9</td>
<td>25.0</td>
</tr>
<tr>
<td>34 Industrial machinery</td>
<td></td>
<td>14.2</td>
<td>11.5</td>
<td>9.6</td>
<td>8.7</td>
<td>8.3</td>
<td>6.8</td>
<td>5.0</td>
<td>2.4</td>
<td>2.2</td>
<td>8.4</td>
</tr>
<tr>
<td>35 Electric machinery</td>
<td></td>
<td>17.5</td>
<td>15.3</td>
<td>10.3</td>
<td>9.5</td>
<td>8.0</td>
<td>6.1</td>
<td>2.7</td>
<td>2.0</td>
<td>1.7</td>
<td>1.0</td>
</tr>
<tr>
<td>36 Transportation machinery</td>
<td></td>
<td>17.2</td>
<td>17.6</td>
<td>12.7</td>
<td>12.7</td>
<td>9.4</td>
<td>6.7</td>
<td>3.5</td>
<td>3.0</td>
<td>4.5</td>
<td>1.4</td>
</tr>
<tr>
<td>37 Precision machinery</td>
<td></td>
<td>12.0</td>
<td>12.8</td>
<td>7.9</td>
<td>10.6</td>
<td>9.2</td>
<td>5.8</td>
<td>3.2</td>
<td>6.4</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>39 Others</td>
<td></td>
<td>8.3</td>
<td>9.8</td>
<td>9.7</td>
<td>10.0</td>
<td>8.4</td>
<td>7.0</td>
<td>6.8</td>
<td>4.1</td>
<td>2.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Manufacturing</td>
<td></td>
<td>6.2</td>
<td>7.1</td>
<td>5.7</td>
<td>5.5</td>
<td>5.5</td>
<td>4.4</td>
<td>2.7</td>
<td>1.9</td>
<td>2.1</td>
<td>2.2</td>
</tr>
</tbody>
</table>
Figure 1 Matrix of Moving-out by the Degree of Growth


Notes:
1. The numbers of industries by the degree of growth are the same in both 1968 and 1969. The larger the number is, the higher the growth rate of the industry is.
2. The distribution of the industry to which conversion was taken place is indicated by percentage composition as follows.

Moving-out
- less than 10%
- 11-20%
- 21-30%
- 31-40%
- more than 40%
Heinz Arndt opened the discussion: Japan's economic growth is a success story without parallel, and a major secret of this success has been adaptability, the capacity of the economy to undergo rapid structural change on a very large scale. So far, this structural change has been directed mainly at the development of a highly dynamic and competitive export sector and of secondary and tertiary industries to meet domestic demand rising and changing with growing per capita income. But the same adaptability should, in principle, enable Japan to adjust to increasing access to the domestic market for manufacturing exports of developing countries and may be expected to serve as a model in this respect for other developed economies. It is this expectation that gave the subject assigned to Mr. Namiki a key role in this conference. We are most fortunate in the choice that was made by the organisers.

Mr. Namiki has presented the results of a large statistical study of industrial conversion in Japan, as well as survey of Japanese government policies to assist conversion and of "market disruption" as an issue in international commercial diplomacy. While I have read the latter two parts of the paper with profit and interest, I found the first most exciting - and tantalising - and shall address my comments mainly to it.

I have called Mr. Namiki's statistical study of industrial conversion tantalising because I found myself right at the outset confronted by a difficulty of interpretation. Mr. Namiki's tables give comparative data, by industry and size of firm, of "rates of conversion". Early on(p.243)he explains that his data "only show when an enterprise changes its products". This suggests that his statistics of the frequency of "conversion" relate throughout to what happens within individual firms which retain their identity and, more specifically, to cases of the cessation of production of a particular product and its replacement by production of a different product. But I am not at all sure whether this is the correct interpretation, and there are passages in the paper which seem to conflict with it.
In relation to small enterprises, for example, (p.251) conversion of the artificial flower manufacturing industry is said to have consisted in varying proportions of "close of business", "change of work" and "others"; and in the textile industry of people (presumably proprietors) "retiring from business" and of "employees turning to farm work". Conversely, in the coal industry (p.258) a company undertook conversion by "creating subsidiaries producing raw concrete, oil products and air-conditioning equipment". It would help me, and probably other readers, if Mr. Namiki would clarify his definition of "conversion".

The precise definition is particularly important in relation to one of Mr. Namiki's interesting conclusions, that "generally speaking, conversion is active in growing industries and sluggish in stagnant industries" (p.245). If, as my interpretation would suggest, an act of conversion from textile to clothing production is classified as having occurred in the textile industry, the conclusion seems paradoxical; one would expect conversion to be easier into than out of high-growth industries. That my interpretation may be wrong is suggested also by Mr. Namiki's comment (p.247) that, while he has no data on conversion from manufacturing to non-manufacturing, such conversion must be expected to have been from low growing rather than from high-growing (manufacturing) industries. But if acts of conversion in his statistics are in fact classified under the industry of the new product (into which conversion takes place) many other statements in his paper are puzzling to me.

Another passage on which I should like Mr. Namiki to throw further light is his statement of the same page that "we would value highly efforts of an enterprise in a low-growth industry to expand into a processing industry and efforts of an enterprise in a high-growth industry to become a conglomerate". I am unable to see the rationale of this preference.

Finally, in this section, Mr. Namiki says that conversion of a large enterprise presents a serious problem but that he will not deal with this because it has "little relation" with the international economic problem which is the theme of this conference (p.252). The long experience of the United Kingdom's conversion problems in the coal, shipbuilding, shipping, textile and other industries would seem to suggest that changes in the international economy can pre-
sent conversion problems for very large enterprises. Is Mr. Namiki implying that this would not be the case for adaptation of the Japanese economy to increased access to the Japanese market for exports of manufactures from developing countries?

In relation to the remainder of this interesting paper, I have time to raise only one question. On page 255, Mr. Namiki makes the intriguing statement that "when the Matsuo Sulfur Mine, the biggest in Japan, was closed down, the oil refineries, at the Government's request, contributed 150 million yen for allowances for retiring sulfur miners". One would like to know whether this was, in some sense, profit-maximising behaviour on the part of the oil companies. If not, could they have refused the Government's "request"? To a non-Japanese, there is something exciting and mysterious about the fact that, as Mr. Namiki states, "the difficulties of the sulfur mining companies were overcome not by the appropriation of taxes, a contribution by the general public, but by contributions from affiliated industries" (p. 256). What was the nature of the "affiliation" in this case?

Sueo Sekiguchi continued the commentary: Industrial policy in Japan seems to be one of the most complicated and even mysterious matters not only to foreign but also to the native economists. The author, being in a position to know best the details of the problems, has presented a pioneering paper on industrial adjustment problems in Japan. In addition to the well arranged explanation of the evolution of policy, he took laborious statistical construction work, namely recomposing the "Census of Manufactures" for looking into the adaptability of business firms.

My comments on Mr. Namiki's paper may be divided into two parts: (1) General comments, and (2) Comments on the discussion with respect to the adjustment assistance in Japan.

Though the title of the paper suggests to us that the main subject is "Industrial adjustment in Japan", it virtually consists of three separate parts, namely, (i) analysis of the adaptability of business firms, (ii) adjustment assistance problems in Japan and (iii) a proposal for a safeguard scheme.

My first impression is that the interrelation among these parts is not completely clear. As we may agree, it is the adjustment assistance problem, or more exactly, the adjustment assistance in
those industries which are to be curtailed that we are now facing seriously in the international trade negotiations among developed countries. The section dealing with (i), however, covers those changes in industrial composition which are universally taking place through the process of economic development. Although this is not the central problem at the moment, I suppose that the author has thought much of the adaptability of private business firms towards the changes in demand and supply conditions and that he has considered it important as a general background to the present subject. Though the author's attempt is understandable from this viewpoint, it seems to me that there remain some questions whether his work has been successful. The definition of the "conversion rate", measurement of it and interpretation of the findings are still not clear and/or not definite. As Professor Arndt discussed these matters, I may omit the details.

The section dealing with (ii) is directly related to the problems we are facing. So my comments are mostly addressed to this part. The author discussed adjustment assistance for sulphur mining, coal mining and the textile industry in this country, in each case presenting how problems have occurred, what has been done by the government, and how the prospect is. As I believe that it is not more than two industries, that is, coal mining and textile industry that the Japanese government has applied adjustment assistance measures in a strict sense, these case studies seem quite appropriate. Nevertheless, I should like to say in general that in the author's evaluation, it is not clear whether the government policy measures have been relevant in the light of the promotion of both international division of labour and domestic full employment. It seems to me that the paper would become much more suggestive if more emphasis had been placed on the discussion of the economic and welfare implications of certain policy measures. As these are the central part of the problem I shall return to this point in more detail in a few minutes.

As to (iii), the discussion about a safeguard scheme, it seems to me that there is a large gap to fill between this part and the preceding two parts. It insists that a new safeguard scheme must be established in order to lower tariff and non-tariff trade barriers for the sake of the expansion of the world trade. Although I do not have many objections to the various statements in this part (except
the definition of market disruption), what I am wondering is that how this proposal has been derived from the preceding parts of the present paper. Therefore it seems to me that if the author had tried to evaluate Japan's industrial adjustment policies on the criteria described in (iii) as his proposal, then the preceding discussions would have become better composed.

(A) Sulphur mining: Like Professor Arndt, I also felt the solution quite strange. Thus it may be useful to explain how I understand this issue. After having explained that oil refinery companies contributed some funds at the request of the government by way of retirement allowance for the sulphur mining industry, the author states that "the conversion of sulphur mines was realized with the co-operation of affiliated industries rather than by disbursements from the treasury (page 256)" and concludes the discussion without further going on to examine the implications: that is, why and how this strange solution was possible. This story looks strange to me as well as to Professor Arndt. It seems quite natural that we should ask this question. The reason why I also raise this is partly that this has much to do with administrative guidance which is peculiar to Japan, or at least understood to be so. I would like to ask the author if I am correct in understanding the facts in this way.

The oil refinery industry has been under a tight administrative guidance which was performed through the allocation of import quotas for crude oil. The import quotas made that guidance effective as it brought a monopolistic premium to the oil refinery companies. Thus, as I understand it, it is the compensation called "import quotas" which made oil refinery companies contribute funds at the request of the government.

If this were so, there arises a further question. Although there has not been a tax burden for the curtailment of sulphur mining industry this does not imply that the social cost of this procedure is negligible. I would rather say that this type of performance is not desirable because it hides the social cost. The fact is that most of the adjustment costs are, as I imagine, still on the consumers in general after all.

(B) Coal mining: It seems to me that this case is the most typical adjustment assistance which has ever been seen in Japan. Because,
while the case of the textiles is different to some extent from a declining industry. Coal mining had started being depressed with the increased importation of oil, which was a close substitute for coal as an energy source. It may be called successful adjustment assistance since 366,000 employees under this industry in 1952 decreased to only 34,000 in 1972. The government seems to have played an active role in this case. As for the evaluation of the government performance, however, I suspect that some subsidies might have worked merely as a protective device for this industry, not to promote conversion. Some measures have been devoted to giving incentives to the coal mining workers to quit the mines on the one hand, some others have functioned to maintain a certain level of coal production. For one thing, the government forced electric generating companies to use certain quantities of coal as inputs. There still remain many problems though this case, as a whole, seems to have been successful on balance.

Finally I should like to emphasize the necessity for full investigation of such and such policy measures, because I do believe that it is critically important to distinguish adjustment assistance from mere protective measures. Furthermore, it may be noted that the high rate of economic growth has had a favourable effect on the smooth adjustment in this case.

(C) Textile manufacturing: The evolution of industrial policies undertaken by the Ministry of International Trade and Industry (MITI) have been elaborately explained in the paper since 1956 up to present days. The following questions occur to me.

(a) I suspect that most of the measures undertaken during 1956 through 1964 may not be called adjustment assistance programs but supply control tactics on a selective basis and export promotion measures. Evidence supporting my suspicion would be that even the 1967 Act still aimed at equipment modernization and tried to extend low-interest loans for this purpose. Thus again the problem remains in the identification of the adjustment assistance policy which is to be clearly distinguished from mere protectionist policy.

(b) Existing quantitative restrictions and a disequilibrium exchange rate may give rise to a problem with respect to the judgement whether a specific industry has become an industry to be reduced on
the basis of the comparative advantage principle. It is common among developed countries that textile products are in the negative list of the general tariff preference towards the developing countries. Furthermore, there exist many voluntary export restraints on the bilateral basis. All these distortions together with the rigidity in the adjustment of the exchange rate seem to have made judgement more difficult about whether textile industries in Japan are competitive or not in the world market. It appears to be that the adjustment assistance in this industry started at a time when the voluntary export restraint agreement between U.S. and Japanese governments was set up. This suggests that adjustment assistance problems will expand in their repercussion effects among nations.

Discussion of the paper was concentrated on interpretation of the conversion indices in Table 8. Some participants were doubtful that the nature of Japanese 'adjustment assistance' to the sulphur industry could be emulated in many industrial countries.

Mr. Namiki explained that 'conversion' in the manufacturing sector took the form of changes in either products or technology within each single sector, while 'conversion' in the agricultural sector took the form of changes from one to the other sector. He added that the inconsistent use of the conversion ratio in various cases presented in the paper was simply due to the non-availability of consistent statistical data.

A Japanese participant compared the adjustment of sulphur mining assisted by private firms in affiliated industries with adjustment in the textile industry and argued that the latter was more desirable in terms of social cost and the distortion of resource allocation.

A Korean participant pointed out that Japan's imports of labour-intensive commodities were limited and had increased only slowly. Considering the fact that Japan's comparative advantage was fading away in this field, the government should provide assistance to firms retreating from these declining industries and increase imports from developing countries. Perhaps a more proximate concern for Japan than any international agreement on adjustment assistance was to explore the possibility of making adjustments in the area of labour intensive imports.
1. Static Nature of Japanese Agriculture and its Adaptation to a Changing Situation

There is no doubt that, if Japanese agriculture is to play its proper role in the economy, its structure will have to be adjusted rapidly and continuously since both Japanese economy and its position in the world economy are changing rapidly and continuously. Government agricultural programs should promote the structural transformation of Japanese agriculture. However, there have been many difficulties in adjusting Japanese agricultural structure at the required rate, and Japanese agriculture has remained rather static. In this section, these two problems are examined. The examination of the government agricultural programs is left to the next section.

The static nature of Japanese agriculture is shown well in Table 1.1 In considering the number of farms by size it is necessary to divide Japan into two parts; Japan excluding Hokkaido and Hokkaido. Development of Hokkaido started only after the Meiji Restoration, and its land holding system is quite different from that in the rest of Japan. Generally speaking, size structure of farm is much more flexible in Hokkaido than that in Japan excluding Hokkaido. Decrease in the total number of farms in Hokkaido during the last twenty years is remarkable, and the decline occurred in farms of less

1Unless otherwise noted, all figures cited in this paper are from official sources.
than 3 hectares before 1960 and in farms of less than 7.5 hectares after 1960. We can say that the size structure of farms in Hokkaido is not very inferior to that in some countries in Continental Europe, and that the size structure has been improving fairly rapidly. A serious disadvantage is found in size structure of farms in the rest of Japan. Not only are the farms extremely small, but increase in their size has been also very slow. The decline in the number of farms occurred in farms less than 1.0 hectare before 1960 and in farms less than 1.5 hectares after 1960.

Table 1 Number of Farms by Size (Unit: 1,000)

(1) Japan excluding Hokkaido

<table>
<thead>
<tr>
<th></th>
<th>-0.5</th>
<th>0.5-1.0</th>
<th>1.0-1.5</th>
<th>1.5-2.0</th>
<th>2.0-3.0</th>
<th>3.0-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>5,931</td>
<td>2,468</td>
<td>1,952</td>
<td>945</td>
<td>363</td>
<td>176</td>
</tr>
<tr>
<td>1960</td>
<td>5,823</td>
<td>2,275</td>
<td>1,907</td>
<td>1,002</td>
<td>404</td>
<td>201</td>
</tr>
<tr>
<td>1970</td>
<td>5,176</td>
<td>1,999</td>
<td>1,604</td>
<td>868</td>
<td>404</td>
<td>241</td>
</tr>
</tbody>
</table>

(2) Hokkaido

<table>
<thead>
<tr>
<th></th>
<th>-1.0</th>
<th>1.0-</th>
<th>2.0-</th>
<th>3.0-</th>
<th>5.0-</th>
<th>7.5-</th>
<th>10.0-</th>
<th>20.0-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1950</td>
<td>246</td>
<td>84</td>
<td>32</td>
<td>32</td>
<td>50</td>
<td>481</td>
<td>..</td>
<td>..</td>
</tr>
<tr>
<td>1960</td>
<td>234</td>
<td>61</td>
<td>25</td>
<td>32</td>
<td>57</td>
<td>33</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>1970</td>
<td>166</td>
<td>36</td>
<td>14</td>
<td>15</td>
<td>35</td>
<td>28</td>
<td>14</td>
<td>20</td>
</tr>
</tbody>
</table>

1) Farms 5 hectares and over.

Since a rate of increase in yield per hectare of each of individual crops is physically limited, if labour productivity of Japanese agriculture is to increase rapidly, the size of farms should increase, or the kinds of crops grown should be changed from those of a land using to those of a less land using type. We will examine the kinds of crops grown later. As was shown above, the size structure of Japanese farms excluding Hokkaido has not improved significantly. What are the difficulties in improving size structure of Japanese farms? First, Japanese farmers do not like to sell their land because of the rise in land prices and the feeling among farmers that their land is an asset not to be parted with easily. Because of the postwar land reform, the standard of living of general
Japanese farm families had improved significantly. Usually Japanese farmers think that their farm lands are the real base of their living. Whereas land tax on farm land has been extremely low, selling prices of farm land have increased very rapidly as shown below because of the nation-wide urbanization in recent years. Farm land became not only an element of security but also an element of speculation.

<table>
<thead>
<tr>
<th>Years</th>
<th>For Agricultural Use (1,000 yen per 10 ares)</th>
<th>For Non-Agricultural Use (1,000 yen per 3.3 square meter)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For residence  For factory  For highway &amp; waterway</td>
</tr>
<tr>
<td>1960</td>
<td>186.611</td>
<td>1966  4.8  5.5  2.3</td>
</tr>
<tr>
<td>1965</td>
<td>203.902</td>
<td>1970  11.4  13.1  5.3</td>
</tr>
<tr>
<td>1970</td>
<td>327.706</td>
<td></td>
</tr>
</tbody>
</table>

1) Nippon Fudosan Kenkyu Sho Series. Since land prices in Tokyo, Kanagawa and Osaka have been extremely high, these prices are excluded in calculating the series.
2) National Chamber of Agriculture series.

Second, it is difficult for aged members of farm families to find work in non-agricultural sectors. Gainfully occupied population in agriculture has been declining very rapidly from 12 million in 1960 to 8.2 million in 1970 and 7.5 million in 1971. However, those who left agriculture were mainly the younger members of farm families. A traditional system of employment in Japan is that of life-long employment. As a result the greater part of those gainfully occupied in agriculture are middle-aged or old persons as shown in Table 2. Moreover, introduction of the smaller type of farm machinery and weed-killers made farm work easier and more tolerable to older members of farm families than was expected in around 1960. It is, therefore, quite natural that rate of decline in number of farms has been much slower than that in gainfully occupied population in agriculture. In usual farm households in present-day Japan the aged members engage in farm work while the younger members engage in non-farm work. Whereas the number of farm households (farms) has been declining very slowly the number of part-time farm households mainly engaging in other jobs has been increasing as shown in Table 3. Therefore, as far as the size structure of Japanese farms are concerned, Japanese agriculture has been quite static while farm labour-input has been declining very rapidly.
Table 2 The Age Distribution of Gainfully Occupied Population in Agriculture

<table>
<thead>
<tr>
<th></th>
<th>1971,000</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1963</td>
<td>1971</td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 19 years</td>
<td>67</td>
<td>1.2</td>
</tr>
<tr>
<td>20-34 years</td>
<td>610</td>
<td>11.9</td>
</tr>
<tr>
<td>35-59 years</td>
<td>1,984</td>
<td>21.7</td>
</tr>
<tr>
<td>More than 60 years</td>
<td>1,044</td>
<td>9.5</td>
</tr>
<tr>
<td>Sub-total</td>
<td>3,705</td>
<td>44.3</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 19 years</td>
<td>40</td>
<td>1.2</td>
</tr>
<tr>
<td>20-34 years</td>
<td>947</td>
<td>17.8</td>
</tr>
<tr>
<td>35-59 years</td>
<td>3,182</td>
<td>31.1</td>
</tr>
<tr>
<td>More than 60 years</td>
<td>762</td>
<td>5.7</td>
</tr>
<tr>
<td>Sub-total</td>
<td>4,931</td>
<td>55.7</td>
</tr>
<tr>
<td>Total</td>
<td>8,636</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 3 The Number of Farm Households

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Full-time Farm Households</th>
<th>Part-time Farm Households</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1)</td>
<td>2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mainly engaged in farming</td>
<td>Mainly engaged in other jobs</td>
</tr>
<tr>
<td>1960</td>
<td>6,057</td>
<td>2,078</td>
<td>2,036</td>
</tr>
<tr>
<td>1965</td>
<td>5,665</td>
<td>1,219</td>
<td>2,081</td>
</tr>
<tr>
<td>1970</td>
<td>5,342</td>
<td>832</td>
<td>1,802</td>
</tr>
</tbody>
</table>

1) Full-time farm households are those in which all working members are exclusively engaged on their own farm.
2) Part-time farm households mainly engaging in farming are those in which farm labour-input (or farm income) exceeds non-farm labour-input (or non-farm income).
3) Part-time farm households mainly engaging in other jobs are those in which non-farm labour-input (or non-farm income) exceeds farm labour-input (or farm income).

Since increase in the yield per hectare of individual crops is rather slow, and since the usual size of Japanese farms is extremely small, it is better to change the kind of crops grown on farms from those of a land using to those of a less land using type. Figures in Table 4 will be suggestive in this connection. It is clear from the table that, except for rice, land using crops are generally labour using too. Both wheat and soybean are most land using. Acreage under wheat has declined from 606 thousand hectares in 1957-59 to 227 thousand hectares in 1969-71. The same is true in the case of...
soybean. (See page 301.) On the other hand, both tomatoes and cucumbers in the green house are least land using. The same is true of all kinds of crops in the greenhouse such as flowers, strawberries, etc. Acreages under greenhouse in Japan are expanding extremely rapidly as shown below. Pig fattenning and egg production are simi-

<table>
<thead>
<tr>
<th>Acreage under Vinyl House (1,000 square meters)</th>
<th>Acreage under glass-house</th>
</tr>
</thead>
<tbody>
<tr>
<td>1965</td>
<td>28,187</td>
</tr>
<tr>
<td>1970</td>
<td>84,013</td>
</tr>
</tbody>
</table>

1) Includes glass fiber plate house.

<table>
<thead>
<tr>
<th>Table 4 Land, Labour and Capital Intensity by Crop&lt;sup&gt;1)&lt;/sup&gt; (1969/70)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acreage needed to yield 100,000 yen net product (are)</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Rice</td>
</tr>
<tr>
<td>Wheat</td>
</tr>
<tr>
<td>Soybean</td>
</tr>
<tr>
<td>Sweet Potatoes (for processing)</td>
</tr>
<tr>
<td>Tomatoes (in greenhouse)</td>
</tr>
<tr>
<td>Cucumber (in greenhouse)</td>
</tr>
<tr>
<td>Cucumber (on usual field)</td>
</tr>
<tr>
<td>Japanese Mandarin</td>
</tr>
<tr>
<td>Tobacco-Leaf</td>
</tr>
<tr>
<td>Pig (fattenning)</td>
</tr>
<tr>
<td>Egg</td>
</tr>
<tr>
<td>Milk Cow - all Japan</td>
</tr>
<tr>
<td>-Excluding Hokkaido</td>
</tr>
<tr>
<td>Beef (calf for fattenning)</td>
</tr>
</tbody>
</table>

1) Calculated from the Cost of Crop Production Survey by the Minist-
Net product = Gross revenue - (total cost - labour cost).
2) Labour input per pig under fattening.
3) Labour input per 100 chickens.

lar to the crops in greenhouse. However, in these cases there has been keen competition between regions with different advantages and among different sized producers. As a result of these kinds of competition, the size of a pig-rearing farm has increased (See page 303). The same was true in the case of egg production and broiler industry. Sweet and white potatoes for processing, milk for processing, and the rearing of calves for fattening are all rather land using, and are only produced in peripheral regions. It must be noted, however, that, if there had not been a rice price support system such as there presently is in Japan, shifts of crops under cultivation are likely to have been more remarkable.

Table 5 Japanese Imports of Major Agricultural Products,1) 1970

<table>
<thead>
<tr>
<th>Product</th>
<th>1970</th>
<th>Increase or Decrease(Δ) in value %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Agricultural Products</td>
<td>---</td>
<td>3,247.6 119.6 38.9 20.5 9.7</td>
</tr>
<tr>
<td>Wheat</td>
<td>4,685</td>
<td>318.4 42.0 18.3 7.2 7.2</td>
</tr>
<tr>
<td>Soybean</td>
<td>3,244</td>
<td>365.8 110.1 24.5 30.2 14.7</td>
</tr>
<tr>
<td>Corn (feed)</td>
<td>4,383</td>
<td>294.0 152.4 25.8 18.4 15.7</td>
</tr>
<tr>
<td>Grain Sorghum (Feed)</td>
<td>3,773</td>
<td>230.4 --- 89.1 45.5 15.7</td>
</tr>
<tr>
<td>Corn (other than feed)</td>
<td>1,635</td>
<td>112.9 1,121.3 145.6 35.1 8.4</td>
</tr>
<tr>
<td>Raw Sugar</td>
<td>2,596</td>
<td>282.7 41.3 31.5 43.6 18.8</td>
</tr>
<tr>
<td>Meat</td>
<td>204</td>
<td>124.1 185.3 284.1 Δ16.9 34.3</td>
</tr>
<tr>
<td>Banana</td>
<td>844</td>
<td>144.1 820.3 92.1 23.7 Δ3.9</td>
</tr>
<tr>
<td>Coffee</td>
<td>81</td>
<td>55.9 61.4 153.6 58.2 Δ22.1</td>
</tr>
<tr>
<td>Cocoa</td>
<td>35</td>
<td>26.0 59.9 198.0 Δ14.3 Δ9.2</td>
</tr>
<tr>
<td>Rape Seed</td>
<td>336</td>
<td>41.4 99.8 115.2 46.9 30.2</td>
</tr>
<tr>
<td>Silk</td>
<td>4</td>
<td>69.1 -- 989.6 81.2 57.0</td>
</tr>
<tr>
<td>Others</td>
<td>--</td>
<td>18,881.2 131.7 20.3 14.6 9.5</td>
</tr>
</tbody>
</table>

1) Excluding cotton, wool and rubber.
2) From January to November.
As are shown in Table 5, the dominant part of Japanese agricultural imports is wheat- and soybean-type products (wheat, soybean, corn, grain sorghum, rape-seed and raw sugar). Imports of these products are increasing very rapidly. The second most important part comprises tropical products (banana, coffee and cocoa). Imports of these products are increasing rapidly too. It is very interesting to find that imports of silk which is a traditional Japanese product are increasing very rapidly too. It is not possible here to go into the details of the story of silk. Silk is most labour using, and with raising wages silk production has become stagnant in Japan. It is the author's opinion that, if the beef price were held constant, a huge amount of beef would be imported. The producer's price of beef increased by 54.9 percent between 1965 and 1970, and imports of beef and veal increased from US$6.9 million in 1965 to US$22.3 million in 1970.

II. Japanese Agricultural Programs in the Last Ten Years

Japanese agriculture like that of other nations has been increasingly dependent on the non-agricultural sector of economy and policies in non-agricultural fields such as employment policy, trade policy, etc. have had more and more influence on agriculture. Therefore, in examining Japanese agricultural programs it is extremely important to consider whether Japanese agricultural programs have been consistent with other policies or not. In describing Japanese agricultural programs, this point should be kept to the forefront.

Immediately after World War II there were land reforms and democratization of rural societies was effected. Then there was a program of increasing food (rice) production by land reclamation, land improvement, and price support. The increasing food production program was so successful that rice was expected around 1960 to be sufficient in not distant future. At the same time a National Income Doubling Plan was launched. It was reasonable that policy makers realized a need of redirecting agricultural program, and a new Agricultural Act of 1961 was enacted.

The Act aims at:
1) adjustment of agricultural production to changing national consumption of foods, or selective expansion of food production;
2) increase in labour productivity in agriculture;
3) improvement of basic structure of agriculture - enlargement
of farm size, improvement of land owning and using system, increase in farm animal population, farm mechanization, etc. - and rearing viable farms;

4) improvement of the marketing and processing of farm products and expansion of demand for foods;

5) stabilization of the price of farm products and assurance of fair income to agriculturalists;

6) improvement of marketing of agricultural purchases and implements and stabilization of prices of those goods;

7) manpower development in agriculture and rural areas; and

8) improvement of transportation and communication systems and living conditions in rural areas.

Among the aims above main emphasis is placed on improvement of basic structure of agriculture and rearing of viable farms. Since total cultivable land in Japan is extremely limited it was necessary to reduce the number of farms, and/or the agricultural work force if the basic structure of agriculture were to be improved.

However, there was a strong objection to the reduction of agricultural work force from agricultural sector. Soon after the enactment of the Act improvement of basic structure of agriculture had lost its importance in agricultural programs. Moreover it was generally understood that the Act assured agriculturalists the maintenance of income parity between agriculturalists and non-agriculturalists, and price policy had got its importance. Since rice production held about a half of total agricultural production in 1960, farmers' organizations pressed the government to raise the government support price of rice. The government support prices of rice in the last fifteen years were as follows.

<table>
<thead>
<tr>
<th>Year</th>
<th>1955=100</th>
<th>Year</th>
<th>1955=100</th>
<th>Year</th>
<th>1955=100</th>
</tr>
</thead>
<tbody>
<tr>
<td>1956</td>
<td>99.1</td>
<td>1961</td>
<td>108.8</td>
<td>1966</td>
<td>176.0</td>
</tr>
<tr>
<td>1957</td>
<td>101.6</td>
<td>1962</td>
<td>119.9</td>
<td>1967</td>
<td>192.1</td>
</tr>
<tr>
<td>1958</td>
<td>101.6</td>
<td>1963</td>
<td>130.0</td>
<td>1968</td>
<td>203.5</td>
</tr>
<tr>
<td>1959</td>
<td>101.7</td>
<td>1964</td>
<td>147.7</td>
<td>1969</td>
<td>203.1</td>
</tr>
<tr>
<td>1960</td>
<td>102.4</td>
<td>1965</td>
<td>161.2</td>
<td>1970</td>
<td>203.6</td>
</tr>
</tbody>
</table>

It was quite clear that the government support prices were rather stable both in 1955-1960 and 1968-70, but increased very rapidly in 1961-67. Rice production had not increased in 1960-1965, and there
was a bad crop in 1965. The government launched a rice production promotion program in 1965, and rapid increase in government support prices of rice was partly a result of this government program. Rice production increased very rapidly. At the same time per capita rice consumption has decreased very rapidly. Per capita rice consumption in 1960 was 115.0 kilograms per year. It was only 95.1 kilograms in 1970. Japan has faced a very serious rice surplus problem since 1969.

The government launched an agricultural structural improvement program in 1962. The core of this program involves the development and improvement of the basic structure of agriculture as stated in the aims of the Agricultural Act of 1961. However, it is clear from Table 6 that the share of the budget for development and improvement of basic structure of agriculture in total budget for agriculture and forestry had not increased. The budget for the price support of staple food crops - funds transferred from General Account Budget to cover the loss of the Food Control Special Account, funds covering the loss due to surplus disposal of rice and funds subsidizing those rice growers who joined the government rice production adjustment program - has been increasing its share in the total budget for agriculture and forestry.

In the year of launching the structural improvement program it was thought that fruit production and animal products production should be promoted under the program. In 1962, there were 173 projects under the program, and 40 percent of the total was related to fruit production and 87 percent of the total was related to animal product production. In 1969, there were 221 projects under the program, but the projects which were related to fruit production were only 22 percent of the total and the projects which were related to animal product production were only 25 percent of the total. During the same period the projects which were related to rice production were increased from 37 percent of the total in 1962 to 59 percent of the total in 1969.\(^2\) The Agricultural Act of 1961 aims at adjustment of agricultural production to a changing national consumption of foods. But the government agricultural structure improvement program accelerated rice surplus in Japan.

\(^2\) Generally speaking, each project was related to more than one crop, and the total of these percentage proportions is more than one hundred.
# Table 6: Budget for Agriculture and Forestry
(100 million yen)

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>General Account Budget for Agriculture and Forestry</th>
<th>Funds transferred from General Account Budget to Basic Structure of Food Control Special Account</th>
<th>Budget for Development and Improvement of Agriculture (A)</th>
<th>Budget for (B)</th>
<th>Budget for (C)</th>
<th>Budget for (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>(D)</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td></td>
<td>17,652</td>
<td>1,669</td>
<td>290</td>
<td>390</td>
<td>9.5</td>
</tr>
<tr>
<td>1961</td>
<td></td>
<td>21,074</td>
<td>2,296</td>
<td>660</td>
<td>469</td>
<td>10.9</td>
</tr>
<tr>
<td>1962</td>
<td></td>
<td>25,631</td>
<td>2,502</td>
<td>670</td>
<td>558</td>
<td>9.8</td>
</tr>
<tr>
<td>1963</td>
<td></td>
<td>30,568</td>
<td>2,987</td>
<td>740</td>
<td>655</td>
<td>9.8</td>
</tr>
<tr>
<td>1964</td>
<td></td>
<td>33,405</td>
<td>3,485</td>
<td>1,050</td>
<td>753</td>
<td>10.4</td>
</tr>
<tr>
<td>1965</td>
<td></td>
<td>37,447</td>
<td>4,049</td>
<td>1,205</td>
<td>921</td>
<td>10.8</td>
</tr>
<tr>
<td>1966</td>
<td></td>
<td>44,771</td>
<td>5,551</td>
<td>2,020</td>
<td>1,098</td>
<td>12.4</td>
</tr>
<tr>
<td>1967</td>
<td></td>
<td>52,034</td>
<td>6,222</td>
<td>2,415</td>
<td>1,306</td>
<td>12.0</td>
</tr>
<tr>
<td>1968</td>
<td></td>
<td>59,173</td>
<td>6,853</td>
<td>2,785</td>
<td>1,393</td>
<td>11.6</td>
</tr>
<tr>
<td>1969</td>
<td></td>
<td>69,309</td>
<td>8,267</td>
<td>3,530</td>
<td>1,625</td>
<td>11.9</td>
</tr>
<tr>
<td>1970</td>
<td></td>
<td>82,131</td>
<td>9,921</td>
<td>[322]</td>
<td>1,890</td>
<td>12.1</td>
</tr>
<tr>
<td>1971 (preliminary)</td>
<td></td>
<td>96,590</td>
<td>11,452</td>
<td>2,601</td>
<td>2,470</td>
<td>11.9</td>
</tr>
</tbody>
</table>

1. Figures in parentheses are funds from General Account Budget to cover the loss due to the surplus disposal of rice, and are not included in figures stated under the parentheses.
2. In 1971, there was a government expenditure of ¥183.6 billion for subsidizing those rice growers who joined a government rice production adjustment program.

In September 1969 the National Agricultural Council recommended a new direction in agricultural programs to the government. Fairly similar lines of agricultural program were stated in a New Economic and Social Development Plan 1970-1975 which was made public in April 1970. The main parts of the new program, or plan, are as follows.

---

1) Promotion of agricultural production in conformity with demand and adjustment of rice production to its consumption. A need for reformation of the present staple food control system is suggested. Regional specialization in agricultural production and the formation of food-supply-bases are to be promoted.

2) Reconsideration of present price support measures. It is recommended that in assuring fair income to agriculturalists more emphasis should be placed on increasing labour productivity than raising the support price of farm commodities. It is also recommended that in determining government support prices of various agricultural products, prices of products in the world market should seriously be taken into consideration. It is stated that, with the progress in internationalization of Japanese economy, there are strong demand, both domestically and externally, for the relaxation or abolition of restrictions on agricultural product imports.

3) To cope with agricultural problems in the future, appropriate measures should be devised with a wider basis than those of existing agricultural administration. The need for such measures as vocational education, employment exchange services, encouraging establishment of factories in rural areas, a special retirement pension program, diversion of farm land to non-farm uses, are recommended.

The Japanese government has pursued two rice adjustment programs for the last three years. The one is a program of balancing yearly production and consumption of rice - an acreage diversion program. The second is a program of disposing accumulated surplus stock of rice. Presently the government has almost succeeded in the rice production adjustment program. As for the agricultural structure improvement, the government is carrying out the second agricultural structure improvement program which is similar both in scale and in nature to the first one (1962-69). The government has not yet succeeded in reforming the price support measures.

Japan's trade liberalization was rapid from 1960 to 1963. The pace of trade liberalization then slowed down. However, trade liberalization has been forced apace again since 1970. At the end of 1968, 73 commodities (BTN) under the jurisdiction of the Ministry of Agriculture and Forestry were under quantitative import control systems (excluding state trading commodities; residual import restrictions). This number was reduced to 53 by the end of 1970, to
42 by June 1971, to 28 by 1 October 1971, and to 24 by 1 April 1972. In abolishing residual import restrictions, the Japanese government made great progress. Moreover, the progress was made at time when the rice adjustment program was being carried out. In addition, Japan has increased her import quota for beef, orange juice, etc. in recent years. The real story of liberalization of imports of individual commodities will be stated in next section. It should be made clear that Japanese agricultural programs were pursued quite independently of liberalization of imports of farm commodities. If these were pursued in close connection with an import liberalization program a larger number of commodities could be liberalized. For example, if the agricultural structural improvement program was concentrated on producing areas of commodities which were under the residual import restriction, production of these commodities would be more competitive in the world market than in reality they are.

III. Examples of Effects of Import Liberalization

Excepting for a few minor cases such as lemons, Japanese farmers were not seriously damaged in the past by liberalization of imports of agricultural commodities. The Japanese government has been extremely careful in carrying out here import liberalization program, and was largely successful in reducing its harmful effects on agricultural sector. The following are examples of the import liberalization of individual agricultural products.

Lemons  Lemons were produced in south-western part of Japan in small quantities, and were one of the least significant among citrus fruits produced in Japan. Importation of lemons was liberalized in May 1964. The domestic (retail) price of lemons declined sharply from around 60 yen per fruit (before liberalization) to around 15 yen (from September to November, 1964), and then the figure settled around the 25 yen level for about one year. In facing this price decline the producers gave up lemon production, and all lemon trees

---


5 These figures are from the National Federation of Horticulturalists' Association.
were cut out. Presently the price is around 30 yen and all lemons and limes consumed in Japan are imported. Since lemons are a tree crop, and since lemon production is concentrated in a small area, lemon producers were seriously damaged by its import liberalization.

**Soybean** Soybean was a principal dry-land field crop, especially in northern part of Japan. Its importation was liberalized in July 1961. Acreage under soybean in 1961 was 286,700 hectares, and that in 1969-1971 was 99,500 hectares. It is true, then, that the acreage under soybean has declined since import liberalization took place. But is is also true that the effects of liberalization of soybean imports on farmers in former soybean producing region was not severe, and that the farmers did not complain bitterly to the liberalization. There were many alternative crops such as miscellaneous pulses, potatoes, grass, etc. in the region. Moreover, it is doubtful that the decline of acreage under soybean was a result of liberalization of its imports. The acreages under soybean cultivation are as follows. We cannot find any significant effect of liberalization of soybean imports on the acreage.

<table>
<thead>
<tr>
<th>Acreage under Soybean Cultivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957-59 average</td>
</tr>
<tr>
<td>1960-62 &quot;</td>
</tr>
<tr>
<td>1963-65 &quot;</td>
</tr>
<tr>
<td>1966-68 &quot;</td>
</tr>
<tr>
<td>1969-71 &quot;</td>
</tr>
</tbody>
</table>

The situation of **rape-seed** is quite similar to that of soybean, and is more impressive in showing a particular story than that of soybean. Imports of rape-seed were liberalized in June 1971. Acreage under rape-seed was 194,900 hectares in 1961, and had declined steadily to 13,700 hectares in 1971. It is clear that rape-seed imports were liberalized after it turned into a least significant crop.

**Raw Sugar** Raw sugar is produced both in the southern part and northern part of Japan. Production in northern part (beet sugar) is much more important than that in southern part (cane sugar). In both parts production is regionally concentrated, and both sugar beet and sugar cane are regionally important. Importation of raw sugar was liberalized in September 1963. Under import quota system
sugar refining industry was most profitable among Japanese industries since there was an extremely big difference between cif price of imported raw sugar and price of refined sugar in domestic market. Soon after the liberalization of raw sugar, the import price of refined sugar (excise excluded) in domestic market declined sharply (See Table 7), and the sugar industry became one of the most depressed industries in Japan. On the other hand the producer's price of both sugar beet and sugar cane have been supported under a Law of Price Stabilization of Sugar. In determining the support prices the government takes costs of production of these crops seriously into consideration. Since cost of production of these crops have been increasing government support prices of these crops have been increasing too. Because of the support of prices of these crops by the government acreage under these crops has not been decreasing. Acreage under sugar beet in 1961-63 was 50,000 hectares and that in 1969-71 was 55,000 hectares. Acreage under sugar cane had increased from 8,740 hectares in 1961-63 to 12,500 hectares in 1969-71.

<table>
<thead>
<tr>
<th>Year</th>
<th>Refined Sugar (wholesale price) yen per kilogram</th>
<th>Government Support Price of Sugar Beet yen per ton</th>
<th>Sugar Cane yen per ton</th>
</tr>
</thead>
<tbody>
<tr>
<td>1963</td>
<td>143</td>
<td>6,150</td>
<td>---</td>
</tr>
<tr>
<td>1964</td>
<td>123</td>
<td>6,450</td>
<td>5,100</td>
</tr>
<tr>
<td>1965</td>
<td>100</td>
<td>6,550</td>
<td>5,850</td>
</tr>
<tr>
<td>1966</td>
<td>101</td>
<td>6,710</td>
<td>5,990</td>
</tr>
<tr>
<td>1967</td>
<td>103</td>
<td>6,970</td>
<td>6,120</td>
</tr>
<tr>
<td>1968</td>
<td>105</td>
<td>7,260</td>
<td>6,260</td>
</tr>
<tr>
<td>1969</td>
<td>104</td>
<td>7,500</td>
<td>6,410</td>
</tr>
<tr>
<td>1970</td>
<td>114</td>
<td>7,760</td>
<td>6,570</td>
</tr>
</tbody>
</table>

Pig Meat Importation of pig meat was liberalized in October 1971. Although number of farms rearing pigs has decreased, about 8 percent of total farms in Japan was still rearing pigs in 1971. Because of the importance of pig rearing in the Japanese agricultural sector the government was extremely careful about timing of import liberalization of pig meat. Since Japan has been importing feed grains freely and free of tax, and about 70 percent of the prime cost of production of pig is feed, pig rearing which is least land using in Japan has been fairly competitive in the world market.
In spite of this advantageous position of the Japanese pig rearing the government postponed the year of liberalization of pig meat imports until as late as 1971. During this postponement Japanese pig industry had transformed largely, and size of pig rearing had increased as a result of regional competition in domestic market. (See Table 8.) Moreover, simultaneously with the liberalization of pig-meat imports the government introduced a pig-meat price stabilization scheme. Up to the present, it is impossible to find any serious effects from the liberalization of pig-meat imports.

Table 8 Number of Farms by Number of Pigs Rearing

<table>
<thead>
<tr>
<th>Total pig rearing farms</th>
<th>1-4 pigs</th>
<th>5-9 pigs</th>
<th>10-29 pigs</th>
<th>30-99 pigs</th>
<th>100-499 pigs</th>
<th>500 pigs and over</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>1,003,000</td>
<td>708,300</td>
<td>72,030</td>
<td>29,820</td>
<td>3,910⁴</td>
<td>188,800</td>
</tr>
<tr>
<td>1966</td>
<td>678,700</td>
<td>374,020</td>
<td>69,990</td>
<td>61,790</td>
<td>19,858</td>
<td>4,920²</td>
</tr>
<tr>
<td>1971</td>
<td>398,300</td>
<td>140,800</td>
<td>41,940</td>
<td>24,701</td>
<td>9,105</td>
<td>615</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>147,100</td>
</tr>
</tbody>
</table>

1) 30 pigs and over. 2) 100 pigs and over.

IV. Concluding Remarks

The basic structure of Japanese agriculture (expressed in terms of size structure of farms) has been static. However, the Japanese farm household economy has been adjusting its structure to the changing situation of Japanese economy. The main adjustment has been the big increase in non-farm work and earnings by members of farm households. A second type of adjustment has been the change in crops under cultivation. If there had not been any rice price support system in Japan, the shift of crops under cultivation is likely to have been more remarkable.

Japanese agricultural programs executed after the enactment of the Agricultural Act of 1961 were different from those aimed at by the Act, and were pursued quite independently of the import liberalization program. If these had been pursued in close connection with the import liberalization program larger number of commodities could have been liberalized. In both recommendations by the National Agricultural Council in September 1969 and in the New Economic and Social Development Plan 1970-1975, a new direction for
agricultural programs was suggested. If these recommendations are realized, structural adjustment of Japanese agriculture will certainly be promoted. It can be said that the government has wasted about ten years since the enactment of the Agricultural Act of 1961 in guiding her agriculture in the right direction.

Excepting for a few minor cases Japanese farmers were not seriously damaged in the past by the import liberalization. The Japanese government has been extremely cautious in carrying out its import liberalization program.
Udom Kerdpibule opened the discussion: Japanese agricultural protectionism seems to represent another example of the conflict between social welfare policy and economic efficiency criteria. The outcome is always the same, that is politicians are the winners and economists the losers.

Agricultural price support schemes have induced distortions in the price-cost structure in agriculture in relation to other non-agricultural sectors as well as among the different sectors within agriculture. The rate of return on the use of land is maintained at an artificially high level resulting in the following problems:

1. There is still a large number of small farms and the consolidation into fewer and larger units has not progressed fast enough.
2. There has been a relatively slow shift in the pattern of land use from land-using to land-saving crops and livestock.

Since the agricultural price support scheme is a political rather than an economic issue and it is difficult for economists to persuade politicians to abandon such a program, what we can hope to do is to suggest some economic policy measures that may minimize the harmful economic effects of the scheme.

A tax on agricultural land may be imposed to offset the benefit from the price support program. Such a tax should be levied at a flat rate, that is, so much per acre regardless of the productivity of the land. This would aim at penalizing farmers who do not make the most efficient use of the land and so encouraging a more intensive use of the available land. In an effort to minimize the effective tax rate farmers will have to raise the crop yield from a given acre of land. This policy would gradually eliminate small and inefficient farms, forcing them to abandon agriculture or consolidate into larger units to take advantage of economies of scale from the use of larger equipment and machinery. The tax rate could be altered from time to time depending upon how fast we would like structural adjustment to take place.
This tax policy however, would not be able to accelerate the shift in land use from land-using to land-saving crops unless the distortions within agriculture, that is, the discriminatory price support scheme is abolished.

As to the impact of Japanese agricultural protectionism on primary exports of Southeast Asian countries, I do not think that the impact has been felt because most of the agricultural exports of Southeast Asian countries such as maize, sorghum, soybean, cassava and raw sugar are not subject to quantitative restrictions. The only commodity that may be of interest is rice but it is understandable that rice represents an enormous political issue. To have free trade in rice with Japan is perhaps too much to expect.

James Kokoris continued the commentary: First, I would like to express my appreciation for this opportunity to comment on Professor Hemmi's paper. It is obvious that he has carried out a considerable amount of research on the subject and has provided us with an interesting and informative paper. One of the difficulties in dealing with this subject is its very broadness, particularly if we were to look at the whole field of primary industry in Japan - a difficult task at best in a short paper aimed at the purposes of this conference.

Examination of structural adjustment is of course one of the main purposes of this conference. Professor Hemmi states that Japan's agriculture will have to adjust if it is to play its 'proper role' in the rapidly changing economy. I wish he had defined and given us more details on how he envisions the 'proper role' for agriculture in the Japanese economy. In his Part I, Professor Hemmi shows us statistics on the number of farms by size in Japan (excluding Hokkaido) and for Hokkaido alone and from these figures he draws the conclusion that Japanese agriculture is static. His figures covering the period 1950-1970 show a reduction in number of farms for Japan (excluding Hokkaido) from 5,931,000 to 5,176,000 - a decline by 755,000 farms or 12.7 percent. In Hokkaido we find the number of farms during the same period reduced from 246,000 to 166,000, a drop of 80,000 farms or a decline of 32.5 percent. This reduction in the number of farms has been accompanied by a reduction in small holdings and an increase in large farms. From these statistics I would say he could build up a case indicating Japanese agriculture has been undergoing a noteworthy adjustment since early 1950.
in terms of declining numbers and increase in size of farms. It may be just a matter of degree and that Professor Hemmi is dissatisfied with the speed of the change that is taking place. He says it is not proceeding at the "needed" rate with the exception possibly of Hokkaido. When we consider past decades of little change and the formidable social and traditional obstacles to change in agriculture, perhaps we can judge the actual change which has taken place over the last 20 years as impressive indeed and perhaps indicating a weakening of past obstacles to change.

Professor Hemmi cites as an obstacle to increasing farm size the farmers' reluctance to sell because (1) of the rise in land prices, and (2) the land is an asset not to be parted from easily. Yet, I wonder if the contemporary Japanese farmer and particularly his sons are that closely tied to the land through tradition and sentiment. This may be one of those stereotype views that needs closer re-examination. Where has the land come from upon which have risen so many new factories, expansion of towns, roads, railways, motels, gasoline stations, new housing areas? As a quip, probably half serious, I have heard several times that the very high automobile accident rate in Saitama Prefecture is due to farmer's sons (new drivers) speeding in their sports cars bought by their fathers who recently sold their land.

The problem of shortage of land will continue to plague Japan as figures provided by Professor Hemmi clearly show. Land prices have skyrocketed, helped along of course by purchases for speculation. Unlike agriculture in the United States which provides temperate zone agricultural products and, as mentioned by Dr. Lawrence B. Krause at yesterday's session, "has little alternative use", Japanese farm land has a great many alternative uses, being close to urban areas, transportation networks, etc. In fact, the shortage of land in Japan is forcing the Japanese to look towards purchases elsewhere as for example in Hawaii, Guam, the U.S. mainland, Malaysia, etc.

The shift away from the farm of labour input has been very great. This includes labour that continues to live on the farm homestead for bedding purposes but works in an office or factory in a nearby city or town. This phenomenon is due to such factors as (1) high rents in the city, (2) the narrowness of the Japanese Isles where most farms are close to urban areas and factories, and (3) the excellent transportation network (even though for some it may mean a two hour commuter ride). Thus, non-farm income of persons living on the
farm has risen very rapidly in recent years. This trend will likely continue if the planned dispersion of factories to rural areas takes place as per the Prime Minister's announced plan to remodel the Japanese Archipelago.

Great adjustments have been made in land used for wheat and soy beans since 1957-58. Soy beans and wheat are two important items among Japan's large scale and growing agricultural imports. This is all to the good in terms of restructuring of domestic agricultural production and land use. Recently, one Japanese soy sauce company bought land and built a plant in Wisconsin to serve the Western Hemisphere market. Previously, this company bought soy beans in the U. S. midwest, shipped them to Japan and re-shipped the soy sauce to markets in all the Western Hemisphere.

There was a time in the decade of the 1950's when much research was devoted to finding the proper hardy winter wheat seeds, improving the local strain or experimenting with foreign seeds in order to increase wheat yields in Hokkaido and other parts of Japan and also to increase the area planted to wheat as demand grew in Japan - but this trend has properly given way to large imports of wheat. Great changes have also taken place, as Professor Hemmi points out, in vinyl covered green-house growth of tomatoes, cucumbers, strawberries and flowers all year round. These and other changes, in my opinion, contribute to making the case for the non-static nature of Japan's agriculture.

Professor Hemmi mentions that silk - a traditional Japanese item - is now imported. As a historic footnote, though in the fisheries category, we can also shed a tear that other traditional items are now being imported due to rapidly growing domestic demand and rising prices. These include prawns (ebi) and eels (unagi), the latter, delicacy, is in short supply now coming from Korea and China.

Professor Hemmi cites the 54.9 percent increase in producer's beef prices from 1965-1970 and the increase in imports of beef and veal over the same period from $6.9 million to $22.3 million. This seems to me woefully inadequate in the face of very high prices for beef and a rising consumer demand due to increasing affluency plus shifting tastes for meat products. Meat and citrus fruits are two items upon which Japan could spend more of its foreign exchange holdings. Prices are very high, per capita consumption is low, and the
Japanese consumer needs some consideration in this area.

I have learned however, that it is easy to advise Japan to import more as if some economic tsar could turn the spigot on and off. But the difficult problem in Japan, as elsewhere in the world, is the existence of strong labour unions, lobby groups and agricultural associations which prevent easy or quick action. Slaughterhouse unions and cattle growers associations cannot be easily opposed by even the Prime Minister of Japan. And the Liberal Democratic Party needs the support of the conservative farm elements more than ever now that urban support to opposition socialist parties has been increasing.

Professor Hemmi provides us with detailed information on the Japanese Agricultural Programs in the last 10 years showing aims of the Agricultural Act of 1961. However, he offers little, if any, criticism on evaluation of these programs. New directions as of September 1969 in agricultural programs are noted. These are also to be found in the "New Economic and Social Development Plan for 1970-1975". To bring us up to date, Professor Hemmi might have added the Prime Minister's new plan for remodeling the Japanese archipelago and commenting on its contents pertaining to agricultural readjustment.

Finally, in his conclusion, Professor Hemmi summarizes very well his main points. I wish however we had received some evaluation of the government's farm programs. Also, perhaps greater sympathy and understanding is required of obstacles to change resulting from politics of vested interest groups in a democracy. You can educate the politics of vested interest groups in a democracy. You can educate the political leaders to the point where they clearly understand all the pertinent economic theory and yet may not be able to act for social and political reasons. Professor Hemmi does say that the government wasted ten years in guiding agriculture in the right direction - but if the government had not moved slowly, perhaps Professor Hemmi could not have given us his other conclusion - namely that there are only a few minor cases of Japanese farmers having been hurt by import liberalization.

We have now dealt with the present and past but in the context of other frame works what of agriculture in 1985? We have seen megalopolis grow in Japan until the Tokaido region, from Tokyo to Osaka and Kobe, is almost like one huge city. Some forecast that all of Japan will look like one urban center - one big factory - by the
turn of the century! What of agriculture then?

In conclusion I would like to pay tribute to Japanese agriculture and the Japanese farmer. Since the Meiji period and before, he has worked very hard. His output grew and yields per acre grew as the result of advances through research, inventiveness and labour. He has played an important role in the growing living standard in Japan and likely will continue to do so in the future.

Subsequent discussion focussed on the effect of taxation policy on agricultural adjustment, tax objectives of Japanese agricultural policy; the role of liberalization in trade negotiations, and the rice surplus problem.

Professor Hemmi agreed that favourable tax treatment for farm land and farm income was a major cause of the static nature of Japanese agricultural adjustment but pointed out the important changes that were taking place in respect of these policies.

The major objective of Japanese agricultural policy in the past had been simply to secure the supply of food. More recently a second objective had become to secure the supply of the cheapest possible good quality food. But there was a third new interest in maintaining the share of agricultural activity vis a vis manufacturing for environmental reasons. The second objective, Professor Hemmi suggested, was having its effect on agricultural trade policy. He guessed that maximum self-sufficiency even for rice production would become around 80 percent, and that in ten years beef imports would be fully liberalized. To date, probably 30 percent of rice farms were benefiting from the price support scheme.

An American participant stressed the importance of solving the agricultural protection problem to the future of world trade policy generally. Japan had an important role to play here in assisting the forces against protectionism, especially in the United States.

In response to a suggestion for the extension of food aid policies from Japan, Professor Hemmi agreed that the disposal of rice surpluses through food aid was costly for everyone, donor and participants alike, and that he opposed this approach to the rice problem.
THE ASSESSMENT OF ADJUSTMENT PROBLEMS
IN AUSTRALIAN TRADE

David E. James

1. Introduction.

R.A. Mattews, in tackling the issue of adjustment policies associated with a liberalization of trade, has commented that "the economic merits of free trade ... are generally accepted by economists as overwhelming. The debate between free traders and protectionists is thus considered ended, in all important respects, giving way to discussion over the best way to implement changes and deal with the problems they create". [28 pp.10-11]. Australia has a long history as a devoutly protectionist nation, and the question of moving into a free-trade environment is one which is scarcely taken lightly in academic, political and business circles. The possible success of adjustment assistance schemes may indeed be the pivot-point of Australia's future attitudes towards its international trading relations.

The traditional arguments in favour of a liberalization of trade emphasise the expansion of real income brought about by improved international efficiency in production. So endeared, in fact, are many economists to the ideal of free trade that they often overlook the need to ensure that, in adopting any new kind of commercial poli-

1 The author wishes to express his gratitude to Professor Warren Hogan, Dr. Peter Drysdale and Dr. Peter Lloyd for helpful comments on an earlier draft of this paper. In particular, I would like to thank Dr. Lloyd for permitting me to read sections from his forthcoming book on "Non-tariff Distortions of Australian Trade". I of course bear sole responsibility for any errors or deficiencies the paper may contain.
cy, the benefits should exceed the costs that arise. Libralised trade may bring benefits but it also may be expected to create a wide spectrum of adjustment costs. It is not sufficient merely to ensure that adequate adjustment-assistance schemes are in existence to overcome the difficulties associated with transition from the present framework to some other; rather, we should employ all possible means of predicting the likely impact of alternative commercial policies so that a variety of quantitative assessments of different costs and benefits may be obtained.

This paper does not attempt to set down detailed criteria for adjustment assistance, nor does it evaluate the costs which adjustment implies. Its main aim is to examine various methods through which the effects of trade liberalization on the Australian economy may be predicted. The benefits of trade are viewed as potential gains in real national income stemming from comparative advantage, whereas the reallocation of resources required to generate this extra income may be taken as an indicator of the costs of adjustment which might be involved. Many of the usual analytical techniques are seen to possess quite serious deficiencies in handling this task. A new kind of general-equilibrium model is accordingly presented as a possible answer to the problem of assessing economic change.

In the Australian context, rationalization of the existing tariff structure - whether deriving from unilateral action, from multilateral tariff reductions associated with entry to a Pacific Free Trade Area or from any other new liberalized trading arrangement - would undoubtedly give rise to widespread problems of adjustment. For many years "self-sufficiency" was an important ingredient of national economic policy, with a decidedly two-sectoral approach to development: primary industry earned the bulk of foreign exchange and manufacturing industry was encouraged by tariff protection to concentrate on import substitution. For decades the Government was successful in implementing such a policy. W.M. Corden and the Bernon Committee, in separate investigations, estimated that by the mid-1960's something like 60 to 70 percent of Australian manufacturing industry, measured by value of production and by employment, had become dependent on tariff protection, the average level of protection being roughly 30 percent. [30]. Although these figures grossly overestimate the impact of the tariff, being based on
partial-equilibrium techniques and not allowing for exchange-rate adjustment, they nevertheless suggest the far-reaching influence of the Australian tariff system. Further analysis of the economic effects of the Australian tariff may be found in articles by Corden and Hogan. [15] [20]. These studies, combined with the discovery by the Vernon Committee of large variations in effective protective rates on manufacturing industries, imply that many of the distortive effects of the tariff system have occurred within the manufacturing sector itself.

Compounding the problems of tariff reform has been the need to fix an appropriate foreign exchange rate. The Australian dollar has experienced an interesting relationship with the overall tariff system over the last twenty years. The 1950's were characterised by enthusiastic protection, in the form of both tariffs and import quotas, with the current account balance typically in deficit. The abolition of import restrictions in 1960 represented a watershed in Australian commercial policy. By that time the realization was dawning that Australia could not give full effect to its national economic objectives by relying forever on the primary sector to remain the chief growth sector and to support the balance of payments. Employment opportunities, for one thing, were not extensive in agricultural industries and world trends in primary commodity prices were by no means favourable. Manufactured products had to be sold on world markets.

Before the removal of import restrictions devaluation was discussed as a means of putting the Australian manufacturing sector on a sound footing to meet the challenge of international competition. Corden introduced the notion of a uniform tariff as a way of correcting cost distortions in the short run and as a stepping-stone to devaluation at some future stage. [14]. Instead, the tariff was brought to the rescue. A Special Advisory Authority was set up in 1962 to recommend emergency assistance in cases where import competition was likely to severely damage domestic industry.

In the 1960's, therefore, the tariff system and the exchange rate played substitutable roles as a stabilization and development device. The Vernon Committee, whose Report was published in 1965, considered this question and made reference to "the general cost disability of import-competing industries in Australia as against overseas suppliers". [30 p.359]. Under a free-trade system, the Committee argued,
this disability would need to be offset by exchange-rate adjustment and such an alternative was not thought to be practicable. These remarks, however, applied mainly to Australia's past development. The Committee did not provide a panacea for future policy. After expressing several fears about possible dangers in altering the exchange rate, such as inhibiting the flow of foreign capital, the Committee conceded that "exchange adjustment deserves careful study because, in a situation of increasing cost disability, it has some advantages over a general increase in tariffs". [30 p.360]. The most significant endowment of the Vernon Committee was the idea of a "benchmark" as a guideline to policy: all protected activities should be brought to a standard cost disability with respect to the rest of the world by means of a uniform effective protective tariff rate. The Committee suggested a rate of roughly 30 percent.

The exchange rate remained stable over the 1960's despite continuing current-account deficits. Ironically, the situation has changed dramatically over the last year or so. During the December 1971 currency realignments the Australian dollar appreciated against the U.S. dollar but depreciated slightly against other major currencies.[31]. Large surpluses on current account have lately appeared and foreign capital inflows have grown to almost embarrassing proportions. [11]. Recent figures show that Australia has accumulated sufficient foreign reserves to finance normal import requirements for a full year. The Government has now imposed capital controls to stem the future growth of reserves.

Despite pressure to revalue the currency, the future role of the Australian dollar is by no means clear. One element in the present uncertainty is the significance of exchange-rate adjustments for future developments in trade, rationalization of the tariff system, and structural change within the economy. As a result of the recent upheavals in the international monetary system it is difficult for Australia to know what the normal trade and capital-flow position is likely to be— with or without further currency adjustments. A desire to protect the interests of primary-industry exporters has led to strong political resistance to revaluation. A two-tier exchange rate, one for trading activities and the other for capital flows, has been suggested as a possible means of separating the allocative and stabilisation problems. And many Australian economists have advocated cutting tariffs at once as the best all-round solution, even
if devaluation is required. It would seem, however, that too little is known of the likely adjustment problems for such an approach to be politically palatable, at least in the immediate future.

Accepting, then, that trade liberalization in Australia may be expected to involve essentially reform of the tariff structure accompanied by appropriate exchange-rate realignment, we may proceed to investigate the nature of adjustment problems Australian might face, discover where the difficulties are likely to show up, and examine methods of determining how the problems might be detected in advance. In view of Australia's size relative to that of other nations in the Pacific area, it seems fairly safe to assume that Australian producers, especially those in the manufacturing sector, must act as price takers. Hence a large part of the task of improving the international efficiency of Australian production may be analysed in terms of unilateral policy. Such an approach becomes unacceptable or must be modified if the optimal pattern of Australian exporting, based on the presumption of unlimited export opportunities, conflicts with the import absorptive capacities of trading partners. This could well be the case with commodities such as minerals and a number of agricultural products. In addition, multilateral agreements as to proposed tariff reductions and currency realignments would need to be taken into account.

In the sections which follow, a brief survey of recent developments in Australian policy and trade is provided; the nature of adjustment problems is discussed and attention given to analytical structures which should prove useful for the prediction of industrial change; input-output techniques are appraised; and finally comes the most substantive part of the paper, which deals with the usefulness of linear programming models as a method of translating commercial-policy changes into output, price, factor-use and exchange-rate adjustments.

2. Liberalisation of Australian Trade

The gains from free trade are so well-known that they barely need reiteration here. The classic exposition can be found in two pioneering articles by Samuelson.[32][33]. In a model characterised by fixed international prices the gains accruing to a nation adopting a free-trade policy take the form of an increase in real national income. Potential economic welfare is accordingly improved. Removal of tariff barriers invokes a reverse application of the costs-of-protection
analysis developed by Corden and Johnson. [13][22]. Bhagwati and Ramaswami have demonstrated that optimal taxes and subsidies must accompany a free-trade policy when domestic distortions are present. [2].

The magnitude of real-income gains will provide an important element in a rational evaluation of entry into a liberalised trading environment. Hypothetical models based on the assumptions of fixed foreign prices and a quadratic transformation function suggest that a country with an average level of protection of 30 percent might experience an increase in real income of, say, 1 to 5 percent upon adoption of a free-trade policy. [21][23]. The Vernon Committee's estimate of the cost of protection to Australia in 1961-62, based on the Brigden-Young "cash-cost" formula, was 6 percent of the gross national turnover of goods and services less the subsidy equivalent of the tariff, or 19 percent of the output of factory products (excluding intermediate products) less subsidy equivalent. There are sound reasons for suspecting that the Committee's results are a serious overestimate of the costs involved. On the other hand, being solely static in approach, the preceding method tends to neglect the dynamic efficiencies brought about by free trade through expanded trade in inputs.

The arguments in favour of free trade are less unequivocal when changes in the tariff structure are known to be capable of altering the terms of trade. This issue too was examined by the Vernon Committee. In the Australian case, the Committee concluded, the matter could probably be disregarded: "Protection has at times been defended on the grounds that it improves the terms of trade by firming the prices for exports, especially primary products, and by inducing some reductions in import prices. This may be so but, for reasons given earlier, we are not persuaded that the actual expansion that has taken place in primary production, including minerals, would have been much greater under different circumstances". [30 p.361]. Economic conditions, however, have changed dramatically since the mid-1960's. Especially with the entry of Britain into the E.E.C., depriving Australia of a valuable traditional export market for primary commodities, the interests of Australian primary producers have figured prominently in Australia's recommendations in G.A.T.T. negotiations. Hence the provision of export outlets for Australian primary products in a new trading arrangement would almost certainly be
ADJUSTMENT PROBLEMS IN AUSTRALIAN TRADE

a precondition of any reduction of tariffs on imported manufactures. Depending on the size of a Pacific Trading Area and the nature of multilateral tariff reductions, the terms-of-trade effect may not be entirely irrelevant to Australia's adjustment problems.

What complicates the issue of tariff review in Australia is the fact that requests for protection are examined not by the Government but by the Tariff Board. The Board has best been described as a semi-independent Government advisory body. [15]. The full extent of the Board's powers is by no means clear. The Board was once informed that "should its work independently, not controlled by sectional pressures, with complete integrity of mind, but with the settled economic objectives of the nation constantly in mind". [36 p.5]. In the terms of reference of the Vernon Report the national economic objectives were given as "a high rate of economic and population growth with full employment, increasing productivity, rising standards of living, internal viability and stability of costs and prices". [30]. When the Board subsequently complained of lack of clarity in the directives governing its work it received the following guidance.

"The Tariff Board is, to repeat, an advisory body. It is not a policy-making body - although its recommendations necessarily have a considerable influence on policy - and it is not an executive body. Its principal and best-known function is to consider, on reference from the Government, applications for protection by way of tariffs or bounties or alternatively, proposals for the reduction of such protection. It also has power on its own initiative to review existing duties, to conduct enquiries on certain matters, and to report to Parliament. But tariff policy as such is the responsibility of the Government. Only Parliament can enact tariffs; only the Government proposes tariff legislation to Parliaments". [36 pp.5-6].

The only other criteria of tariff-making available to the Board have been the provisions of the 1957 United Kingdom-Australia Trade Agreement which endorsed protection of industries which were "economic and efficient" or essential for defence purposes. [34].

Given that Australia's outlook on future trade will be at least partly shaped by the attitudes of the Tariff Board, signs are favourable towards a liberalisation of commercial policy. The Board does seem, for example, to have decided that "economic" industries are
DAVID E. JAMES

those which are characterised by low production costs, and that high-cost industries should be sustained only under special circumstances. In fact, the last few years have witnessed quite an astonishing sequence of events. The Tariff Board's discontent with the existing guidelines first appeared in its Annual Report in 1965-66, where the criticisms voiced by the Vernon Committee were discussed at some length. A minority group within the Board stated that "the uncertainty of meaning of the term 'economic' has restricted its effectiveness as a basis of discrimination in tariff making". [35 p.7].

In their Annual Report for 1966-67 the members of the Board, as a unified body, made it quite obvious that they could not satisfactorily carry out their duties without clearer directives from the Government. In this quite controversial document, the Board announced its intentions of proceeding with a full-scale revision of existing tariffs. That enquiry is still in progress. [37]. The Board concluded in its 1966-67 Report that a more conscious effort to encourage the growth of manufacturing industries which are internationally competitive would create an environment far more conducive to the attainment of national economic goals than the measures which were implemented in past years.

Although there is obvious enthusiasm within the Tariff Board for reform of the tariff structure, the attitude of the Government is much more difficult to ascertain. Even the Board's own review is narrower than originally planned and neglects important industries such as automobile assembly and shipbuilding. There is no guarantee in any case that the Government will accept the Board's recommendations.

3. Perspectives on Australian Trade.

In recent years Australia's trade with its Pacific neighbours has expanded rapidly. The trade agreements under which Australia is operating are presently under revision. The United Kingdom-Australia Trade Agreement of 1957 is now of questionable relevance to Australia's future commercial policy in view of Britain's entry into the E.E.C., and Pacific trading partners, especially Japan, may rightly challenge the preference system as it currently stands. Indeed, the Japan-Australia Trade Agreement, first signed in 1957 and last amended in 1963, is due to be renegotiated in the near future. On a smaller scale, rationalisation of industry has already been sought under the New Zealand-Australia Free Trade Agreement. The
development of free trade with New Zealand may have some advantages for Australia, although a much wider market is clearly desirable. The official Australian outlook as to the exact nature of a widened trading environment is again somewhat poorly defined. The outcome of the next meeting of G.A.T.T. could have a decisive influence on Australia's longer-term policies. The interest of the Pacific Basin Economic Co-operation Council, which developed from the Australia/Japan Joint Business Co-operation Committee, has stimulated academic thought on a Pacific Free Trade Area or an organisation similar to the O.E.C.D., but although the Government is aware of the existence of these ideas it has given no public indication of committing itself to any specific kind of trade agreement. [12].

In the meantime, the statistics point to Australia's growing involvement in Pacific trade. The composition of Australian trade has undergone significant change in the last few years. In terms of countries, the most notable development has been a major switch in trade from the United Kingdom and Europe to Pacific nations, especially Japan. In 1970-71, for example, 27.1 percent of Australian exports went to Japan, whereas exports to the United Kingdom were only 11.2 percent of the total. Other figures worthy of note were exports to the U.S.A. 11.9 percent, to Canada 2.4 percent, to New Zealand 5.3 percent and to Papua-New Guinea 3.7 percent. In all, more than 60 percent of Australian exports went to countries in the Pacific region. Looking at imports for the same year, roughly 50 percent of Australian imports came from Pacific countries. The largest percentages were from the U.S.A. 25.1, Japan 13.8, Canada 4.0 and New Zealand 2.3. [10].

On a percentage basis, Australia exported more to Pacific countries than it imported. This is true also of the absolute values traded. The pattern is revealed in Australia's trade with its three main partners, Japan, the U.S.A. and the United Kingdom. Australia has clearly relied more strongly on the latter two countries for its imports than on Japan. As stated above, Australian exports to Japan were 27.1 percent of total exports whereas imports from Japan were only 13.8 percent of total imports. On the other hand the export and import percentages were respectively 11.9 and 25.1 for the U.S.A., and 11.2 and 21.4 for the United Kingdom. Further details
of trade between Australia and other Pacific countries can be found in an article by Drysdale. [17].

The commodity composition of Australian trade has also changed significantly. By 1970-71, primary produce (excluding mining and quarrying output) had declined to 51.2 percent of total export proceeds. Indeed, only 39.1 percent of total exports took the form of unprocessed primary products, the figure of 51.2 percent being made up by exports of processed primary commodities which amounted to 12.1 percent of total exports. The sectors which have grown rapidly are manufacturing and mining. Exports of manufactures in 1970-71 occupied 20.5 percent of total exports. Unprocessed minerals have expanded from a proportion of 7.6 percent in 1966-67 to 18.0 percent of total exports in 1970-71. Processed minerals accounted for a further 6.8 percent. Import percentages for 1970-71 were more evenly spread, the major items being machinery 19.0, transport equipment 13.8, textiles 7.3, electrical machinery 6.5, and petroleum products 4.5.

On a country-commodity analysis Australia's strongest export links are again revealed as being with Japan. Exports of metalliciferous ores and scrap alone to Japan in 1970-71 amounted to $446.5 million or 10.2 percent of total Australian exports. Other export items sent to Japan were textile fibres and waste, representing 4.5 percent of total exports, coal and coke 3.9 percent, and cereals 1.9 percent. The most important commodities sold to Canada were meat, sugar and metals; to New Zealand, iron and steel, non-ferrous metals, transport equipment and machinery; and to the U.S.A., meat and meat preparations, chemicals, minerals and non-ferrous metals. As stressed earlier, the future of the minerals and certain agricultural industries may be crucially dependent upon multilateral trade policies.

4. Adjustment Problems

The kind of adjustment problems Australia might face in moving to a situation of free trade would obviously be influenced by the specific policies implemented and, even more importantly, by the timing of Government action. Consider the issue of reducing tariff barriers. How would this be accomplished? Would tariffs be removed in an "overnight" operation, or would successive reductions be sought?
Would the phasing procedures and time horizons be the same for all trading partners? Would tariffs only on selected industries be phased out? Again, how might commodity agreements fit into the overall picture? There also remains the question of whether the best results might be achieved through concurrence with the general policies of, say, a Pacific trading bloc or G.A.T.T., or alternatively through a series of bilateral agreements. If international specialization has any positive meaning, however, some activities must look forward to an expansion of production whereas others may be expected to decline and even disappear altogether. Frictions in adjustment will inevitably arise and create legitimate economic costs, and rational commercial policy should at least ensure that real-income gains accruing from international specialization exceed the adjustment costs which are generated.

Adjustments brought about by changes in tariff policy raise maximum sensitivity as regards the consequent employment of different skill categories within the work force. The geographic distribution of labour is external to traditional comparative advantage models. While it is of obvious importance to determine shifts of employment required to generate higher real income through more efficient production and trade, the mobility of different labour groups must be brought under examination. What are the likely costs, for example, of retraining a skill category which becomes redundant in a new trading environment? What kind of assistance might be required to induce workers to move from the capital cities to, say, a mining project in north-west Australia? What kind of investment might be required in social overhead capital as an accompaniment to geographic redistribution of labour? Adjustment problems will be experienced by firms as well as individuals. To the extent that major changes in commercial policy are not part of the normal business environment, management and owners of capital may also require special consideration to improve their economic and perhaps geographic mobility.

Adjustments within the Australian economy must be governed not only by commercial policy but also by various domestic constraints. Industries essential for defence would need to be preserved regardless of whether comparative advantage implies their decline. Free trade may similarly imply the decline of industries generating beneficial externalities, as may apply in knowledge-intensive indust-
ries such as electronics, automobiles and chemicals. External dis-economies created by comparative-advantage adjustments may prove to be even more significant. A suggested specialisation in minerals extraction and processing could, for example, raise problems of pollution and environmental deterioration. Internal taxes and subsidies may not be capable of overcoming all these difficulties and, in any case, Australia has a variety of restrictions on subsidy arrangements.

What form should adjustment assistance take? It is difficult to provide a ready-made answer because each individual problem might need specialised diagnosis and treatment. Yet it seems fairly clear that, from an economic viewpoint, government intervention should improve the mobility of resources and should be of a temporary rather than permanent nature. Greater efficiency and higher real income should be the keynote of policy, rather than compensation for injury, although it seems impossible that equity considerations could be completely ignored. Adjustment assistance schemes are a familiar aspect of policy as regards Australian rural industries, but as yet have not been seriously entertained for the manufacturing sector.

The theory of domestic distortions implies that internal taxes and subsidies might be the best way of providing aid although, as argued previously, there may well eventuate a trade-off between internal and external policies in negotiations among trading partners by way of special phasing arrangements, commodity agreements and even international subsidy transfers. Such policies would be especially significant for less-developed trading countries.

On a wider front we should recall further adjustment problems associated with the maintenance of internal and external balance. Overall industrial dislocation has its implications for general monetary and fiscal measures. The impact of tariff rationalisation on sectoral flows of foreign capital is a further topic requiring study. The provision of capital for required industrial adjustments and the aggregate effect of foreign capital flows on the balance of payments are but two of the considerations that are relevant to stabilisation problems. Exchange-rate adjustment which has the desired resource-allocative effect and which also contributes to the attainment of internal and external balance must similarly be predetermined.
How may adjustment problems best be detected? The answer depends in part upon the kind of trade agreements Australia is likely to enter into. Whether, for example, only a few isolated industries might need to be rationalised, or whether across-the-board tariff reductions are envisaged would set the stage for appropriate analytical procedures. Output adjustments at least should be accurately assessed. Knowledge of the pattern of input usage may then point up the detailed structural adjustment problems involved. It seems reasonable to suggest that a variety of predictive techniques should be employed. Through a comparison of results a fairly reliable picture of adjustment processes may thus be obtained.

A popular type of analysis is the industry-study method. Partial-equilibrium in approach, this technique involves an industry-by-industry comparison among different countries with a view to detecting the "optimal" pattern of specialisation. Although a great deal of useful information may be gleaned from such studies, the main drawback is that a series of local "optima" may not add to an overall optimum. Matthews, for instance, points out that comparative advantage for an industry in a one-sector context may not exist after a wider liberalisation of trade, and that the industry-by-industry approach may in fact lead to double-adjustment problems.[28]. This is of obvious importance to the way in which the review of tariffs is conducted within Australia and even more so to the time sequence in which the protective system might be restructured through the implementation of new policy.

To overcome these disadvantages, general-equilibrium considerations must be introduced. Fruitful exercises may be carried out using various input-output techniques, as will be demonstrated in the next section. At least some notion of overall consistency as regards direct and indirect adjustments in outputs, factor usage and price structures, may thereby be attained. But input-output has inherent limitations which restrict its effectiveness in analysing adjustments associated with the forces of comparative advantage. To overcome some of these restrictions linear programming methods, which may combine consistency and optimality in a general-equilibrium framework, are to be greatly preferred.

5. Input-Output Techniques.

Input-output is a good starting point for examining the structur-
al implications of new commercial policies. It should be noted, however, that data limitations will pose short-run difficulties in the application of input-output methods to Australian adjustment problems. The Bureau of Census and Statistics has released a preliminary table featuring 104 activities, but it is too outdated (1962-63) to be of any use in future planning. Moreover, it is a commodity-industry table and thus unsuitable per se for many of the usual input-output exercises. Figures have been provided to convert the table to an industry-industry or commodity-commodity matrix, but the results so obtained cannot be taken as very reliable. Work is proceeding on tables for 1968, but the completion date as yet is uncertain. It is clear that a combined endeavour by countries to prepare tables which are consistent in their classification of commodities and activities would greatly facilitate the task of making international comparisons and of planning for liberalised trade.

The best-known input-output technique is application of the Leontief inverse matrix to the problems of output adjustments. Given an array of changed final demands for Australian outputs resulting from new trading conditions, the method ensures that direct and indirect output adjustments, generated by interindustry production repercussions, are measured in a reasonably reliable manner. Denoting total outputs by the vector \( x \), the input-output matrix by \( A \), and the vector of final demands by \( f \), we have

\[
x = (I - A)^{-1} f
\]

for the equilibrium set of output levels. From this we obtain

\[
\Delta x = (I - A)^{-1} \Delta f
\]

where \( \Delta x \) denotes changes in total output levels, \((I - A)^{-1}\) is the Leontief inverse and \( \Delta f \) represents the vector of final-demand changes occurring upon participation in a new trading environment.

The approach is relatively simple. The major problem is determining the elements of \( \Delta f \). The difficulties are therefore exogenous; once \( \Delta f \) has been specified, input-output merely guarantees that interindustry adjustment processes will be taken into account, thereby introducing consistency into the planning exercise.

Several methods suggest themselves as means of assessing changes in final demands. The first involves the use of price elasticities in conjunction with reciprocal agreements on tariff reductions, as...
ADJUSTMENT PROBLEMS IN AUSTRALIAN TRADE

described by Drysdale. [17]. For each commodity imported into Australia, for example, we would have

\[ \Delta M = a \frac{t}{100 + t} n^M \]  

(5.3)

where \( \Delta M \) is the change in imports due to tariff reduction, \( a \) the rate of tariff reduction, \( t \) the original tariff level, \( n \) the price-elasticity of import demand, and \( M \) the original value of imports. Ideally, a more complete elasticity formula would be employed, incorporating income- and cross-elasticity effects. The resulting estimates would provide a basis for determining Australia's changed demands for its trading partners' exports. Assuming all countries carried out this exercise and pooled their results, we would then be able to establish elements of \( \Delta f \) comprising expanded export demands for Australian outputs. A similar elasticity approach could be taken to measure the decline in Australian demands for final outputs of import-competing domestic industries following a reduction of Australian tariff barriers. Further elements of \( \Delta f \) would accordingly be obtained. Taking the combined results reflecting expanded export demands and contracted domestic demands for Australian commodities, we could then feed \( \Delta f \) through the Leontief inverse matrix to determine the direct and indirect output adjustments generated by tariff reductions.

A second source of information of relevance to the vector of final demands might be specific details of trade agreements. Commodity quotas are one example. Export contracts are another. Tied-aid programmes may be of significance for exports to less-developed countries.

Let us now turn to factor-use adjustments. Once changes in equilibrium outputs have been determined, detailed sectoral adjustments in the demand for inputs can be predicted, assuming one has an adequate inputs-into-industries matrix. Consider labour adjustments. Ideally a fairly large matrix, describing employment by different labour skills in individual industries on a per-unit basis, would be available. Taking \( b_{ij} \) as the per-unit input of the \( i \)th occupation

---

2 This method is valid only if substitution occurs solely in final markets. If imports substitute for domestic production in inter-industry markets as well, changes in input-output coefficients are implied. This is one of the disadvantages of the input-output approach.
into the jth activity, we have, in matrix notation

\[ Bx = q \]  

(5.4)

where B is our direct-input matrix, x is the vector of total equilibrium outputs and q is the vector of total demands for the various labour groups. It follows from equation (5.4) that

\[ B\Delta x = \Delta q \]  

(5.5)

where \( \Delta x \) and \( \Delta q \) represent changes in total outputs and factor-demands respectively. Making use of equation (5.2) we see that

\[ \Delta q = B(I - A)^{-1}\Delta f \]  

(5.6)

The implied reallocation of labour following changes in commercial policy can thus be studied by applying equation (5.4) to the existing and new situations and comparing the results, or by directly applying equation (5.6). These estimates may then be superimposed on the geographic distribution of activities and of the work force to gain some idea of the relevant labour adjustment difficulties involved.

The above formulae could also be useful in predicting the emergence of excess capital capacities. Demand pressures for investment funds may also be studied by these means. Given a set of marginal investment-output ratios, capital requirements of various activities in a changed environment may be readily assessed. We merely need to add a row of investment coefficients to the matrix B. Estimates obtained would be of considerable value in policies influencing the optimal channelling of domestic funds. The implications are clear as to the possible magnitude and direction of foreign capital flows should domestic capital sources prove to be inadequate.

Import flows, particularly for noncompetitive imports used as intermediate products, are another item which may be examined by adding further coefficients to the matrix B.

A comparatively new concept emerging from input-output analysis is that of effective protection. So much has been written on this topic in the last few years that it is impossible to cover even the main issues here. Suffice it to say that effective protection was conceived as a short-cut method of detecting the influence of a
tariff structure on resource allocation. [16]. The reliability of the approach has been the subject of much debate. The introduction of nontradables and of factor-substitution effects, for example, renders many of the earlier simple formulae inappropriate. [19]. Indeed, there are suggestions that resource pulls and effective rates may even move in opposite directions. The Australian Tariff Board has made extensive use of the effective-protection concept. Thus it is important to overcome some of the difficulties which have been raised in the literature. Theoretically, the problems inherent in the effective-rate approach may be avoided by constructing a general-equilibrium model. [1]. In that case, effective protection becomes redundant because the model itself should predict the adjustments sought. Effective rates generated by a general-equilibrium model would therefore be valuable only for comparative purposes. Until sufficient empirical results have been compiled, the issue looks like remaining unresolved.

An interesting synthesis of effective protection theory and exchange adjustment has been accomplished by Johnson. [24]. The model provides a method of determining the exchange rate realignment required in a movement from a protected situation to one of free trade. The only drawback with Johnson's approach is that it is essentially partial-equilibrium. Marginal-cost functions for each industry are assumed identical in the protected and free-trade states. Thus there is no allowance for adjustments in factor prices induced by resource-allocation shifts accompanying the movement to free trade. If these are insignificant Johnson's model would prove to be quite valuable in overcoming the exchange-rate problems, but in the Australian case the tariff structure, as emphasised earlier, is so influential that changes in factor prices would almost certainly occur with any major alteration of the protective system.

A powerful set of techniques referred to as structural analysis in the input-output literature could provide an interesting way of looking at certain aspects of Australian adjustment problems.[8]. We could begin by arranging industries to form a lower-triangulated matrix of input-output coefficients. Utilising the concept of the "forward linkage effect", a row ranking of industries may be made according to their importance as a supplier of intermediate products. This may be achieved by taking, for each industry, the ratio of intermediate sales to the value of output: industries which sell main-
ly to final markets will have low ratios and are placed towards the
top of the ranking; suppliers of basic outputs, on the other hand,
will exhibit high ratios and should appear at the lower end of the
list. Alternatively, the ranking may be undertaken by columns in
accordance with the "backward linkage effect", which indicates the
significance of industries as users of other industries' products.
Under this approach, the ratio of interindustry inputs to the value
of output is the relevant ranking index. Industries with a high pro-
portion of interindustry inputs will emerge on the left-hand side of
the triangulated matrix; those with low ratios, on the right. A
further method of ranking is described by Yan and Ames who employ an
"order matrix" as a measure of industrial interrelatedness. [39].
Row and column indices, again measuring the importance of industries
as sellers and users of intermediate products, comprise the basis of
their ranking procedure.

With a triangulated matrix qualitative analysis of tariff reduc-
tions suggests itself. Consider the significance of reducing tar-
iffs on a supplier industry first. "Water in the tariff" would at
once be created in all activities above the selected industry. 3
Further tariff reductions would thus be feasible. This is, of
course, merely the "escalation" process in reverse. Could the eco-
nomy adjust quickly enough to the new environment, especially if ex-
ports opportunities are suddenly made available? Again, the admini-
strative side cannot be ignored. Could the Tariff Board work fast
enough to reduce tariffs in temporarily favoured industries, or
would fast enough to reduce tariffs in temporarily favoured indus-
tries, or would there be a substantial time lag during which wages
and other costs might rise, thereby absorbing the water in the tar-
iff and making the task of tariff reform even more difficult in the
future? On the other hand, reduction of tariffs on final-sales indus-
tries would tend to create widespread decline in the demand for
interindustry inputs and give rise to substantial unemployment pro-
lems.

The adjustment processes revealed by structural analysis can ac-
cordingly be related to macro-stabilisation policies. Tariff reduc-
tions on supplier industries would tend to give rise to expansionary
forces whereas a general squeezing effect would follow the reduction

3 "Water in the tariff" refers to protection which is more than suf-
ficient to cover the cost disability of a domestic producer.
of tariffs on final-sales activities. Interesting trade-offs might therefore be uncovered by the use of a triangulated matrix as regards tariff rationalisation, fiscal action and exchange-rate adjustment. Experiments with block-triangular matrices could also yield valuable findings.

Any results obtained by input-output techniques must be qualified by the assumptions upon which input-output is so crucially dependent. In the first place, foreign trade fits rather awkwardly into an input-output framework. A movement towards liberalised trade will bring forces of comparative advantage into play. Some activities may entirely disappear, while opportunities for new activities to emerge may well be created. Unless industries are added to or deleted from an input-output analysis of adjustment by way of exogenous judgements, these extreme effects will not be allowed for. Judgements as to the viability of different activities in a free-trade environment may of course be undertaken on a partial-equilibrium basis, and the relevant activities incorporated in subsequent study of output and factor-use adjustments. But there is no guarantee that the selection of "correct" activities by such methods will be truly optimal or even feasible, having regard to the overall pattern of resource use. The calculation of effective protective rates via simple formulae, such as is used by the Tariff Board, in lieu of a general-equilibrium determination of optimal resource allocation may, as one example, lead to spurious results. The suggestion that we should implicitly assume the continued existence of all activities does not do sufficient justice to the principle of comparative advantage. Procedures for judging the optimal pattern of resource use should allow for such outcomes to be predicted.

Secondly, input-output cannot predict any switch by a given industry from, say, import-competition to export activity as a result of tariff reductions. A survey by Lecomber, concerning the role of input-output in trade models, reveals that in the vast majority of applications of the technique, imports and exports are determined exogenously. [25]. This clearly by-passes both the normative and positive significance of comparative advantage. Input-output is not an optimisation device and cannot capture shifts in importing and exporting activity following changes in policy.

In the face of lower domestic import prices following a reduction
of tariffs, existing producers may continue to survive because of an unwillingness of buyers to switch from domestic to imported sources of supply. This will be especially the case for markets in which price is only one determinant of demand; product differentiation between domestically-produced and imported lines may be significant enough to create price insensitivity on the part of buyers. Again, firms may be only partially affected by changes in policy if they produce a wide range of commodities, thereby retaining a reasonable basis for survival. Many of the models which draw an arbitrary distinction between a nation's interindustry activities and its importing and exporting behaviour rely upon the rigid assumption of non-substitution between traded and home-produced commodities. If product differentiation or heterogeneous production are not apparent in reality, however, allowance should be made in predictive procedures for activity-switching. As argued previously, optimal resource allocation, insofar as the maximisation of real income is concerned, may imply quite severe shifts in the pattern of specialization and in extreme cases may even warrant the complete disappearance of some industries.

The third assumption is the constancy of input-output coefficients regardless of commercial policies pursued. There are two quite distinct issues involved. First, we have the problems of determining whether the same physical coefficients will always prevail or whether substitution between inputs is likely to take place. Secondly, one is faced with the prospect that the physical coefficients may not change, but the value coefficients do, owing to price repercussions within the system. General equilibrium adjustments in the shadow prices of primary inputs, for example, may distort the value coefficients, thereby invalidating projected output changes or the calculation of effective protective rates at different stages of tariff removal. This problem will be taken up in the next section.

6. **Linear Programming Methods**

To improve upon input-output techniques, a method is required which may incorporate comparative advantage forces, select the optimal set of activities and output levels, predict the pattern of primary-input allocation and compute the optimal set of factor prices. Ideally the model should also analyse the relationship between tariff rationalisation and exchange adjustment. At the same time, consistency in resource allocation is needed. Linear programming can
perform all these tasks and will provide reliable results provided the assumptions of the model are appropriate. Indeed, linear programming would seem to be the only tractable method of studying trade-adjustment problems in a general-equilibrium framework, given that optimality and not merely consistency is a prime ingredient of rational commercial policy.

One of the stumbling blocks in a programming approach is the selection of a suitable objective function. Lecomber points out that the usual practice is to maximise consumption, which is unsatisfactory on a number of counts: the foreign trade assumptions may be unrealistic; the Government is probably not able to control the variables in the programme and attention should instead be focussed on policy instruments such as taxes, subsidies and so forth; and finally, it is most unlikely anyway that governments will attempt to maximise consumption. [25].

Lecomber's survey contains four such models - those of Nataf, Simpson, Sandee and Blyth - and we can look to projects by Chenery, Bruno, Evans and others as examples of this approach. [7][3][18]. The models typically maximise a bundle of final commodities subject to domestic production and foreign-exchange constraints.

Programming applications to the Israeli economy have emphasised the strategy of moving towards more self-sufficient production, simultaneously economising on the supply of foreign exchange, hence the specification of the models used. Bruno has tried to demonstrate that effective protection, properly measured, of a given activity is the same as the activity's "domestic resource cost" which reflects the opportunity cost of using primary inputs in the selected activity rather than employing them elsewhere in a general-equilibrium schema. [4]. The drawback with Bruno's approach is that there is no provision in the programme for trade-switching effects to be predicted. The shadow prices measuring domestic resource cost, in other words, will be no more reliable than the exogenous judgements arbitrarily separating domestic and trading activities. One may reasonably ask whether the kind of model described by Bruno is the most appropriate for an analysis of the adjustment problems Australia is likely to face in a liberalised trading environment.

The second difficulty in a linear programming approach relates to the assumption of fixed coefficients, which imparts special properties to the economy's production possibilities set. The nature of
predicted adjustments in production will be closely dependent on these properties. In a neoclassical world "diversification" in production, to use Chipmean's expression, may well be the expected state of affairs, with changes in commercial policy translating themselves into output adjustments across a smooth, convex transformation hypersurface, rather than into the emergence or disappearance of activities [9]. In a classical world of fixed production coefficients on the other hand, "threshold" effects are a much more likely occurrence; as a result of the linear-segmentary properties of the feasible output set, one may expect as a more usual occurrence certain industries to disappear. Output adjustments moreover will tend to be less stable, in the light of the fact that new production equilibria can be reached only by jumps from one extreme point of the feasible output set to other extreme points. [21]. The generalised classical framework is a linear programming model. The kind of adjustments implied will depend upon specification of the underlying production constraints and in particular upon the number of separate inputs and number of different activities under consideration. The number of activities in a linear-programming solution cannot exceed the number of input constraints. The inclusion of existing capacity constraints goes part of the way to overcome this dilemma, although complete "diversification" cannot always be guaranteed.

We may wish to query empirical support for the assumption of fixed coefficients. If all our data were available in physical terms, two problems would need to be analysed. First, does evidence suggest that physical coefficients remain stable over time or alternatively that they are subject to time-trends in technology? Secondly, could a given set of coefficients be assumed immutable regardless of changes in policy, or would significant input-substitution effects take place? The latter question concerns the technological rigidity of production processes at any point in time.

The answer to the first question is that fairly definite trends in technology do appear to take place, as exemplified by the studies of Vaccara and Middelhoek. [28][29]. Cameron has investigated a sample of Australian industries and found input-coefficients to be stable over quite a lengthy period of time. [5]. Hence we may be reasonably confident of using a given set of physical coefficients for projective planning exercises. Where time-trends in technology are suspected to prevail, projection techniques such as Carter's best-technology method would enable more reliable prediction to be
made. [6].

The second question is more difficult to answer. Leontief considers that most advanced Western countries appear to possess basically similar input-output structures. [27]. At any moment in time there would seem to be a fairly universal optimal technology. In considering the significance of assuming fixed coefficients, one must be careful to distinguish the main purpose of analysis. Leontief takes the view that a fixed-coefficient model is a perfectly satisfactory representation of reality, for even if the production capabilities frontier is of neoclassical form, a linear version is a sufficiently reliable approximation of the underlying technology. [26]. For relatively small adjustments in production linear programming could be confidently used, its effectiveness being dependent mainly on the temporal stability of the coefficients. For large adjustments in production, however, there is a crucial difference between fixed coefficients as an approximation of technology and as a rigid representation. If in reality input-substitution does take place on a large scale, linear-programming methods must be suspect. On the other hand, if inputs are required strictly in fixed proportions, linear programming has the advantage of clearly showing up structural adjustment effects. Scarcity of one input, for instance, may lead to production bottlenecks and restricted employment opportunities for other inputs. The present author is of the opinion that it is worthwhile at least discovering what a programming exercise predicts in the way of adjustment, bearing in mind the limitations as regards the substitution problem. A comparison of programming results with the details of individual industry studies, particularly for activities where large adjustments are implied, would be one way of assessing the credibility of a programming approach.

In practice input-output data is usually available only in value terms. Coefficients may thus change as a result of price movements. Many of these, however, can be identified. Price adjustments due to tariff changes, for example, can be detected in the rows of an input-output matrix. What cannot be easily ascertained in advance, however, is the effect of shifts in factor prices on value coefficients following a redistribution of primary inputs. Hence although the price effects of tariff rationalisation may be distinguished for interindustry coefficients, it is desirable to work with physical data for primary inputs to overcome the problem of factor-price
adjustments. This procedure in fact is adopted for the programming model in section 7.

An investigation into the Australian tariff structure is currently under way at Monash University. A general equilibrium model of the Australian economy is being developed, largely along the lines specified by Evans in his programming model of trade and protection [18]. The model is Ricardian in that it contains only a single labour constraint, although additional factor constraints are introduced in the form of base-year capacity limits. The objective is to maximise a fixed bundle of private consumption goods at a prescribed planning horizon, the relative weights in the objective function being given as a set of consumption coefficients which sum to 1. The model's constraints relate to commodity-balance restrictions, base-year capacity limits, labour supply, foreign exchange and a somewhat unusual tariff-revenue equation. The model differs from its predecessors in that it incorporates an endogenous investment mechanism. Commodities are divided into tradables and non-tradables.

Structural adjustment induced by tariff rationalisation in the Evans model is examined by changing the rates of nominal duty in the tariff-revenue balance constraint and computing the associated optimal output combination. The model in dual form enables shadow prices, corresponding to the tariff-ridden and free-trade situations, to be calculated, thus yielding general-equilibrium estimates of effective rates of protection. One of the more interesting outcomes of the Monash project will be a comparison of the effective rates calculated through the programming model and rates obtained via the usual formulae. Again, the reliability of effective rates as indicators of "resource pulls" may be studied.

Despite the sophistication of the Monash project, a number of criticisms may be levelled at the approach. As argued by Lecomber with reference to similar programming models, the choice of consumption as the maximand may not be an appropriate indicator of optimality. Comparative advantage is not given the opportunity to play an optimising role; an arbitrary distinction is drawn between domestic and trading activities so that switching is precluded. Of even greater consequence is the fact that the optimal solution (including the shadow prices in the dual) is to a large extent governed by the special tariff-revenue constraint. This is the only section of the model in which tariffs explicitly appear, and the assumption is...
made that tariff revenue is redistributed to the community in accordance with the weights of the objective function. The tariff-revenue constraint is the sole representation of government intervention, and it seems rather unrealistic to assess the impact of tariff policy in terms of a redistribution process when the primary influence is more likely one of activity-switching. Finally, because the model postulates only a single, homogeneous labour supply it is not capable of distinguishing the detailed adjustments which might be implied for different occupational groups, although it is evident that any number of primary resource categories could quite easily be incorporated in the programme.

7. Tariff Reductions: A Programming Model

What would give considerable insight into national adjustment problems created by a liberalisation of Australian trade is a linearised comparative-advantage model. Although, in the analysis which follows, multilateral effects could be built into the basic framework, the emphasis is on unilateral reform of the Australian tariff system. Special price and output constraints might need to be introduced for certain commodities with restricted export opportunities, but essentially a fixed terms-of-trade model is postulated. The influence of alternative tariff structures, including free trade as a special case, on the pattern of resource allocation is explored through a general-equilibrium linear-programming framework featuring a linearised production possibilities set and a linear objective function. Alternative tariff structures are reflected in different sets of prices in the objective function.

The model's main aims are to predict (i) the production effects that are likely to occur over a short- to medium-run planning period subsequent to any alteration in the structure of nominal tariff rates (ii) the optimal set of outputs in a free-trade situation (iii) the potential gain in real income to be obtained in moving from a tariff-ridden to a free-trade environment or in moving from the existing situation to one involving lowered tariffs (iv) the effect of policy changes on the structural employment of different inputs and (v) the quantitative influence of alternative commercial policies on the factor rewards of primary inputs in the system. Real-income gains from trade can be calculated, to be compared with the possible adjustment costs associated with implied reallocation
of available resources. Aspects of the exchange-rate problem may also be studied in the model.

The model may be applied to the entire economy or to a subset of activities as a suboptimisation programme. One may seek results in terms of what could have been achieved with given resources and technology - that is, discover the implications of alternative policies with existing resources and production techniques, assuming perfect mobility of factors - or more significantly as an exercise in projective planning whereby future alternative uses of exogenously projected factor supplies might be examined. The model attempts to predict what would occur if all inputs were perfectly mobile. In reality of course this would not be the case, and in this sense the model may be employed to show where adjustment problems are likely to occur.

The analysis is based on the following assumptions.

(a) There are n tradable goods and m physically nontradable commodities. The international prices of all tradable goods are fixed.
(b) Traded and domestically-produced tradable goods are perfect substitutes.
(c) Domestic final demands are satisfied solely by tradable goods.
(d) All new capital goods are tradable.
(e) Factors of production are disaggregated into k separate categories, each of which is in fixed overall supply.
(f) Factors of production are perfectly mobile.
(g) Technology is represented by fixed coefficients.
(h) There are no transport costs.

Notation is given in Appendix I.

The model is capable of further elaboration, but such matters are not touched upon in this paper. It is not difficult, for example, to introduce extensions such as existing-capacity constraints, final demands for nontradables and for domestically-produced fixed capital, and second-best constraints of various kinds.

Only production effects are treated. The production possibilities set is best conceived as a value-added possibilities set. The model is concerned with the allocation of primary inputs among activities rather than among fully integrated products. Tradable goods used as interindustry inputs therefore act solely as a vehicle for
domestic primary inputs to enter production and earn a return through the value-added component of each commodity. Capital theory in the model can be handled in two ways. First, we may assume that the level of real income is constrained by factors other than capital, and that portion of national income will simply be allocated to purchases of capital required. Secondly, the amount of real income for expenditure on new capital goods during the planning period may be assumed fixed and a supply-of-funds constraint included in the primary-inputs restrictions. With these assumptions the production possibilities set is immutable for the planning period. The approach becomes similar to that found in the cost-of-protection models of Corden and Johnson whereby changes in tariff policy show up in a shifting linear objective function which in turn influences the equilibrium set of outputs. [13] [22].

Demand effects are ignored. Consumers are imagined to choose freely among domestically produced and traded goods subject solely to prevailing (possibly tariff-distorted) domestic prices and to the aggregate real national income which any particular commercial policy yields. The model may be used for normative judgements if Bergson-Samuelson "potential welfare" criteria are acceptable; the level of real income associated with any commercial policy will be a direct indicator of potential economic welfare. To obtain some idea of the welfare implications of distorted consumer prices, however, a separate exercise - incorporating specific utility functions - would need to be undertaken.

Let us set out the model on the assumption that all coefficients in the model are in physical form. The production possibilities set satisfies the following restrictions.

\[ x = A_{11} x + A_{12} y + f \]  \hspace{1cm} (7.1)
\[ y = A_{21} x + A_{22} y \]  \hspace{1cm} (7.2)
\[ B_1 x + B_2 y \leq q \]  \hspace{1cm} (7.3)
\[ x, y \geq 0 \]  \hspace{1cm} (7.4)

Equations (7.1) and (7.2) describe totals of commodities required in production and for final sales. These requirements are dictated

---

4 If real income varied significantly under alternative commercial policies, the supply of funds could be adjusted accordingly and a solution ultimately found through iterative procedures.
338 DAVID E. JAMES

by the technical conditions of production. Tradable domestic and overseas commodities are perfect substitutes, hence any deficiencies in domestic supply must be filled by imports. Not all domestic tradables need be produced under alternative policies; specialisation, with imports filling the gaps, is a possible outcome. Again, because final domestic demands are excluded, nothing definite may be said about the balance of trade. The pattern of importing and exporting, apart from possible interindustry import requirements, is deemed irrelevant. The constraint (7.3) reflects the limits of direct input usage. Nonnegativity restrictions on outputs are given by (7.4).

We are assuming that there are no domestic final demands for non-tradables, but nontradables are clearly required, directly and indirectly, to produce tradables. Resource constraints over outputs of tradables can thus be found as follows.

\[ y = (I - A_{22})^{-1}A_{21}x \quad (7.5) \]

which upon substitution into (7.3) yields

\[ [B_1 + B_2(I - A_{22})^{-1}A_{21}] x \leq q . \quad (7.6) \]

Restriction (7.6) describes the production possibilities set; it expresses the way in which primary inputs are added directly to tradable goods and indirectly through intermediate nontradable products.

Now consider the objective function. For the jth commodity, the existing tariff-distorted domestic price is given as

\[ \hat{p}_j = p_j(1 + t_j) . \quad (7.7) \]

The international price is therefore

\[ p_j = \hat{p}_j / (1 + t_j) \quad (7.8) \]

Now suppose the nominal rate is lowered to \( \xi_j \). The new domestic price accordingly becomes

\[ \tilde{p}_j = p_j(1 + \xi_j) \quad (7.9) \]

Making use of (7.8) we get

5 Autonomous capital flows would enter the picture only inasmuch as they might affect the supply-of-funds constraint.
\[ \tilde{p}_j = \hat{p}_j \frac{(1+t_j)}{(1+t_{j_0})} \]  

(7.10)

Hence the new price of the jth commodity can be predicted from knowledge of its existing domestic price, the existing nominal tariff and the proposed reduced tariff rate. A special case of (7.10) is where \( \tilde{c}_j = 0 \) so that the free-trade price corresponds to (7.8).

The objective function is to maximise the total value of final sales expressed in terms of domestic prices of tradable goods.\(^6\) Using, say, the vector \( \tilde{p} \) the objective function is

\[ \text{maximise } \tilde{p} f \]  

(7.11)

From equation (7.1), however, we see that

\[ f = (I - A_{11})x - A_{12}y \]  

(7.12)

and, substituting (7.5) for y into (7.12), we obtain

\[ f = [(I - A_{11}) - A_{12}(I-A_{22})^{-1}A_{21}] x \]  

(7.13)

Hence the objective function becomes

\[ \text{maximise } \tilde{p} \ [(I - A_{11}) - A_{12}(I-A_{22})^{-1}A_{21}] x \]  

(7.14)

A special case emerges under free trade, whereby \( \tilde{p} \) is identical to \( p \). Under these circumstances the objective function may be conceived as the maximisation of gross export receipts (imagining all output to be exported) minus the total cost of tradables needed as interindustry inputs to produce the equilibrium quantities of tradable and nontradable commodities. We have

\[ \text{maximise } X - M \]  

(7.15)

where

\[ X = px \]  

(7.16)

and

\[ M = pA_{11}x + pA_{12}y \]  

(7.17)

Substitution of (7.5) for y into (7.17) gives

\[ M = pA_{11}x + pA_{12}(I-A_{22})^{-1}A_{21}x \]  

(7.18)

---

\(^6\) This is identical to aggregate value-added or national income measured in domestic prices.
Putting (7.16) and (7.18) into (7.15) we obtain the objective function as

$$\text{maximise } px - pA_{11}x - pA_{12}(I-A_{22})^{-1}A_{21}x.$$  \hspace{1cm} (7.19)

It is obvious from inspection that (7.19) is the same as (7.14) when $\hat{p}$ and $p$ are identical.

In general, the primal problem is thus:

maximise $$\hat{p} [(I-A_{11})-A_{12}(I-A_{22})^{-1}A_{21}] x$$

subject to $$[B_1 + B_2(I-A_{22})^{-1}A_{21}] x < q$$

$$x > 0 \hspace{1cm} (7.20)$$

The equilibrium set of tradables is given by the set of $x$ satisfying the above conditions. Outputs of $y$ may be determined from equation (7.5). It is apparent that by substituting $\hat{p}$, $\hat{p}$ and $p$ in the objective function and retaining the same production possibilities set, one may determine the equilibrium output sets corresponding respectively to the existing tariff structure, to a situation involving tariff reductions, and to completely free trade. Required output adjustments themselves can be predicted by comparing alternative solution sets.

Consider the calculation of income levels associated with different solutions. Specifically, let us denote the existing, reduced-tariff and free-trade output solution vectors by $\hat{x}$, $\hat{x}$ and $x^*$ respectively. We accordingly may calculate values for aggregate income, in terms of domestic and foreign prices, by substituting the following into the objective function in (7.20).

<table>
<thead>
<tr>
<th>Equilibrium Outputs</th>
<th>Domestic Prices</th>
<th>Foreign Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Tariffs</td>
<td>$\hat{x}$</td>
<td>$\hat{p}$</td>
</tr>
<tr>
<td>Reduced Tariffs</td>
<td>$\hat{x}$</td>
<td>$\hat{p}$</td>
</tr>
<tr>
<td>Free Trade</td>
<td>$x^*$</td>
<td>$p$</td>
</tr>
</tbody>
</table>

We expect free trade to yield the highest income, when measured in foreign prices. Rational policy involves a weighing-up of any real income gains with the costs of overcoming the relevant adjustment problems. The implied reallocation of primary inputs may be determined by means of equation (7.3).
To assess the effect of different tariff structures on factor-prices, on the prices of nontradables and on the foreign exchange rate, recourse must be made to the dual algorithm. The price equations of the model may be written as

\[ A'_{11} \bar{p}' + A'_{21} z' + B'_{1} w \geq \bar{p}' \quad (7.21) \]

\[ z' = A'_{12} \bar{p}' + A'_{22} z' + B'_{2} w \quad (7.22) \]

Rearranging (7.22) to obtain an alternative expression for \( z' \), we get

\[ (I - A'_{22}) z' = A'_{12} \bar{p}' + B'_{2} w \]

\[ z' = (I - A'_{22})^{-1} (A'_{12} \bar{p}' + B'_{2} w) \quad (7.23) \]

Substituting (7.23) for \( z' \) in (7.21) we see that

\[ A'_{11} \bar{p}' + A'_{21} (I - A'_{22})^{-1} A'_{12} \bar{p}' + A'_{21} (I - A'_{22})^{-1} B'_{2} w + B'_{1} w \geq \bar{p}' \quad (7.24) \]

Rearrangement of (7.24) yields

\[ B'_{1} w + A'_{21} (I - A'_{22})^{-1} B'_{2} w \geq (I - A'_{11}) \bar{p}' - A'_{21} (I - A'_{22})^{-1} A'_{12} \bar{p}' \]

that is,

\[ [B'_{1} + A'_{21} (I - A'_{22})^{-1} B'_{2}] w \geq [I - A'_{11} - A'_{21} (I - A'_{22})^{-1} A'_{12}] \bar{p}' \quad (7.25) \]

The dual problem is therefore

minimise \( q' w \)

subject to

\[ [B'_{1} + A'_{21} (I - A'_{22})^{-1} B'_{2}] w \geq [I - A'_{11} - A'_{21} (I - A'_{22})^{-1} A'_{12}] \bar{p}' \]

\[ w \geq 0 \quad (7.26) \]

The effect of the existing tariff structure, reduced tariffs and free trade on factor prices can be determined by using \( \bar{p} \), \( \bar{p} \) and \( p \) in the main constraint in (7.26).

Required exchange-rate adjustment depends on institutional constraints over movements in factor prices. Let us assume that owners of employed inputs will not accept a free-trade or rationalised-tariff factor price lower than that obtained under the existing tariff structure, but will accept a higher factor reward if the new production pattern should so yield. Consider a movement to free
trade. We first calculate, via the dual, the set of existing tariff-distorted shadow prices, then calculate the free-trade set. We take the higher of the free-trade and existing factor prices for each input; this is then multiplied by total employment of the input in the free-trade solution. Aggregation of totals so obtained will yield the preferred free-trade monetary national income. A comparison of this figure with income yielded by the free-trade objective function will enable the necessary exchange-rate adjustment to be calculated, using the formula

\[ d = \frac{Y^p - Y^f}{Y^p} \]  

where \( d \) is the required rate of currency depreciation, \( Y^p \) is the preferred monetary income and \( Y^f \) is the value of the objective function in the free-trade optimal solution. A similar procedure would be followed in analysing exchange adjustment associated with a rationalised tariff system. It is conceivable, depending on the pattern of resource reallocation and the factor prices carried forward from the original tariff-ridden situation, that currency adjustment might need to be accompanied by a system of taxes and subsidies to enable the implied equilibrium solution to be attained, otherwise altering the exchange rate might change the solution values of the endogenous variables.

The foregoing analysis has been based on the assumption of fixed physical coefficients. However, the model is still operational using value coefficients. Given an existing input-output schema, we may transform value coefficients into physical coefficients by way of the identity

\[ a_{ij} = \tilde{a}_{ij} \frac{\tilde{p}_i}{\tilde{p}_j} \]  

where \( a_{ij} \) are physical coefficients and \( \tilde{a}_{ij} \) are value coefficients. An arbitrary price-cum-quantity system can be introduced by letting \( \tilde{p}_j = p_i = 1 \) for all tradable goods and \( \tilde{z}_i = z_j = 1 \) for all nontradables. Hence "physical" commodity totals will be represented by the corresponding dollar totals in the commodity-commodity value totals table. "Physical" and value coefficients will be identical. Output adjustments may thus be calculated in percentage terms. To obtain the primary-inputs matrix we require a set of totals of vari-
ous inputs employed to produce each commodity total. The $b_{ij}$ may be calculated by taking the ith input total employed in the jth activity and dividing it by the jth commodity's value total. Putting these assumptions into our price equations (7.7) through (7.10) we see that the appropriate prices to be incorporated in the objective function will emerge as

$$\hat{p}_j = 1$$  \hspace{1cm} (7.29)

$$p_j = 1/(1+t_j)$$  \hspace{1cm} (7.30)

$$\hat{p}_j = (1+t_j)/(1+t_j)$$  \hspace{1cm} (7.31)

A hypothetical application of the physical-coefficient and value-coefficient models involving a movement from an existing protected situation to one of free trade is given in Appendix II.

If data is available only in interindustry rather than commodity-commodity form, the same techniques may be applied, except that one would be obliged to use a weighted average of tariffs on each industry's commodity array rather than a single rate. Difficulties concerning the homogeneity of output and of production processes would inevitably arise. In general, a commodity approach should yield superior results.

* * * * *

APPENDIX I

Programming Model. Symbols

- $A = n+m$ square matrix of commodity-commodity coefficients
- $A_{11} = nxn$ submatrix of tradables-into-tradables
- $A_{12} = nxm$ submatrix of tradables-into-nontradables
- $A_{21} = mxn$ submatrix of nontradables-into-tradables
- $A_{22} = mxm$ submatrix of nontradables-into-nontradables
- $B = kx(n+m)$ matrix of primary-inputs-into-commodities coefficients
- $B_1 = kxn$ submatrix of primary-inputs-into-tradables
- $B_2 = kxm$ submatrix of primary-inputs-into-nontradables
- $d = $ currency depreciation (fraction)
- $f = nxl$ vector of final outputs of tradables
- $M = $ intercommodity imports (value)
\( p \) = lxn vector of fixed international prices for tradables
\( \hat{p} \) = lxn vector of existing tariff-distorted prices for tradables
\( \check{p} \) = lxn vector of domestic prices for tradables, following reduction of tariffs
\( q \) = kxl vector of inelastic factor supplies
\( t_j \) = existing ad valorem nominal tariff on jth tradable good
\( \check{t}_j \) = proposed reduced ad valorem nominal tariff on jth tradable good
\( v_j \) = value-added for the jth commodity
\( w \) = kxl vector of shadow prices for primary inputs
\( x \) = gross export proceeds (value)
\( \check{x} \) = nxl vector of tradable goods
\( \check{x} \) = nxl vector of existing tradable goods
\( x^* \) = nxl vector of tradable goods under free trade
\( Y_f \) = free-trade national income, measured in foreign prices
\( Y_p \) = preferred monetary national income
\( \gamma \) = mxl vector of nontradable commodities
\( z \) = lxm vector of prices of nontradable commodities

APPENDIX II

The following hypothetical application of the model involves moving from a tariff-protected situation to one of free trade. Two tradables and one nontradable are assumed. The aim of the exercise is to show the workings of the model and in particular to demonstrate the equivalence of results yielded by the physical-coefficient and value-coefficient versions when the same basic data is used. The status quo is reaffirmed as the domestic tariff-distorted optimum. The analysis then demonstrates the kind of adjustment problems, (in the form of changes in outputs, employment, factor prices and the exchange rate) which are predicted to arise with the elimination of exiting tariff barriers.

<table>
<thead>
<tr>
<th>PHYSICAL-COEFFICIENTS MODEL</th>
<th>VALUE-COEFFICIENTS MODEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothetical Data</td>
<td>Hypothetical Data</td>
</tr>
<tr>
<td>Physical Totals</td>
<td>Value Totals</td>
</tr>
<tr>
<td>( x_1 ) ( x_2 ) ( y ) ( f ) Total</td>
<td>( x_1 ) ( x_2 ) ( y ) ( f ) Total</td>
</tr>
<tr>
<td>( x_1 )</td>
<td>( x_1 )</td>
</tr>
<tr>
<td>0 40 5 5 50</td>
<td>0 80 10 10 100</td>
</tr>
</tbody>
</table>
ADJUSTMENT PROBLEMS IN AUSTRALIAN TRADE

\[ x_2 \quad 4 \quad 0 \quad 2 \quad 14 \quad 20 \]
\[ y \quad 2 \quad 8 \quad 0 \quad 0 \quad 10 \]
\[ q_1 \quad 15 \quad 20 \quad 50 \quad 85 \]
\[ q_2 \quad 46 \quad 4 \quad 20 \quad 70 \]

\[ x_2 \quad 40 \quad 0 \quad 20 \quad 140 \quad 200 \]
\[ y \quad 10 \quad 40 \quad 0 \quad 0 \quad 50 \]
\[ v \quad 50 \quad 80 \quad 20 \quad 150 \]
\[ Total \quad 100 \quad 200 \quad 50 \quad 350 \]
\[ q_1 \quad 15 \quad 20 \quad 50 \quad 85 \]
\[ q_2 \quad 46 \quad 4 \quad 20 \quad 70 \]

Prices
\[ p_1 = 2 \quad p_2 = 6 \quad z_1 = 5 \]
\[ t_1 = 0 \quad t_2 = 2/3 \]
\[ \hat{p}_1 = 2 \quad \hat{p}_2 = 10 \]

Physical Coefficients

<table>
<thead>
<tr>
<th></th>
<th>x_1</th>
<th>x_2</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_1</td>
<td>0.08</td>
<td>0.04</td>
<td>0.3</td>
</tr>
<tr>
<td>x_2</td>
<td>0.04</td>
<td>0.08</td>
<td>0.2</td>
</tr>
<tr>
<td>y</td>
<td>0.3</td>
<td>0.1</td>
<td>5</td>
</tr>
<tr>
<td>q_1</td>
<td>0.92</td>
<td>0.4</td>
<td>2</td>
</tr>
<tr>
<td>q_2</td>
<td>0.3</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

Value Coefficients

<table>
<thead>
<tr>
<th></th>
<th>x_1</th>
<th>x_2</th>
<th>y</th>
</tr>
</thead>
<tbody>
<tr>
<td>x_1</td>
<td>0</td>
<td>0.4</td>
<td>0.2</td>
</tr>
<tr>
<td>x_2</td>
<td>0.4</td>
<td>0</td>
<td>0.4</td>
</tr>
<tr>
<td>y</td>
<td>0.1</td>
<td>0.4</td>
<td>0</td>
</tr>
<tr>
<td>q_1</td>
<td>0.15</td>
<td>0.1</td>
<td>1</td>
</tr>
<tr>
<td>q_2</td>
<td>0.46</td>
<td>0.02</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Production Constraints

\[
\begin{bmatrix}
0.3 & 1 \\
0.92 & 2
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\leq
\begin{bmatrix}
1 & 0.4 & 0.5 \\
0.8 & 1 & 0.2
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\leq
\begin{bmatrix}
85 \\
70
\end{bmatrix}
\]

that is

\[
\begin{bmatrix}
0.5 & 3 \\
1 & 1
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\leq
\begin{bmatrix}
85 \\
70
\end{bmatrix}
\]

\[ x_1, x_2 \geq 0 \]

Primal Objective Function (using \( \hat{p} \))

\[ \text{maximise} \]
\[
\begin{bmatrix}
2 & 10
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\]

that is

\[
\begin{bmatrix}
.25 & 3 \\
.5 & 1
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\leq
\begin{bmatrix}
85 \\
70
\end{bmatrix}
\]

\[ x_1, x_2 \geq 0 \]
that is
\[
\begin{bmatrix}
1.08 & 4.8 \\
.54 & .48
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\]

Tariff-Distorted Solution
\[
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix} = \begin{bmatrix}
50 \\
20
\end{bmatrix}
\]

National Income (Domestic Prices)
\[
\begin{bmatrix}
1.08 & 4.8 \\
.54 & .48
\end{bmatrix}
\begin{bmatrix}
50 \\
20
\end{bmatrix} = 54 + 96 = 150
\]

National Income (International Prices)
\[
\begin{bmatrix}
2 & 6 \\
.432 & 1.12
\end{bmatrix}
\begin{bmatrix}
50 \\
20
\end{bmatrix} = 71.6 + 22.4 = 94
\]

Dual Objective Function (using \( \hat{p} \))
\[
\text{minimise} \quad 85w_1 + 70w_2
\]

Shadow-Price Constraints (Using \( \hat{p} \))
\[
\begin{bmatrix}
.5 & 1 \\
3 & 1
\end{bmatrix}
\begin{bmatrix}
w_1 \\
w_2
\end{bmatrix} \begin{bmatrix}
1.08 \\
4.8
\end{bmatrix}
\]

Tariff-Distorted Shadow Prices
\[
\begin{bmatrix}
w_1 \\
w_2
\end{bmatrix} = \begin{bmatrix}
3.72/2.5 \\
.84/2.5
\end{bmatrix}
\]
Value-Added (Tariff-Distorted Shadow Prices)

\[
\begin{bmatrix}
85 \\
70
\end{bmatrix}
\begin{bmatrix}
3.72/2.5 \\
0.84/2.5
\end{bmatrix} = 150
\]

Free-Trade Primal Objective Function

\[
\begin{bmatrix}
2 \\
6
\end{bmatrix}
\begin{bmatrix}
1 \\
-2
\end{bmatrix}
+ \begin{bmatrix}
0.5 \\
0.8
\end{bmatrix}
\begin{bmatrix}
1 \\
0.4
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\]

that is

\[
\begin{bmatrix}
1.432 \\
1.12
\end{bmatrix}
\begin{bmatrix}
x_1 \\
x_2
\end{bmatrix}
\]

Free Trade Solution

\[
\begin{bmatrix}
x_1^* \\
x_2^*
\end{bmatrix} = \begin{bmatrix}
70 \\
0
\end{bmatrix}
\]

\[
\Delta x_1 = +40\% \\
\Delta x_2 = -100\%
\]

National Income (International Prices)

\[
\begin{bmatrix}
1.432 \\
1.12
\end{bmatrix}
\begin{bmatrix}
70 \\
0
\end{bmatrix} = 100.24
\]

\[
\begin{bmatrix}
.716 \\
.112
\end{bmatrix}
\begin{bmatrix}
140 \\
0
\end{bmatrix} = 100.24
\]

Equilibrium Output of y

\[
y = .04 \times 70 = 2.8
\]

Employment of Primary Inputs

\[
\begin{bmatrix}
.3 \\
9.2
\end{bmatrix}
\begin{bmatrix}
1 \\
5
\end{bmatrix}
\begin{bmatrix}
70 \\
0
\end{bmatrix} = \begin{bmatrix}
21 \\
64.4
\end{bmatrix}
\begin{bmatrix}
+0+14 \\
+0+5.6
\end{bmatrix} = \begin{bmatrix}
35 \\
70
\end{bmatrix}
\]

50 units of \( q_1 \) slack
\( q_2 \) fully employed

Real-Income Gain from Tariff Removal

\[
\frac{100.24 - 94}{94} = 6.6\%
\]

\[
\frac{100.24 - 94}{94} = 6.6\%
\]
Free-Trade Dual Objective Function

\[
\begin{align*}
\text{minimise} & \quad 85w_1 + 70w_2 \\
\text{minimise} & \quad 85w_1 + 70w_2
\end{align*}
\]

Free-Trade Shadow-Price Constraints (using \( p \))

\[
\begin{align*}
[.5 & \quad 1] \begin{bmatrix} w_1 \\ w_2 \end{bmatrix} \geq \begin{bmatrix} 1.432 \\ 1.12 \end{bmatrix} \\
[.3 & \quad 1] \begin{bmatrix} w_1 \\ w_2 \end{bmatrix} \geq \begin{bmatrix} .716 \\ .112 \end{bmatrix}
\end{align*}
\]

\( w_1, w_2 \geq 0 \)

Free-Trade Shadow Prices

\[
\begin{align*}
\begin{bmatrix} w_1 \\ w_2 \end{bmatrix} &= \begin{bmatrix} 0 \\ 1.432 \end{bmatrix} \\
\begin{bmatrix} w_1 \\ w_2 \end{bmatrix} &= \begin{bmatrix} 0 \\ 1.432 \end{bmatrix}
\end{align*}
\]

Free-Trade Value-Added (\( Y_f \))

\[
\begin{align*}
\begin{bmatrix} 85 & 70 \end{bmatrix} \begin{bmatrix} 0 \\ 1.432 \end{bmatrix} &= 100.24 \\
\begin{bmatrix} 85 & 70 \end{bmatrix} \begin{bmatrix} 0 \\ 1.432 \end{bmatrix} &= 100.24
\end{align*}
\]

Higher of Tariff-Distorted and Free-Trade Shadow Prices

\( w_1 = 3.72/2.5 \quad w_2 = 1.432 \quad w_1 = 3.72/2.5 \quad w_2 = 1.432 \)

Preferred Free-Trade Monetary Income (\( Y_p \))

\[
\begin{align*}
\begin{bmatrix} 35 & 70 \end{bmatrix} \begin{bmatrix} 3.72/2.5 \\ 1.432 \end{bmatrix} &= 152.32 \\
\begin{bmatrix} 35 & 70 \end{bmatrix} \begin{bmatrix} 3.72/2.5 \\ 1.432 \end{bmatrix} &= 152.32
\end{align*}
\]

Required Rate of Currency Depreciation

\[
\begin{align*}
d &= \frac{Y_p - Y_f}{Y_p} &= \frac{152.32 - 100.24}{152.32} = 34.2\% \\
d &= \frac{Y_p - Y_f}{Y_p} &= \frac{152.32 - 100.24}{152.32} = 34.2\%
\end{align*}
\]

* * * * * * *

REFERENCES


2. Bhagwati, J, and Ramaswami, V.K., "Domestic Distortions, Tariffs and the Theory of Optimum Subsidy", Journal of Political Eco-


37. Tariff Board: The Tariff Review.


Makoto Ikema opened the discussion: As far as the written version of Dr. James' paper is concerned, its main emphasis is upon building up a model which sets out to examine the effects of trade liberalization on the Australian economy. Although his presentation is in very general terms, or theoretical, it might be much more meaningful if he had paid more attention to factors specific to the Australian economy. I say so because adjustment policy induced by trade liberalization in a particular country seems to be best tackled by taking into consideration factors specific to the country concerned. Unless this kind of consideration is given, then what Dr. James' model really deals with is adjustment problems in general but not those in the Australian economy.

There are many factors which are likely to affect Australia's adjustment policy. Among them, it seems to me, two specific and fundamental factors should not be overlooked. One is Australia's largeness in terms of geographical area; the other is her relative smallness in terms of Gross National Product and/or population.

Australia's largeness in terms of geographical area means, in turn, that she is well endowed with natural resources, actually or potentially. This might lead Australia to adopt free trade policies, exporting minerals and rural products. On the other hand, as far as Australia's relative smallness in GNP and/or population alone is concerned, she may be expected to specialize in some selected manufacturing industries, given her high per capita income.

Now a real problem Australia faces in formulating her trade policy arises when two factors are taken together. That is to say, Australia's trade policy tends to become protective: protective not towards selected manufacturing industries but towards 'almost all' manufacturing industries. This is very likely because there may be an incentive to utilize "forward-linkage effects" brought about by the endowment of various natural resources basic to all sorts of manufacturing industries.
I would therefore like to ask Dr. James how he can incorporate these factors, among others, into his model. I would also like to ask Dr. James whether selected industrialization or selected protection rather than all-round industrialization under all round protection might be better for Australia from the viewpoint of her own economic welfare and of her trade relations with neighbouring countries.

Turning to the other aspect of the Australian economy, it may not be unreasonable to say that all manufacturing industries in Australia are connected, directly or indirectly, with foreign capital. This circumstance, alongside the factors already mentioned tends to encourage industrialization based upon import substituting industries rather than export-oriented industries. I find it difficult to know how foreign capital fits in Dr. James' model.

So much about some of the factors which I think should be taken into account explicitly when considering Australia's adjustment policy. Now I would like to make a few technical comments on his model. First, Dr. James assumes that factors of production are perfectly mobile. It seems to me that this assumption throws away an important and real problem associated with adjustment policies. Speaking more specifically, the costs of adjustment become a real problem mainly when there is fixity on immobility of productive factors. In the context of Australia, does this not pose an important problem in that there exists immobility of factors between the rural and urban sector?

Secondly, although Dr. James presents only two objective functions, we can of course think about many other objective functions. However, I am not going to push this matter too far, but simply say that his second objective function on page 339 is in a sense to maximize balance of payments surpluses.

Finally, it may be worth pointing out that Dr. James' model will tend to underestimate the gains from trade and hence to overestimate the costs of adjustment. This is so, because in his model gains from trade come from only specialization on production effects and ignore consumption effects.

In spite of all comments made and the questions posed, this paper certainly provides a new and useful way of attacking and assessing the effects of trade policy.
Ippei Yamazawa continued the commentary: Professor James' approach to adjustment problems differs from the other five papers on the similar subjects. He started with the recognition that in the present state of the world economy Australia may not be able to continue her high tariff protection in future and emphasized the necessity of protecting the magnitude of adjustment which Australia would be required to make under alternative trade policies. For example, if Australia estimated all of her tariff barriers leaving her exchange rate to find its own equilibrium level, then some industries will expand whereas the others will decrease or may disappear altogether under free trade.

Professor James presented a linear programming model in which optimum sets of output for individual industries and resource allocation among them are determined under alternative trade policies. Comparison of the sets of outputs and resource allocation under free trade with those under the present tariff protection will give us the magnitude of both real income gains and the adjustment we have to make when free trade policy is adopted. It goes without saying that if we argue for trade liberalization we must make sure that the real income gains should exceed the adjustment cost.

The necessity for structural adjustment in developed economies has long been pointed out by many economists, but not much study has been done yet to implement it and Professor James' approach has certainly the advantage over sectoral studies and conventional analyses of trade liberalization presented at previous meetings of this Conference, being general equilibrium in nature. For only within a general equilibrium framework can the effects of structural adjustment be properly assessed.

Professor James' model worked out in the last section of his paper, however, seems to need more elaboration if it is to be properly applied to real situations and produce outcomes that assure the usefulness of his approach. I have little knowledge about Australian economy. In order to understand the basic characteristics of Australian adjustment problem I would like to ask three questions.

My first question is concerned with what the industrial structure of Australia would be like under free trade. Professor James wrote in page 314 "Many Australian economists have advocated cutting tariffs at once as the best all round solution". What industrial
and trade structure do they have in their mind would emerge under free trade when they make that proposal? I am asking just a rough guestimate which we often make before elaborate calculations.

The present structure of Australian foreign trade may give a clue to such a guestimate; primary industries and some manufacturing industries will increase their output and resource employment and the rest of manufacturing sector will reduce their share or some of them may disappear. My second question is concerned with this restructuring. Is there any particular balance in the minds of Australians between the primary and the manufacturing sector? That is, if the decrease in manufacturing output by some sectors were compensated for by an increase in other sectors, there is no problem. But if a large part of manufacturing production were replaced by primary production, such restructuring may not be tolerable, not from an efficiency point of view but from the view point of economic considerations. Or when Australian economists advocate trade liberalization, would they accept any restructuring of their industries which assures maximum real income, apart from adjustment cost considerations. I understand that there is an increasing demand for Japan's importing more processed materials. Is this demand related to any sense of industrial balance in the minds of Australians?

My third question is concerned with adjustment cost. Although Professor James stressed the necessity for assessing adjustment cost, he does not go beyond comparing alternative sets of outputs and resource allocation. Is it not necessary to introduce some formula of cost assessment into his model in order to undertake cost-benefit analysis of trade liberalization? Let us consider the problems of switching to two alternative sets of resource allocation from that under the present policy. If the switch to one set involves greater re-allocation of, say, labour between primary and manufacturing sector than the switch to the other, then we may say that, for a given economic capacity to adjust in a given time interval a switch of the former type will incur a smaller adjustment cost than that of the latter. Furthermore, in order to make sure that the real income gain exceeds the adjustment cost, both the gain and cost has to be measured in the same value terms. The collaboration of sociologists and other experts in related fields would also be required. That this sort of assessment involves some arbitrary procedures cannot be helped. If it is not provided economists are left in the position
of providing information only about the real income gains under alternative trade policies and leaving assessment of the adjustment costs to the judgement of politicians.

Discussion dealt with the process of trade policy formulation in Australia and the general lessons of Australian experience with trade policy formulation; the importance of faster mobility in assessing adjustment costs; and the importance of the time discount factor in adjustment cost assessment, as well as some technical aspects of the paper.

Apart from the entrenched nature of protectionist interests, one participant suggested that public servants in Australia tended to slow the process of trade liberalization, where it was otherwise justified, by adopting a bargaining stance which reserved established tariffs as bargaining coin. Another participant saw this bargaining stance approach to be more a reflection of fundamental political realities than of shadow boxing. Public servants in this position, like politicians interested in trade liberalization, appreciated the political importance of reciprocity in trade liberalization, on the production effect side, because, on the consumption effect side, political pressure groups are difficult to mobilise.

This factor was of general importance and a major element to be considered in the success or otherwise of the coming round of trade negotiations.

Another Australian participant pointed out that the time-discount factor or time horizon was a crucial factor in the implementation of trade liberalization policies. Politicians usually have a shorter time horizon than economists. Politicians prefer protection so long as the annual cost of protection is less than the total cost of adjustment.

Dr. James agreed that his model assumes perfect factor mobility and does not consider the social costs of adjustment, but suggested that it would be possible to introduce some political factors into the objective functions and production constraints if detailed information were available. Even though the model was rigid, he thought it better to have some results than none at all.

Other participants welcomed Dr. James ambitious approach to the problem, whilst reserving judgement until concrete results were obtained.
THE DIRECTION OF NEW ZEALAND'S INDUSTRY, TRADE, AND EXTERNAL ECONOMIC POLICIES

F.W. Holmes

Introduction

New Zealand has been described as a welfare state based on grass. The export of pastoral products, especially to Britain, has been and remains of very great importance in enabling New Zealanders to enjoy a relatively high, and gradually improving, material standard of living, and extensive public welfare services, in a comparatively pleasant physical and social environment. But by force of circumstances, with the population continuing to grow at between 1.5 and 2 percent per annum, and given the relatively slow growth of overseas demand for several pastoral exports, accentuated by the policies of agricultural protection adopted by the major industrial countries, the relative importance of farming in employment, output and external trade has been diminishing and will continue to diminish. The country's economic links with Britain and Europe have also been weakening to the point where trade with countries of the Pacific Basin already exceeds that with the members of the enlarged European Economic Community. This tendency towards a Pacific orientation will be accentuated by the terms on which Britain is joining the enlarged Community, despite special arrangements made to deal with the problems which British membership will cause for New Zealand's butter and cheese exports to the United Kingdom.

Changes in Employment and Output

In the 25 year period from 1946 to 1971 the New Zealand labour
force grew from about 700,000 to just over 1,100,000. The percentage employed in the primary industries fell from about 21.5 to 12.5 percent during this period. The most vigorous growth in employment has been in commerce, administration and professional services, and in manufacturing industries, especially in the engineering and metalworking industries. The pattern of employment in April 1972 is shown in Appendix I. It will be noted that over 50 percent of the labour force is now employed in the service industries.

In Government economic policy, throughout this period, considerable emphasis has been placed on fostering the development of manufacturing industries, both to provide employment for growing numbers and in an effort to reduce the vulnerability of the economy to overseas fluctuations in the prices of pastoral exports. Until recently, most weight was given to promoting import substitution behind a wall of protection accorded by quantitative restrictions on imports, applied ostensibly to protect exchange reserves. Since the mid-1960's, there has been a shift of policy towards encouraging exports of manufactures through fiscal, credit and other incentives. Even more significant in encouraging manufacturers to turn towards export markets was the combination of a substantial devaluation and firm fiscal policies to correct a serious balance of payments deficit in 1967. While import licensing has been gradually removed on almost all raw materials and items of capital equipment, a hard core of protective controls over imports competitive with domestic manufactures remains. With the balance of payments strong and reserves of overseas exchange built up substantially (see Appendix IV), the Government is reviewing the remaining controls over a five-year period beginning in 1972; in conjunction with an examination of the adequacy and structure of the Customs tariff.

The net output of manufacturing industry rose from about 16 to 20 percent of GNP between 1960 and 1970. A leading sector has been the forest-based industry, manufacturing timber, wood chips, pulp, newsprint and packaging materials, mainly from the country's excellent resources of radiata-pine. A further burst of expansion in this industry is in train with three large companies in the course of major capital developments designed to boost output of pulp and paper in various forms, one of the developments being a joint venture between New Zealand and Japanese companies. Considerable encouragement has been given to other industries processing New Zea-
land resources, and significant growth has been achieved in the manufacture and export of carpets, blankets and fabrics, leather goods and table ware, for example. A major project, still in its initial stages of production and not without its difficulties, is a steel mill utilizing the extensive ironsands of the west coast of the North Island as a raw material. Other heavy industries worthy of mention are an aluminium smelter at Bluff, — (utilizing cheap New Zealand hydro-electric power to process Australian raw material mainly for the Japanese market, with Australian and Japanese interests associated in the expansion) — an oil refinery and a metal fabricating industry. Expansion has occurred over a wide range of light industries, especially in the machinery and metal-working industries embodying technological skills available in a comparatively well-educated labour force.

During the past year, a reassessment has been made of the targets for growth of output and exports set for the 1970's by the sector councils involved in the national system of indicative planning. As the National Development Council has emphasized, while the targets are set after many months of work by persons from the public and private sectors in assessing the potential and prospects of the economy, the targets are merely a set of figures embodying economic aspirations which seem reasonable in current circumstances. As the figures in Appendix II indicate, the real output of agriculture and the industries processing its products is expected to grow at only about 3 percent per annum during the coming decade, while total output of goods grows by about 5 percent per annum. Manufacturing output is expected to increase by more than double the rate for agriculture; while the output of minerals and natural gas and the generation of power and gas should grow even more rapidly than manufacturing. As indicated, the expansion of forest output should be well above the average in the next few years, but slow down in the latter part of the seventies. Considerable expansion of the transport and communication network is foreseen in the first half of the decade, and the output of services from this sector should grow more rapidly throughout the 1970's than the expected average rise of about 4.5 per cent per annum in gross domestic product.

Changes in the Pattern of Trade

The following table indicates the changes which occurred in the
value and pattern of exports between the years ending March 1958 and 1970, and the targets recently set in projected actual prices for the March years 1973, 1976 and 1982:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Poastoral Products*</td>
<td>498</td>
<td>910</td>
<td>1137</td>
<td>1286</td>
<td>1857</td>
</tr>
<tr>
<td>Other Agricultural Products*</td>
<td>11</td>
<td>32</td>
<td>44</td>
<td>58</td>
<td>92</td>
</tr>
<tr>
<td>Forestry*</td>
<td>13</td>
<td>63</td>
<td>94</td>
<td>181</td>
<td>281</td>
</tr>
<tr>
<td>Fisheries*</td>
<td>3</td>
<td>15</td>
<td>18</td>
<td>23</td>
<td>59</td>
</tr>
<tr>
<td>Minerals</td>
<td>-</td>
<td>1</td>
<td>7</td>
<td>23</td>
<td>42</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>3</td>
<td>68</td>
<td>155</td>
<td>231</td>
<td>517</td>
</tr>
<tr>
<td>Other goods (incl.re-exports)</td>
<td>11</td>
<td>22</td>
<td>31</td>
<td>39</td>
<td>65</td>
</tr>
<tr>
<td>Total Goods</td>
<td>540</td>
<td>1112</td>
<td>1485</td>
<td>1841</td>
<td>2914</td>
</tr>
</tbody>
</table>

* Includes processing

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tourism</td>
<td>7</td>
<td>26</td>
<td>46</td>
<td>74</td>
<td>178</td>
</tr>
<tr>
<td>Transport</td>
<td>47</td>
<td>88</td>
<td>129</td>
<td>183</td>
<td>313</td>
</tr>
<tr>
<td>Other Services</td>
<td>54</td>
<td>161</td>
<td>240</td>
<td>341</td>
<td>629</td>
</tr>
<tr>
<td>Total Services</td>
<td>594</td>
<td>1273</td>
<td>1725</td>
<td>2182</td>
<td>2543</td>
</tr>
</tbody>
</table>

Although some diversification has occurred to reduce the previous extreme dependence of the country's export trade on farming products, (which still provided about 94 per cent of exports of goods in 1957/58), their relative importance remains substantial at over three-quarters of exports of goods and about two-thirds of exports of goods and services. The targets indicate that diversification is projected to proceed apace in the next decade, with the proportion of farming exports expected to decline to about 55 per cent of total goods and services in the early 1980's. Other sectors, especially manufacturing, forestry and tourism, continuing the tendency already established, should contribute a steadily increasing part of the country's earnings of overseas exchange.

The farming industry itself has demostrated capacity for flexibi-
lity in its activities during the past decade. With butter prices falling away from the levels achieved in the mid-1960's, and with wool prices severely depressed, the period 1966-71 was one of some difficulty for both the farmers and the country, the overall terms of trade index (base 1957 = 100) falling persistently from 111 in 1964 to 83 in 1971. During this period, there was a substantial expansion of output of meat, especially beef from which exchange earnings are now about equal to those from sheep meats. Within the dairy industry, there has been a continuous process of amalgamation of farms and factories into larger and more flexible units and a diversification of output away from butter and Cheddar cheese towards other dairy products enjoying wider and more profitable markets, to the point where the latter products now earn about 40 per cent of total receipts from dairying.

Some details of the changes which have occurred in the export mix of the pastoral industries, and of the type of expansion which has occurred in manufactured exports, especially since the devaluation of 1967, are given in Appendix III.

The following table shows the considerable shifts which have occurred already in the orientation of New Zealand's exports and imports away from Britain and Europe and towards the Pacific Basin.

| Proportion of New Zealand's Trade in Goods with Selected Markets |
|-------------------------|-------------------------|-------------------------|-------------------------|
|                         | Exports                 |                         | Imports                 |
|                         | % of total               |                         | % of total               |
| United Kingdom          | 84 51 40 32             | 47 45 31 30             |
| UK, EEC & EFTA          | 89 68 51 43             | 53 55 39 41             |
| Australia               | 4 4 8 9                | 13 16 20 22             |
| Canada                  | 2 1 2 3                | 9 4 4 3                |
| United States           | 3 15 18 17             | 12 9 12 10             |
| Japan                   | 1 5 9 9                | 2 3 8 11               |
| Other Pacific           | NA 3 N.A. 9            | N.A. 3 N.A. 4           |
| Total Pacific           | NA 28 N.A. 46          | N.A. 36 N.A. 50         |

On the export side, the changes reflect several developments. The dairy industry has succeeded in diversifying its products and markets to the point where between 50 per cent and 60 per cent of
the receipts from its exports has been derived from markets outside the United Kingdom, although the latter still normally takes about 90 per cent of butter and 80 per cent of cheese exports. The growing output of beef has found its main market in the United States; Japan has provided a profitable outlet for forest products and mutton; while Britain still takes over 80 per cent of exports of lamb, fiscal incentives to ship elsewhere have been gradually reducing the percentages sent to that country. Australia has become the main outlet for the expanding exports of manufactures, including pulp and newsprint. Worthwhile markets are being established in several of the Pacific countries for both primary products and manufactures. The switch towards close trading relations with Pacific countries is also evident in the country's import trade, with Japan and Australia making particularly significant advances in capturing a growing share of the New Zealand market. Nowadays, only about 12.5 per cent of imports are finished consumer goods; materials for domestic industries (37% in 1969), finished capital goods (14 per cent), components and materials for capital goods (10-11 per cent). Part and other finished products (12 per cent) and other components (13 per cent) make up the bulk of the inflow of goods from overseas.

Balance of Payments, and Adjustment Policies

As Appendix IV indicates, New Zealand's balances of payments and of overseas exchange transactions have been subject to wide fluctuations from year to year. These have been caused not only by swings in receipts from a narrow range of primary products, but also by variations in expenditures on imports following fluctuations in domestic activity, despite the use by Government of quantitative import restrictions. Until 1967, considerable reliance was placed on the intensification of import controls, combined with credit restraints, to deal with trends in exchange transactions and reserves which caused concern to the authorities. This reliance was a reflection not only of Governmental preference for administrative controls rather than for controls working through the price mechanism, but also of reluctance to resort to borrowing overseas.

The serious balance of payments difficulties of the mid 60's resulted in a considerable change in this philosophy. After making extensive use of rights to draw on the International Monetary Fund,
(an organization which New Zealand had not joined until 1961) and of borrowing from other sources, the Government introduced firm fiscal policies to dampen demand in early 1967 and, in deciding to move the exchange rate following the sterling devaluation of November 1967, went further proportionately than the British, devaluing by 19.45 per cent to bring the New Zealand dollar to parity with the Australian. Since then, the overseas exchange position has remained generally strong, with reserves showing a rising trend which has been particularly pronounced in 1971 and 1972. By the end of October, 1972, official overseas reserves exceeded $800m, the equivalent of 8-9 months' import payments. The increase is attributable to a combination of factors — significantly improved receipts for exports of goods and services, a slow growth of current payments, an appreciable increase in the inflow of private capital and, until recently, some net official borrowing by the Government.

The New Zealand Government is not accustomed to dealing with the rather pleasant embarrassment of such a pronounced upsurge in external wealth (with all its implications for domestic liquidity). Like some other Governments, it has been attempting to deal with a problem of internal "stagflation" by a combination of incomes policies and relaxation of fiscal and credit restraints designed to stimulate activity. It has significantly relaxed exchange controls and restrictions on imports of materials, equipment and motor vehicles, but has resisted advice to move more rapidly in dismantling quantitative restrictions on imports competitive with domestic industry, having promised manufacturers that, before such protective controls are removed, their cases for adequate tariff protection will be heard through the protracted processes of the Tariff and Development Board. Repayment of official overseas debt is being accelerated to some extent. The terms on which Britain is joining the EEC will lead to some decline in receipts for butter and cheese exports next year; and the downward float of the pound sterling is effectively revaluing the NZ dollar to some extent. The Government is obviously trusting that these developments, and the increasing overseas payments inherent in the other policies mentioned above, will at least reduce and possibly reverse the accumulation of reserves in the coming year.

There has been surprisingly little public discussion of the possibility of exchange rate action to help deal with the current situation. In the exchange readjustments of December 1971, New Zealand followed the Australians in maintaining the old IMF parity, linking
the New Zealand dollar to the devalued US dollar rather than the pound sterling, and establishing the market rate of exchange at the lower end of the permitted band. Although the large revaluation of 1948 and large devaluation of 1967 indicate that New Zealand Governments are not incapable of independent exchange rate action, it is evident that they have a marked preference for short-term stability of rates - indeed, the present Minister of Finance has expressed some reservations about the extent of the widening of margins which was arranged in 1971. The Government has also indicated a desire to retain the parity with the Australian dollar, if possible, the main reason apparently being to give confidence to New Zealand manufacturers developing trade with that country. Since it is known that the Japanese Government is under some pressure to revalue further, and that the Australians might feel obliged either to follow the Japanese or revalue independently, the Government no doubt feels that, for both political and economic reasons, it is wiser to wait developments in these countries. Official documents\(^1\) indicate recognition that there is likely to be more flexibility by major trading countries in altering exchange parities than in the past; however, in general, New Zealand is more likely to respond to initiatives by others than to make active use of variations of rates as an instrument of adjustment.

The foregoing comments have been made to give the reader an indication of recent attitudes by New Zealand Governments to problems of balance of payments adjustment. It is of some interest in this connection that the planning authorities, in setting targets for the 1970's, assumed that overseas borrowing and investment (including reinvested profits of overseas companies) equivalent to an annual average of 2 per cent of GNP would be sustainable. It will be observed from Appendix IV that the average balance of payments deficit on current account during the past few years has been well below this figure.

Forthcoming Adjustments to Trading Policies - Trade with U.K. and Europe

New Zealand's bilateral trade agreement with the United Kingdom has up till now been one of the basic instruments upon which the country's trading relationships have rested. British membership of \(^1\) e.g. The Report of the Department of Industries and Commerce 1972. Government Printer. Wellington p.8.
the EEC means that she will no longer be free to accord New Zealand the rights of unrestricted access for foodstuff exports embodied in the agreement, and that Community preferences will supplant the preferences previously granted to New Zealand and other Commonwealth suppliers. For its part, New Zealand will, between 1974 and 1977, be gradually phasing out the quite substantial tariff preferences accorded to British exporters in exchange for the concessions obtained in the British market.

Fortunately, the potentially very serious effects on New Zealand's export trade of British membership without safeguards have been recognized in a special protocol to the Treaty of Accession which makes provision for the continued entry of specific quantities of butter and cheese to the British market during the transitional period, and envisages a review in 1975 to determine what measures should be taken in respect of imports of butter after 1977. The quantities were calculated as percentages of the quotas alloted to New Zealand under the UK's restrictions on butter imports and voluntary arrangements with cheese suppliers, quotas which New Zealand like others has been unable recently to meet in a situation of unexpected shortage, with consequently very high prices.

The guaranteed market for cheese is to be phased out by steps of 20 percent, being completely eliminated in 1978. Some British Ministers have claimed that New Zealand will find consumer preference sufficient to retain a substantial portion of the market, even though the products will have to be sold at the high EEC retail price and be subject to variable levies and restrictions on access to protect EEC produce. This seems unlikely unless there is an unexpected decline in the rate of growth of the enlarged community's own output of cheese.

The guaranteed market for butter is to be reduced more gradually and to remain at 80 percent of the 1970/71 quotas in 1977. The manufacture of butter uses up much more milk than the manufacture of cheese; the combined quantities of butter and cheese guaranteed in 1977 constitute about 71 percent of the milk equivalent of New Zealand's 1970/71 quotas in Britain. The retention of this important basic market for butterfat throughout the transitional period is regarded as most helpful in cushioning the blow of British entry for New Zealand; if it had not been retained, not only would the difficulties of finding markets for butterfat products elsewhere
have been greatly accentuated, but the basis for producing and selling other dairy by-products would have been seriously undermined.

How serious the problems will be for the enlarged Community in honouring these guarantees will depend on trends in production and consumption in the Community. New Zealand has been left in no doubt that Britain expects to provide guaranteed outlets for the quantities mentioned in the Protocol. However, if as some economists in Britain have suggested, the situation of supply and demand produced a conflict between New Zealand's guarantees and EEC producers' own aspirations for access to the British market, the qualifying clause in Article 2(2), providing that levies and market prices be set so as to allow the quantities of New Zealand butter and cheese to be effectively marketed without prejudicing the marketing of Community butter and cheese, would provide ample room for debate.

Prices for butter and cheese are to be fixed at a level which will enable New Zealand to realise a price representing the average price obtained by that country on the United Kingdom market during the years 1969-1972. The New Zealand Government did not feel able to endorse this formula for fixing prices to be paid. Debate is continuing as to what method of averaging is to be adopted, whether the prices are to be regarded as fixed or minima, and whether upward adjustments can be negotiated in the light of inflation and trends in EEC prices during the transitional period.

The New Zealand Government laid great emphasis on securing a "continuing" arrangement, not confined to the transitional period, for butter. The typical diplomatic document which has emerged makes it difficult to say how far this objective has been achieved. Article 1(1) speaks of "a transitional arrangement" for butter and cheese. Article 4(2) looks forward to appropriate measures to ensure the maintenance after 31 December 1977, of exceptional arrangements in respect of imports of New Zealand butter. The decision on the arrangements is to be made in the light of a review by the Council in 1975. This is to look at "prevailing conditions" and supply and demand developments, and to take account of progress towards an effective world agreement on milk products and extent of New Zealand's progress towards diversification of its economy and exports. The New Zealand authorities take considerable comfort from the understanding written into the Protocol that the EEC will "strive to pursue a commercial policy which does not run counter to this pro-
gress". The most reasonable assumption to make at this stage would probably be that the 1975 review would provide for a further gradual reduction in quantitative guarantees at the end of the transitional period.

It is evident that the Luxembourg agreement is by no means the end of the process of negotiation about the future of New Zealand dairy exports, or about other elements of her trade in pastoral products. The agreement gives New Zealand the great advantage of being able to work closely with the Six, the British, and others who join the EEC on questions of the regulation of production and trade in dairy produce. The "spirit of the agreement" indicates a present willingness by the EEC to order their own dairying policies in a manner which will let us sustain a high proportion of our existing markets in Britain at least during the transitional period and for butter for some time thereafter; which will avoid frustrating our efforts to diversify into third markets; and which will make an effective world agreement on dairy products possible. On the other hand, the Six and other new members like the Irish and the Danes will be expecting from New Zealand positive efforts to diversify her exports, her markets and her economy. The arrangement offers scope for regular, mutually advantageous discussions on dairying and other policies between New Zealand and the enlarged Community during the 1970's.

No special arrangements have been made for other New Zealand products exported to Britain, which will henceforth have to be sold over the enlarged Community common tariff and any other levies and restrictions imposed. The most important of these other products is lamb, about 80 percent of New Zealand's exports of this commodity now being sold in Britain. The Six have not yet devised common policies in respect of this product. We have had to be satisfied with a statement by the British expressing their confidence "that there will continue to be adequate and remunerative access for lamb from traditional sources of supply". At present the only common barrier to access to the EEC for lamb is a common external tariff of 20 percent. In addition, some individual countries have their own special restrictions on access. The French have recently made a modest relaxation of their controls on the import of frozen lamb. The British have already begun to apply a levy to our produce, and will gradually raise this to the common external tariff of 20 percent during the
transitional period. Especially as the prices of beef and other meat would be raised appreciably in Britain as she adopted the regulations of the Community, New Zealand should be able to sell increasing quantities of lamb over that tariff at satisfactory returns if this remained the sole form of protection. The French have spoken of the need to introduce a common EEC sheep meat regulation but were persuaded to do nothing prior to British entry. The New Zealand Government is clearly relying on Britain's willingness and ability as a member to avoid the imposition of regulations which will have an adverse effect on New Zealand.

Overall, while British membership will have adverse effects on New Zealand's dairy export prospects, a substantial base for further diversification of the industry's output and export markets has been preserved and New Zealand has been given time to make the adjustments which will be needed to offset the damage which could otherwise be done to the economy. Indeed, a major difficulty is that the disadvantages of British entry are likely to be felt so gradually that there will be no dramatic stimulus to persuade Government and people that old attitudes to domestic and international policy are in need of substantial alteration. A continuation of the patient, tactful but strenuous diplomatic effort which resulted in the relatively successful outcome of the enlargement negotiations will need to be accompanied by an intensified commercial drive to hold old markets, develop new ones and widen the range of goods and services sold overseas. This in turn will require more attention than in the past by Government and business to the need for efficiency and flexibility in the domestic economy.

While the country's dependence on Britain and Europe can be expected to continue to decline in the next decade, relationships with the enlarged Community will remain of crucial importance in external economic policy. This will be so not only because of the need to preserve as good access as possible to Britain and the Continent but also because the policies adopted by the enlarged community will be vital in determining conditions of access for our products to several of the other markets which we shall wish to develop. Our interests will not be confined to the policies which are adopted in relation to the products which we want to sell which will influence the amounts which become available for disposal from Europe in the third markets. We also have a vital interest in their general trad-
ing policies, with particular reference to whether they will be such as to provoke a damaging trade war with other countries who are excluded from the enlarged Community.

New Zealand's major interest, however, must naturally be in the policies for the support of farmers producing temperate zone foodstuffs which are adopted, particularly in the EEC, but also in other countries. While the record of the past is rather dismal, all is not gloom so far as possibility of progress on this front is concerned. There are aspects of the arrangements made for New Zealand at Luxembourg which indicate a greater willingness by the Community to pursue policies which avoid large and costly surpluses of particular products, and to cooperate in avoiding disruption of commercial trade if surpluses do arise. Further, one would expect the British, as members, to use their influence whole-heartedly to keep down the cost of food and the cost of support of agriculture, of which they must eventually pay a substantial share. Moreover, while the aspirations of the North Americans are by no means identical with our own in this field, they have a strong, if somewhat schizophrenic, interest in international trade in farm products with the EEC countries, which could react to our advantage in negotiations.

OECD and GATT

Recognising that the policies adopted by members of OECD will continue to be of crucial importance to New Zealand, not only because they provide the most important actual and potential markets for New Zealand's major export products, but also because of their influence on the development of world trade generally, New Zealand has recently applied for full membership of the Organisation. If, as is likely, the application is successful, New Zealand will not only secure a somewhat greater opportunity to keep her views on trade and agricultural policies effectively before the other members, but also expose herself to greater critical scrutiny in respect of her own policies, both domestic and international.

One can also expect New Zealand's import and foreign exchange policies to receive somewhat more critical attention than in the past in the other international organisations to which she belongs. The great improvement in her balance of payments and exchange reserves is bound to provoke more searching examination in GATT of the justification for continuing use of import restrictions. More-
over, the forthcoming round of trade negotiations could well involve greater pressure to provide meaningful concessions on access for foreign supplies to the New Zealand market in exchange for improved opportunities for New Zealand exports to other members.

The protectionist attitudes hitherto taken to agricultural trade by the major industrial countries, and their unwillingness to enter into serious negotiations on non-tariff barriers, have meant that previous rounds of negotiations under GATT have proved of little significance to New Zealand in terms of advantages for exporters or pressures to make concessions which might expose domestic industries to greater competition. On this occasion, it seems likely that the possibilities of an exchange of concessions on agricultural support policies and non-tariff barriers to access by efficient primary producers will be seriously explored; on the initiative of the United States. Unfortunately, the export interests of the United States are by no means identical with those of New Zealand, and it is unclear to what extent the Americans would be prepared to modify their own protectionist stance, in particular on dairy products and to a lesser extent on meat, in the bargaining. Given their own problems in regard to dairy products and the special position accorded to New Zealand butter and cheese in the enlarged EEC, it is possible that the Community could see merit in including provision for easier access for dairy products (and possibly meat) to North America and Japan as an element in an acceptable agricultural "package" which it would be prepared to see emerge from the negotiations. However, New Zealand is unlikely to obtain a "free ride" in this respect, or in securing concessions exchanged by the major participants and others in those industrial products which, as indicated, should assume greater importance in the country's export trade in the future. The pressure to reduce current levels of protection would be intensified if the major participants accepted ideas currently being advanced that concessions should be offered on a conditional most-favoured-nation basis or confined, so far as wealthier countries are concerned, to those prepared to join a multilateral free trade area in industrial products.

**Trade Policy in the Pacific Region**

The threat of Britain's entry to the EEC on unfavourable terms has provoked some thought in New Zealand during the past decade about the disadvantages of a narrowly protectionist trading policy and about the need to equip a wider range of industries to engage in international competition. The main policy initiative which has
so far emerged from Government as a result has been the New Zealand-Australia free trade agreement established in 1965.

This agreement has no timetable or schedule for achieving free trade in substantially all goods flowing between the participant countries, although this is said to be its ultimate objective. A feature of the agreement is the number of safeguard provisions included to prevent any serious disruption to industrial production in either country. Over 1000 tariff items were included in the original schedule of products to be traded free of duty and a further 374 items have been added in annual reviews since then. However, both Governments have so far been careful to avoid the inclusion of products particularly sensitive to competition from the partner country. Emphasis has rather been placed on fostering co-operative arrangements among producers in the two countries, bolstered for example by the exchange of tariff concessions by Australia for import licensing concessions by New Zealand. In addition, Australia is giving New Zealand exporters a preferred position in meeting her import requirements of pulp and newsprint, provided that they charge prices comparable with those "normally" available from other major suppliers and meet quality requirements. A number of advisory consultative committees and panels have been established to consider trade and development in particular products, the most recent being a joint committee on dairy products, where the possibility of conflict in production policy and international marketing is apparent, especially with Australian produce likely to be excluded from the enlarged EEC.

It is evident that, up till now, while the NAFTA agreement has helped to foster co-operation and improve relationships between the two countries, its free trade aspects have been very limited in scope and efficiency. The Governments have recently agreed that faster progress is desirable, and have decided to consider further extension to the free trade schedule on an industry-by-industry, rather than on a tariff item basis. However, it is probable that, before real progress can be made, a new approach will be needed involving (a) agreement to establish free trade within a defined period according to an agreed timetable for all but a selected list of excepted goods, some of which might be made subject to tariff quotas, and (b) some provision for adjustment assistance and possibly for harmonisation of important economic policies.
The caution with which the question of freeing trade with Australia has been approached indicates that the Government is unlikely to take any active interest in proposals for wider free trading arrangements in the Asian-Pacific region. An exception can be made to this statement in the case of some neighbouring South Pacific territories; there is some indication that New Zealand might welcome the association with NAFTA in a special relationship of countries like Fiji, New Guinea, Tonga, Western Samoa, the Cook Islands, Niue and the Tokelaus if they were interested, but it is not known whether Australia would welcome such a development. So far, adverse reactions to Japanese proposals for a Pacific free trade area, and the rather negative response by most members of ECAFE to the suggestions for regional trade co-operation which have been made in that body, would indicate that pressures upon New Zealand to adopt a more liberal import policy are unlikely to come in the context of an Asian-Pacific regional grouping, but rather in wide-ranging international negotiations or through bilateral bargaining.

This is not to say that the New Zealand Government is disinterested in constructive co-operation and mutually beneficial exchanges of concession with her Asian and Pacific neighbours. Indeed, as indicated, New Zealand policy and commercial contact are already being increasingly oriented towards this area. Given the nature of New Zealand's major export industries, the greatest potential for export expansion in the short-run is probably to be found in Japan and North America. The main obstacles are agricultural protection in these countries and the necessity for New Zealand to adopt new methods of production, processing and marketing to satisfy the requirements of consumers there. New Zealand exporters have been making considerable investments and changes in marketing practices to meet these requirements, notably in the preparation and sale of meat to North America where it has been necessary to conform to stringent standards of hygiene and to co-ordinate the marketing of lamb with that of the domestic producers in a manner which will assist rather than undermine their own efforts. Proposals have been made to the Japanese authorities for a system of pooling increasing quantities of New Zealand dairy produce with Japanese domestic output in a manner which will enable the Japanese Government to pay domestic producers support prices while selling the pooled supplies on a regulated basis to consumers at a price below the high support
level thus stimulating rather than retarding consumption. The New Zealand Government has given encouragement to joint ventures designed to cater for the Japanese market, notably in forest products and aluminium. The current review of import licensing, of the tariff and of methods of phasing out the system of Commonwealth preference provides a good basis for constructive bargaining by these countries, and others, for improved access to the New Zealand market in exchange for greater opportunities for New Zealand suppliers of commodities which we are well fitted to produce. It could of course be contended that it would be economically logical for each country to make such concessions, without a quid pro quo, in the interest of its consumers. Regrettably economic logic prevails only within severe constraints in matters of trading policy, both in New Zealand and in the other countries mentioned.

In the past, New Zealand has tended to specialize heavily in its export trade in the production of luxury foodstuffs of a type which were bound to find their main markets in the highly industrialized countries, notably Britain. Even within the dairy industry, the trend is now towards the production of a much wider range of commodities which will cater for the requirements of developing as well as developed countries. The growing range of manufactured products such as processed foods, forest products, light machinery, small boats, light aircraft and so on should extend New Zealand's capacity to satisfy the needs of consumers, industry and Governments in increasing numbers of Pacific countries. While, among the developing countries of the Pacific, only Fiji individually took more than 1 percent of New Zealand's exports in 1971, collectively they took about the same proportion as either Australia or Japan, i.e. approximately 9 percent, whereas in 1961 their share of New Zealand's exports had been only about half that of Japan and two-thirds that of Australia. The most significant markets have been developed in Fiji, Singapore, the Phillipines, Malaysia, Peru, Hong Kong, Thailand and Chile.

On the import side, these developing countries supplied not much more than 4 percent of New Zealand's requirements in 1971, with Hong Kong and Mainland China being the only ones to show significant improvement in their market share in the past decade. From 1 January 1972, New Zealand began to apply a modest system of tariff preferences for developing countries under the UNCTAD scheme. The De-
partment of Industries and Commerce notes, presumably mainly for
domestic consumption, in its 1972 report, that "like other prefer-
ence-giving countries, New Zealand has incorporated safeguard me-
chanisms to enable the modification or withdrawal of preferences
on items where the preferential trade is causing or threatening in-
jury to domestic interests."

Conclusion

It will be evident that the provision of security for domestic
producers has been an important element in New Zealand's external
economic policies. On the export side of its overseas trading ac-
tivities, New Zealand is accustomed to living somewhat dangerously.
Even here, considerable importance has been attached to reducing
the uncertainties inherent in dependence on a narrow range of pri-
mary produce through trade arrangements assuring access to the Unit-
ed Kingdom and now the special arrangement with the E.E.C. Never-
theless, in general, New Zealand exporters have had to adjust their
output to conform with changing overseas requirements. Government
has generally avoided subsidisation of export activities, although
it has accorded tax credit and other incentives to exporters, fost-
ered stabilization schemes for the major primary exports to avoid
undue fluctuations in producers' incomes, and occasionally spent
public money to induce farmers to take action deemed in the longer-
run interest, such as holding more sheep than they might otherwise
have done or diversifying more rapidly into dairy beef, which short-
term difficulties or preoccupations might have inhibited them from
taking.

In import policy since the 1930's, on the other hand, consider-
able emphasis has been placed on the promotion of import substitu-
tion by according domestic producers protection from overseas com-
petition mainly through import licensing. Until recently, little
attention had been given to the desirability of reviewing the pro-
tection so accorded in the interests of economic efficiency and
the consumer. As indicated, since the middle of the 1960's, there
has been some change of emphasis in industrial development policy
towards the positive promotion of an efficient export sector cover-
ing a wide range of goods and services. In addition, there are
signs, for example in the shape of the NAFSA agreement, and in
some of the criteria laid down for the review of import licensing
and the tariff, of a recognition by Government in principle of the need to avoid inefficiency in the allocation of the country's resources if its export policies are to succeed. Nevertheless, in practice, in the debates which have gone on in New Zealand about the desirability of faster progress towards freeing trade with Australia and replacing import controls speedily with a well-considered tariff, Government has up till now tended to side with those advocating the preservation of a "secure home market" by adopting a policy of great caution in adjusting protective controls and tariffs on imports.

Hitherto, the pressures upon the Government to make structural adjustments to harmonize trade with other countries or to assist the exports of developing countries have not been great. It is possible that these pressures will intensify in the next few years, especially through the forthcoming international trade negotiations or as an element in co-operative efforts to assist her Pacific neighbours. This would provide the stimulus for more serious attention to be given to the need for a policy of adjustment assistance to relatively inefficient sectors of activity which, in the writer's view, already deserve in any case to be given greater weight in policy-making for national development.

Some of the elements of an adjustment assistance policy are already present in New Zealand. For example, a relatively efficient employment service through the Labour Department has played a helpful role in preserving New Zealand's low rate of unemployment during the post-war period, although the difficulties of doing so consistently with stability of prices seem to have been increased by developments in industrial relations and bargaining over pay in the last few years. The Government has not been averse to providing directly some of the capital necessary to enable large-scale and potentially efficient industries to be started on a satisfactory basis, and is according a broadening range of assistance to industrial development generally. There seems no reason why these elements of policy could not be developed further into a more co-ordinated endeavour to transfer resources from the less to the more efficient sectors of industry, in a manner which would enable New Zealand to play an even more constructive role than in the past in working for the further liberalisation of world trade and the improvement of conditions in developing countries.
### Appendix I Estimated Distribution of Total Labour Force

April 1972  

<table>
<thead>
<tr>
<th>Industrial Group</th>
<th>Total Employed (000's)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, hunting, forestry and fishing</td>
<td>137.1</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>4.4</td>
</tr>
<tr>
<td>Manufacturing industry -</td>
<td></td>
</tr>
<tr>
<td>Food, beverages, and tobacco</td>
<td>67.4</td>
</tr>
<tr>
<td>Textiles, wearing apparel and leather</td>
<td>47.7</td>
</tr>
<tr>
<td>Wood and wood products</td>
<td>21.4</td>
</tr>
<tr>
<td>Paper and paper products, printing and publishing</td>
<td>27.5</td>
</tr>
<tr>
<td>Chemicals petroleum, coal, rubber, and plastics</td>
<td>20.2</td>
</tr>
<tr>
<td>Non-metallic mineral products</td>
<td>11.4</td>
</tr>
<tr>
<td>Basic metals, metal products, machinery and equipment, and other manufacturing industries</td>
<td>78.3</td>
</tr>
<tr>
<td>Totals, manufacturing industries</td>
<td>273.9</td>
</tr>
<tr>
<td>Electricity, gas, and water</td>
<td>14.3</td>
</tr>
<tr>
<td>Construction</td>
<td>86.4</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>188.2</td>
</tr>
<tr>
<td>Transport, storage and communication</td>
<td>103.4</td>
</tr>
<tr>
<td>Community, social and personal services -</td>
<td></td>
</tr>
<tr>
<td>Public Administration, etc.</td>
<td>43.8</td>
</tr>
<tr>
<td>Sanitary and similar services</td>
<td>6.9</td>
</tr>
<tr>
<td>Social and related community services</td>
<td>125.8</td>
</tr>
<tr>
<td>Recreational services</td>
<td>10.0</td>
</tr>
<tr>
<td>Personal and household services</td>
<td>45.4</td>
</tr>
<tr>
<td>Totals, community and personal services</td>
<td>231.9</td>
</tr>
<tr>
<td>Total in industry</td>
<td>1,107.0</td>
</tr>
<tr>
<td>Armed forces in New Zealand</td>
<td>11.2</td>
</tr>
<tr>
<td>Registered unemployed</td>
<td>4.7</td>
</tr>
<tr>
<td>Total labour force</td>
<td>1,122.9</td>
</tr>
</tbody>
</table>

Appendix II Output Growth - Projections of Sector Councils

<table>
<thead>
<tr>
<th>Sector</th>
<th>Assumed Weight in G.D.P.</th>
<th>1972-3</th>
<th>% Increase in 3 yearly periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture &amp; Processing</td>
<td>16.0</td>
<td>2.8</td>
<td>3.3</td>
</tr>
<tr>
<td>Forestry &amp; Processing</td>
<td>4.1</td>
<td>5.0</td>
<td>8.7</td>
</tr>
<tr>
<td>Fishing &amp; Processing</td>
<td>0.3</td>
<td>-0.2</td>
<td>4.7</td>
</tr>
<tr>
<td>Mining</td>
<td>1.0</td>
<td>7.7</td>
<td>6.7</td>
</tr>
<tr>
<td>Power and gas</td>
<td>2.5</td>
<td>5.5</td>
<td>8.2</td>
</tr>
<tr>
<td>Motor Vehicle repair</td>
<td>1.9</td>
<td>5.5</td>
<td>-</td>
</tr>
<tr>
<td>Other Manufacture</td>
<td>17.6</td>
<td>5.7</td>
<td>6.5</td>
</tr>
<tr>
<td>Building &amp; Construction</td>
<td>8.9</td>
<td>3.7</td>
<td>5.0</td>
</tr>
<tr>
<td>Total Goods</td>
<td>52.3</td>
<td>4.5</td>
<td>5.6</td>
</tr>
<tr>
<td>Transport &amp; Communication</td>
<td></td>
<td>4.8</td>
<td>5.6</td>
</tr>
<tr>
<td>Distribution</td>
<td></td>
<td>3.2</td>
<td>4.1</td>
</tr>
<tr>
<td>Total Services (incl. other)</td>
<td>47.7</td>
<td>3.4</td>
<td>4.2</td>
</tr>
<tr>
<td>Total G.D.P.</td>
<td></td>
<td>4.0</td>
<td>5.0</td>
</tr>
</tbody>
</table>

Note: These projections were adjusted by the National Development Conference for a more stable rate of expansion to produce the following set of target growth rates.

<table>
<thead>
<tr>
<th></th>
<th>Actual growth 10 years to 1970-71</th>
<th>Target average annual growth for 3 years ending</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Real G.N.P.</td>
<td>3.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Real G.N.P. per head</td>
<td>2.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Productivity</td>
<td>1.6</td>
<td>2.0</td>
</tr>
<tr>
<td>Real Consumption per head</td>
<td>1.6</td>
<td>2.5</td>
</tr>
<tr>
<td>Population</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Labour Force</td>
<td>1.9</td>
<td>2.0</td>
</tr>
</tbody>
</table>

The targets are based on a number of assumptions. For example, it is assumed that savings can be sustained at a ratio of 24 percent of GNP, permitting an investment ratio of 26 percent of GNP to be achieved with the aid of overseas borrowing and investment. The terms of trade (1957=100) are expected to be 84 in 1972/73 and to fall only slightly thereafter to about 81 or 82 for the remainder of the decade, while domestic price increases are held to about 3.5 percent per annum (as compared with 7.5 percent in 1970/71 and between 2 and 3 percent in the 14 years up to 1967). Source: Report of National Development Council. 1972.
Appendix III  (a) Exports of Selected Pastoral Products 1963, 1967, 1971 June Yrs. ($ million)

<table>
<thead>
<tr>
<th></th>
<th>1963</th>
<th>1967</th>
<th>1971</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat &amp; Meat Preparations</td>
<td>173.0</td>
<td>205.0</td>
<td>390.8</td>
</tr>
<tr>
<td>Wool</td>
<td>214.4</td>
<td>174.1</td>
<td>187.9</td>
</tr>
<tr>
<td>Hides, Skins &amp; Pelts</td>
<td>25.4</td>
<td>33.6</td>
<td>50.6</td>
</tr>
<tr>
<td>Butter</td>
<td>90.9</td>
<td>109.4</td>
<td>113.6</td>
</tr>
<tr>
<td>Cheese</td>
<td>37.0</td>
<td>45.1</td>
<td>48.1</td>
</tr>
<tr>
<td>Casein</td>
<td>8.4</td>
<td>18.6</td>
<td>30.2</td>
</tr>
<tr>
<td>Other Dairy Products</td>
<td>10.1</td>
<td>32.3</td>
<td>36.7</td>
</tr>
<tr>
<td>Tallow</td>
<td>4.8</td>
<td>6.8</td>
<td>10.1</td>
</tr>
<tr>
<td>Sausage Casings</td>
<td>10.5</td>
<td>12.0</td>
<td>14.1</td>
</tr>
<tr>
<td><strong>Total of Above</strong></td>
<td>574.5</td>
<td>636.9</td>
<td>882.4</td>
</tr>
<tr>
<td><strong>Total N.Z. Exports</strong></td>
<td>627.5</td>
<td>727.2</td>
<td>1131.7</td>
</tr>
</tbody>
</table>

(b) Exports by New Zealand Manufactures* Calendar Years 1963, 1967, 1971. ($ million)

<table>
<thead>
<tr>
<th></th>
<th>1963</th>
<th>1967</th>
<th>1971</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulp and Paper</td>
<td>17</td>
<td>19</td>
<td>33</td>
</tr>
<tr>
<td>Wood Products</td>
<td>2</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Petroleum and Products</td>
<td>-</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Processed Foods and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horticultural Produce</td>
<td>2</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Machinery and Transport</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment</td>
<td>1</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td>Metals and Metal Products</td>
<td>1</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Textiles</td>
<td>1</td>
<td>2</td>
<td>16</td>
</tr>
<tr>
<td>Chemicals</td>
<td>1</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>5</td>
<td>20</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27</td>
<td>47</td>
<td>152</td>
</tr>
</tbody>
</table>

*excluding processors of pastoral products.

         Reports of Department of Industries and Commerce

Appendix IV Balances of Payments and Reserves ($m)

<table>
<thead>
<tr>
<th></th>
<th>Balances of Payments on Current Account</th>
<th>Current Balance in Overseas Exchange Transactions</th>
<th>Overall Balance in Overseas Exchange Transactions</th>
<th>Official Reserves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Year ending March)</td>
<td>(Calendar Year)</td>
<td>(Calendar Year)</td>
<td>(End of Year)</td>
</tr>
<tr>
<td>1961</td>
<td>- 90</td>
<td>-105</td>
<td>- 33</td>
<td>170</td>
</tr>
<tr>
<td>1962</td>
<td>- 95</td>
<td>+ 5</td>
<td>+ 25</td>
<td>221</td>
</tr>
<tr>
<td>1963</td>
<td>- 29</td>
<td>- 20</td>
<td>- 9</td>
<td>212</td>
</tr>
<tr>
<td>1964</td>
<td>- 13</td>
<td>+ 2</td>
<td>+ 6</td>
<td>235</td>
</tr>
<tr>
<td>Year</td>
<td>First Column</td>
<td>Second Column</td>
<td>Third Column</td>
<td>Result</td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>---------------</td>
<td>--------------</td>
<td>--------</td>
</tr>
<tr>
<td>1965</td>
<td>-17</td>
<td>-96</td>
<td>-24</td>
<td>170</td>
</tr>
<tr>
<td>1966</td>
<td>-156</td>
<td>-87</td>
<td>-15</td>
<td>164</td>
</tr>
<tr>
<td>1967</td>
<td>-138</td>
<td>-107</td>
<td>+40</td>
<td>234</td>
</tr>
<tr>
<td>1968</td>
<td>-66</td>
<td>+73</td>
<td>-28</td>
<td>204</td>
</tr>
<tr>
<td>1969</td>
<td>+56</td>
<td>+96</td>
<td>+61</td>
<td>257</td>
</tr>
<tr>
<td>1970</td>
<td>+40</td>
<td>-26</td>
<td>-22</td>
<td>308</td>
</tr>
<tr>
<td>1971</td>
<td>-195</td>
<td>+42</td>
<td>+145</td>
<td>478</td>
</tr>
<tr>
<td>1972</td>
<td>-20 (Est.)</td>
<td>+170\textsuperscript{a}</td>
<td>+272\textsuperscript{a}</td>
<td>778\textsuperscript{b}</td>
</tr>
</tbody>
</table>

\textsuperscript{a} Year ending September 1972  
\textsuperscript{b} End of September 1972.  

Hisao Kanamori introduced discussion: Professor Holmes' excellent paper clarifies many interesting aspects of the New Zealand economy, especially for those of us who are not familiar with its detailed operation. I should like to comment on two points.

The first is the special characteristics of the transformation in its industrial structure. The policies aimed at diversification of the economy are understandable, because in order to increase employment and reduce the danger of fluctuations, encouraging manufacturing industry appears desirable. But the nature of transformation in New Zealand is quite different from that of Japan and some of the other countries.

We can say that the growth of manufacturing industry and the decline of agriculture in Japan is a natural course for development. But in New Zealand this transformation has to be pushed against the law of comparative advantage. The transformation is more difficult in New Zealand not because of the poor performance of its manufacturing industry but rather because of the great comparative advantage of its primary industry. New Zealand has enjoyed a high standard of living and high wages based on primary production. To build new manufacturing industry using this high wage labour would not appear easy. In Japan, cheap labour was supplied to manufacturing industry from a poor agriculture sector. This is not the case in New Zealand. So except for such manufacturing industries as pulp, paper or aluminium which are based on natural resources or cheap electric power there may not be many manufacturing industries which can develop without protection. In the projections shown on p.376 the annual rate of growth of manufacturing industry is expected exceed 6 percent throughout the coming decade. So my question is whether New Zealand can achieve such a high growth rate in manufacturing industry without very costly protection, or is it desirable to develop manufacturing industry even if the cost of production is fairly high.
The terms of trade in the future are uncertain but it is possible that the terms of trade for agricultural products will improve.

By the way, I should like to ask whether it is desirable or not to have a flexible exchange rate or wider band for the exchange rate. Under a flexible exchange rate the balance of payments problem can be handled more easily but the development of manufacturing industry may be more difficult. For example, when the export price of wool or dairy products increased and a balance of payments surplus occurred a higher value for the New Zealand dollar would make the export of manufacturing goods difficult. So is it not desirable to have a fixed rate with dollar or Australian dollar for the purpose of developing manufacturing industry?

The second point is the possibility of the trade with the Pacific Area. Due to the British membership of the EEC, trade within the Pacific Area will become more important. Fortunately many safeguards during the transitional period will give the time for adjustment by New Zealand. One direction of trade which should be encouraged is of course that with Australia under the NAFTA agreement. But trade with Japan is also important. Already Japan's share of the total New Zealand exports is almost the same as that of Australia. As for butter, cheese and meat, Japan's demand is increasing rapidly. In this area, I agree that the main obstacle is agricultural protection in Japan. This protectionist attitude must be changed in order to increase the Japan-New Zealand trade.

I defer to Professor Hemmi's judgement about the possibility of the liberalization of agricultural imports into Japan. But I personally think that a more liberal policy will be employed in future. As current protection is now the main cause of the rise in consumer prices in Japan and the demand for increased imports will become more powerful. Of course there is also a need to adopt a very practical approach to encourage trade in agricultural commodities, as Professor Holmes suggested in his paper. Other than dairy products, there are many items such as aluminium and forest products for which Japan's import demand will be increasing rapidly. So the future for trade between Japan and New Zealand is very promising.

Peter Drysdale continued the commentary: Professor Holmes has provided us with an excellent digest of New Zealand's position in the world economy and her approach to international economic policy.
New Zealand is a very rich and beautiful country and the population, apart from its general distrust of Australians, is highly educated. She has long engaged in effective specialization in primary commodity export, has a high trade dependence, a high commodity concentration and still, a high geographic concentration in trade. She has developed a costly insurance system against the vagaries of international markets in the form of her protective system and she has been adjusting her trade structure rapidly to the closure and diminished relative importance of U.K. and European markets, and changing comparative advantage.

There has been some rationalization of the productive system, which is even more comprehensive and restrictive than Australia's, but Professor Holmes takes a somewhat pessimistic view of the prospects of further rationalization, despite the substantial under-valuation of the NZ $, recently accentuated by the NZ government's failure to follow Australian revaluation. This situation, I would judge, is significantly different from that in Australia where there are, at last, stronger internal forces pushing towards further tariff rationalization.

The transformation in the geographic structure of Australia's trade has also, incidentally, proceeded much further than that for New Zealand for various reasons. Only 9 percent of New Zealand's total exports are destined for Japan, whereas Japan's share in Australia's exports is now almost 30 percent.

Australia and New Zealand, like Japan, are countries which certainly have something to bargain away in the coming round of trade negotiations within GATT. Like Professor Holmes, I believe that New Zealand has much to hope for from these negotiations. But, of course, Mr. Royer has reminded us that there is certainly no cause for complacency about the chance of early success there.

Perhaps, the more important questions that Professor Holmes' paper prompts is what role is there for the small rich economies, like New Zealand and Australia, in the evaluation of a strong and favourable world trading environment more generally. This takes us back to a major theme in yesterday morning's discussion. New Zealand and Australian experiences illustrate very well the way in which the economic policy environment within which we all have to work and develop efficient international specialization is largely
determined by the policy behaviour of the major established economic powers. That is so whether we like it or not. That is why it is very relevant to discuss developed country trade problems in the context of concern about developing country or small country trading opportunities in the Asian Pacific region. The declining industries of developed countries are the potential export industries of all the smaller economies, and the structure of declining industries significantly is not uniform across industrial countries. That opens opportunities for leverage. For example, it is ironical but a fact that negotiations between the U.S. and Japan have already damaged the opportunities for trade in woolen and synthetic textiles, and, earlier, cotton textiles, for smaller East Asian trading nations. Thus, the main issue in trade strategy becomes: how can we add some small weight to economic interests in the major world economies which align with the trading and other international economic interests of the smaller economies, most importantly the developing economies. That is the relevance to the small economies of Krause's, Patrick's or my own concern about trade negotiations between advanced countries. Negotiations over agricultural trade, surprisingly enough, offer a route to rationalization of protective systems in the small developed economies and, more importantly, a means of securing continuation and extension of an open world trading environment. What comes out of the coming round of trade negotiations will very much affect the trade policy environment in which we all have to operate. The question of rich country agricultural trade is thus intrinsically linked with the general problem of trading opportunities for everyone, in manufactured goods and agricultural goods alike. As I tried to explain yesterday there could be major retreat to the extension of market limitations and market-sharing arrangements and that it is our responsibility to check these by whatever means possible.

What small part can New Zealand play in its own and others' interests? Professor Holmes suggests that the best strategy for New Zealand is to use whatever influence she can through her new membership of the OECD and appeal to the assurances of Europe for whatever they are worth, as well as press on with the extension of freer trade within NAFTA. Beyond New Zealand, this could offer something to the little Pacific countries.

This raises a specific question upon which I would welcome Pro-
fessor Holmes' comment. On 28 August Mr. Kirk, who has since become New Zealand's Prime Minister, made the following statement: "Peace, development, political stability, growing prosperity, consumption and trade and better relationship between countries are all inter-related and in the future it will not be enough for New Zealand to hope that this will happen. It will happen only if we get busy and make it happen. And this means that New Zealand should continue to seek the development of a regional association based on mutual assistance in which all countries in the Pacific region are willing to participate". Does Professor Holmes judge this to mean that the new government will wish to become actively involved, alongside Australia and perhaps Japan and Southeast Asian countries, in the development of a new economic power centre, aimed at promoting, albeit slowly, their own economic integration and providing a more effective forum for pursuing the interests of developing and developed economies within Western Pacific region in an Organization for Pacific Trade Aid and Development, for instance, along the lines recommended by earlier meetings in this series?

The supplementary question I raise is whether there are prospects now for developing a broader orientation in the NZ-Australian economic alliance at least from New Zealand's viewpoint.

Discussion focussed on the structure and costs of New Zealand's industrialization program; the possibility of New Zealand revaluation; New Zealand's relationship with South Pacific countries; and New Zealand's developing relationship with Japan.

Professor Holmes suggested that the structure of industrial development suggested in Appendix II of his paper was, of course, problematic and would depend on internal and external price developments which are difficult to forecast. However, he felt that the growth in manufacturing activity projected was likely if there was appropriate specialization. He was doubtful that reversal of the trend in the terms of trade for primary products would affect the situation greatly.

One participant asked why New Zealand had not followed Australia's revaluation. Whilst there may be a need for tariff and import control liberalization, as in Australia, immediate balance of payments requirements seemed to demand revaluation for New Zealand, too, as they had for Australia. Professor Holmes suggested that New Zea-
land's position was rather different from Australia's, especially because of the impending reduction of dairy product exports to the United Kingdom, so that the strong balance of payments position may well be only a temporary phenomenon.

Professor Holmes suggested that there would be stronger efforts within NAFTA towards co-operation between Australia and New Zealand in the fields of export promotion, transport facilities as a first step towards more substantial tariff and non-tariff barrier reduction. This co-operation could also be valuable in relation to South Pacific countries. Professor Holmes pointed out that there had been substantial migration from these countries to New Zealand, but that the best assistance to the people of the South Pacific from New Zealand would probably take the form of technical and education assistance in the countries themselves.

Finally, Professor Holmes suggested that Japan's approach to agricultural trade liberalization could after all play a significant part in shaping a new world economic order in the coming round of trade negotiations.
The U.S. Economy and International Trade

Lawrence B. Krause*

For most of the period following the Second World War, domestic economic policy in the United States was formulated independent of developments in other countries. To be sure, the monetary authorities were aware of difficulties in the balance of payments by the end of the decade of the 1950s, and somewhat tighter money may have resulted, but the main thrust of both monetary, and fiscal policy was addressed to domestic needs. This inattention to foreign economic impulses was probably an optimal strategy for the time. By concentrating on domestic factors, the American economy was kept within reasonable bounds of its full employment growth path, which served both domestic needs and probably those of other countries. The balance-of-payments measures that were adopted in increasing regularity in the mid-1960s were nothing more than expedients meant to ease the problems until a more basic adjustment was accomplished through automatic market mechanisms or through exchange rate alterations initiated by other countries. At no time, for instance, were measures seriously considered that would build up export industries or support import-competing industries on a broad scale. At times, particular industries like textiles received a great deal of attention from the government, but relatively little aid was actually provided.

* The views are those of the author and should not be attributed to other staff members, officers, or trustees of the Brookings Institution.
The "benign neglect" of the world economy by the United States ended quite abruptly on August 15, 1971. For purposes of considering the future role of the United States in the world economy, it is important to know whether the "Nixon shock" represents a complete reversal of U.S. policy, or merely a modification. My evaluation of the circumstances leads me to believe it is much more likely to prove to be a modification rather than a reversal. The August 15th measures resulted, from a confluence of factors which are unlikely to be duplicated. The U.S. economy was then performing rather badly, and a change of policy was clearly required. Inflation had not been conquered despite the recession, the expansion of the economy was below par for a cyclical recovery, and unemployment remained high, including large numbers of experienced prime-aged heads of households. This employment group makes up a large share of industrial workers producing tradeable goods. Furthermore, the international trade balance was threatening to go into deficit for the first time in the twentieth century. While substantial deteriorations had taken place in the trade accounts in previous years for instance by $3 billion between 1967 and 1968, the shift from a positive to a negative balance dramatized the condition and made it a politically salient issue. Moreover, the overall balance of payments was in deficit by a record breaking amount causing much concern among foreign official dollar holders and, therefore, within the U.S. government. Finally, the gradual but persistent shift of American labor unions from supports of liberal commercial policy to demanders of protectionist barriers was galvanized by Congressional action toward restrictive legislation. All of these factors were either alleviated or mollified by the new measures.

Such a combination of factors is unlikely to be repeated, and thus American policy can be formulated in the future in a more rational and crisis-free atmosphere. In the first place, the international monetary system that in the past has not permitted effective U.S. action for adjustment on a modest scale is itself in the process of being reformed. The American government is unlikely to permit the dollar to become over-valued again to the extent suffered in 1971. Furthermore, as the American economy begins fully utilizing its prime work force without the large trade surplus achieved in the past, the argument that such a surplus is a necessary condition for its full employment will be shown to be incorrect. In addition, the achievement of reasonable balance of payments equilibrium will be
shown to be possible without the $10 billion or so trade surplus sometimes suggested. But some changes will be longlasting. No American administration will be able to proceed with liberal trading rules unless American exports are afforded reasonable treatment by other countries. Also the distress of domestic interests injured by imports will have to be recognized and helped, rather than disregarded as in the past.

Evolution of the U.S. Economy

My observations concerning full employment and balance-of-payments equilibrium in relation to the merchandise trade accounts come from the expected evolution of the American economy. The United States is rapidly becoming a post industrial or service economy. The most significant reflection of this evolution is the increasing trend toward production and consumption of nontradeable goods and services and away from production and consumption of merchandise that can enter international trade. Like many other trends, the United States is not the only developed country experiencing it, however, the evolution has gone much further in the United States and some advanced countries like Germany and Japan have not experienced the trend at all as yet.

The evolution is evident in a number of U.S. economic indicators. In the national product accounts, one finds service expenditures as a share of consumer outlays rising from 30 percent in 1947 to 43 percent in 1971, and government expenditures — mainly for services by local governments — rising from 11 percent of GNP in 1947 to 22 percent in 1971. Also in the statistics of income originating by industry, one finds a rising share of service producing industries in the total, although the contrast is less marked. The most striking evidence, however, comes from employment statistics as shown in Table 1. In 1946, 24.4 million workers were employed in the production of tradeable goods representing 47.0 percent of total wage and salary employment. By 1971, the number of workers so employed had actually declined to 22.6 million, representing only 30.5 percent of the work force, even though manufacturing employment had risen from 15.5 million to 18.6 million workers. In 1971 only 25 percent

of American employment was in manufacturing firms - a decline of 5 percentage points in less than 30 years. The continued decline can not be attributed to the cyclical downturn of the economy which presumably could be reversed. During 12 months of cyclical expansion (Oct. '71 to Oct. '72), employment increased by 2.7 million workers, but only 648,000 were in manufacturing - or a marginal ratio of 24.1 percent indicating that the average share is still falling slightly.

Table 1 Wage and Salary Employment In Tradeable and Nontradeable Industries, 1947 and 1971 Actual and 1980 Projected

<table>
<thead>
<tr>
<th>Classification and Industry</th>
<th>Millions of Employees</th>
<th>Percentage Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tradeable goods industries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mining</td>
<td>1.0</td>
<td>0.6</td>
</tr>
<tr>
<td>Manufacturing (durable and non-durable goods)</td>
<td>15.5</td>
<td>18.6</td>
</tr>
<tr>
<td>Agriculture</td>
<td>7.9</td>
<td>3.4</td>
</tr>
<tr>
<td>Nontradeable industries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contract construction</td>
<td>2.0</td>
<td>3.3</td>
</tr>
<tr>
<td>Transportation and public utilities</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Wholesale and retail trade</td>
<td>9.0</td>
<td>15.2</td>
</tr>
<tr>
<td>Finance, Insurance, and real estate</td>
<td>1.8</td>
<td>3.8</td>
</tr>
<tr>
<td>General services</td>
<td>5.1</td>
<td>11.9</td>
</tr>
<tr>
<td>Federal government</td>
<td>1.9</td>
<td>2.7</td>
</tr>
<tr>
<td>State and Local government</td>
<td>3.6</td>
<td>10.2</td>
</tr>
<tr>
<td>All industries</td>
<td>51.8</td>
<td>74.2</td>
</tr>
</tbody>
</table>

Note: Figures are rounded and may not add to totals.

As seen in Table 1, the major expansion of employment has been in industries producing nontradeable goods and services. The larg-
est employers are in wholesale and retail trade, and they have continued to increase their share of total employment. The area of fastest growth of employment, however, has been state and local governments, with education the major service being expanded. Indeed, fully 8 percent of American employment is in education. During the 12 months October 1971 to October 1972 as many new jobs were created in retail and wholesale trade, in state and local governments and in general services (medical, private education, recreation, etc.) as in manufacturing. Thus, an average American is much more likely to be working behind a desk than on an assembly line.

The increasing importance of nontradeables in the U.S. economy is a rather natural development, given the level of personal income in the United States and the increasing urbanization of the society. As per capita incomes rise, consumption of certain classes of goods which previously were rising proportionally or more than proportionally to income begin to decline as a share of consumption. This first appears for food and clothing but then spreads to other classes of commodities. They are replaced by expenditures for higher education, restaurant meals, travel, etc. When per capita incomes rise above an important threshold point (or band) in which automobile ownership is possible for most of the population - a position reached in the United States some years ago - then the totality of demand for tradeable goods tends to decline relative to disposable income bringing on the trend noted above. Furthermore, a growing number of Americans tend to live in urban complexes. This increases their demand for certain services that either were not available or unnecessary in rural areas or were self-provided. Thus a need is created for education, fire and police services, water and other public utilities, etc., and these services are provided by local governments. Given the belief that per capita incomes will continue to rise and urbanization will proceed, then one can anticipate a continuation of the trend away from the consumption and production of tradeable goods. Such a projection is given in Table 1 for 1980.

Implications for the United States in World Trade

The trends noted above for the U.S. economy have some implications for the long run evolution of U.S. comparative advantage in international trade. Obviously many variables are at work in the long run, and thus one can only point out tendencies rather than
certainties, but they are meaningful nonetheless. With growing demand for nontradeable goods and services by Americans, which by definition must be provided by resident factors of production, resources will be drawn away from the production of tradeables. This suggests that, in general, American producers might not be very "export minded" in the future, since the expanding areas of domestic output will be in nonexportable products. To be sure, there are important exceptions to this generalization. The comparative advantage of American agricultural exports will be increasing because it is based on factors of production that will either be increasing (new technology resulting from research and development expenditures and capital) or which have almost no alternative use (fertile land which is not fully utilized) or which don't get expanded by use (climatic conditions). Furthermore, other research and development expenditures will give certain American manufactured products a technological edge in world markets. Finally some U.S. exports will be generated because of the ties between American parent firms and their foreign subsidiaries. Nevertheless, these exceptions should only provide a rather narrow range of products for export.

Important and somewhat opposite tendencies can be anticipated on the import side of U.S. trade. Because of the comparatively stagnant nature of U.S. demand for tradeable commodities, many American producers of manufactures products may see their competitive position undermined as economies of scale are captured by their competitors abroad. Thus, increased imports of a wide variety of products should result, particularly labor-intensive products and those not particularly subject to technological improvement via research and development expenditures. This will reinforce the growth of imports which will rise because of the need to import fuels due to natural factors.

Since the trend toward production of nontradeables in the U.S. economy has been observed for some years, the expected consequences for international trade should already be visible. One need be careful, of course, in attributing observed changes in trade patterns to trend factors when the real world is also affected by cyclical conditions. It is well known that the U.S. suffered somewhat greater inflation than its major competitors from 1953 to 1959, less inflation from 1960 to 1964, and much more inflation again from 1965 to 1970. These relative price movements, plus shortfalls from full
employment growth paths, must be adjusted for in the analysis in order to obtain useful results. A recent study of U.S. trade undertaken by the General Agreement on Tariffs and Trade (GATT) has attempted to do this and found some interesting results.\(^2\)

An examination of the major outlines of U.S. trade points up the impact of cyclical factors and the importance of adjusting for them. In 1953, the merchandise trade surplus of the United States was $4.8 billion, but under competitive pressure declined to less than $2 billion in 1959. With the competitive improvement in the early 1960s, the trade surplus reached $7.9 billion in 1964, only to be undermined by the subsequent inflation resulting in the trade deficit in 1971. In order to abstract from these cyclical factors, exports and imports are considered separately and disaggregated into three groups: agricultural products, nonagricultural primary products, and manufactured products.

With respect to U.S. exports of agricultural products, special factors including commercial policies have been more important explanatory factors than have cyclical conditions. U.S. agricultural exports expanded quite rapidly in the later 1950s but primarily because of U.S. government programs comprising concessional sales and gifts. A further expansion of exports occurred in the early 1960s and entirely on commercial account, reflecting the improved competitiveness of American field crops. The subsequent decline of exports at the end of the 1960s might superficially be attributed to reduced competitiveness, but this would be an improper interpretation. With the exception of raw cotton, which no longer is an important export of the United States, American field crops maintained or even improved their competitiveness based on fundamental economic factors. During this period, however, U.S. government concessional programs were scaled down which reduced U.S. exports to certain less developed countries, and European commercial policies were made much more protectionist – particularly the adoption of the Common Agricultural Policy by the European Economic Community – with serious consequences for U.S. trade.

In the last couple of years, agricultural exports have begun rising again, but in part due to unusually poor weather conditions in

Europe. As demonstrated in many markets where policy distortions are not present, American agricultural exports are competitive and likely to grow over time. It is estimated that the United States has 50 million acres readily available for crop production and 300 million more acres could be made available relatively easily. At mid-1972 prices (before the recent rise) and current technology, this acreage could produce $4 billion of additional exports immediately and conceivably seven times that amount relatively soon.  

The GATT study concludes that in the absence of increasingly restrictive trade barriers, U.S. agricultural exports would have grown more rapidly in absolute amounts and as a share of total U.S. exports. Such a finding is consistent with my analysis of the trends in the U.S. economy. 

The category nonagricultural primary products does not require much analysis, although it is of very great importance in view of the expected worldwide energy crisis. This category includes minerals, fuels and petroleum products. Both U.S. exports and imports of these products have risen quite steadily and in line with total trade. In the future, natural conditions, technological changes and concerns over environment are likely to be the most important variables influencing this trade. While some U.S. export growth can be expected in products like scrap metals and coal, it no doubt will be overwhelmed by U.S. import growth of crude petroleum and natural gas. Because of the great attention being given to this development by governments and others, I have nothing useful to add to the analysis.

The impact of the trend toward production of nontradeables is seen most clearly in the trend of manufactured products. On the export side, there has been growth of American exports which was substantially affected by cyclical conditions, however, certain underlying trends were operative over the whole decade of the 1960s. As one would expect in an economy moving toward service production, American exports of manufactures are becoming more concentrated in a few product lines, in sharp contrast to developments in other in-

4 GATT, ibid., p. 13.
Industrial countries. As measured by a concentration coefficient, U.S. exports increased their concentration during the 1960s by 11 percent, while other industrial countries were moving in the opposite direction, ranging from less than 1 percent for Japan to 6 percent for Italy.\(^5\) No doubt the concentration in a few products was speeded up by the U.S. inflation in the later 1960s, but as long as American demand for standard manufactured products rises only slowly in the future, American producers are unlikely to make investments in domestic facilities which could serve home and export markets, even with an improvement in U.S. competitiveness via the devaluation of the dollar and better relative price performance.

Some further insight into the causative factors in U.S. export growth can be obtained by classifying products by their principal production characteristics. Other researchers have pursued this kind of work along with the GATT study and found similar results.\(^6\) As seen in Table 2, U.S. export performance has been best in those products characterized as combining R & D intensiveness, high wages and capital intensiveness. It would appear that American demand for educational services gets translated into ample supplies of highly skilled workers who command high wages, into a capacity to pursue research and development, and into management talent to organize the intricate process of creating and merchandising new products. Thus, it is the new products in which American pioneer as consumers and producers that yield the greatest growth of exports. It should be noted that mere capital intensity does not lead to strong American comparative advantage, which confirms the observation that large amounts of private capital can be raised for investment wherever there is a reasonable business climate.

An implication of these two facets of American exports - concentration in a few products and ones that are relatively new - is that U.S. exports are not likely to be very responsive in the short run to relative price changes, but they are affected by variations in foreign income growth. American exporters are unlikely to have many foreign competitors, as they control a major share of the mar-

\(^5\) Gini coefficient of manufactured exports by 51 SITC classifications. GATT, ibid., p.27

Table 2 United States Trade in Manufactures Classified by Production Characteristics, 1960, 1965, and 1970
(million dollars f.o.b. and percentages)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Value</td>
<td>Value</td>
<td>Average Annual Rate of Growth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A. EXPORTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. R&amp;D intensive &amp; high wages</td>
<td>2,021</td>
<td>2,620</td>
<td>5,422</td>
<td>5.3</td>
<td>15.7</td>
<td>10.4</td>
</tr>
<tr>
<td>II. R&amp;D intensive, high wages and capital intensive</td>
<td>2,470</td>
<td>3,764</td>
<td>6,872</td>
<td>8.8</td>
<td>12.8</td>
<td>10.8</td>
</tr>
<tr>
<td>III. Capital intensive and high wages</td>
<td>3,384</td>
<td>4,248</td>
<td>6,230</td>
<td>4.6</td>
<td>8.0</td>
<td>6.3</td>
</tr>
<tr>
<td>IV. Capital intensive</td>
<td>629</td>
<td>730</td>
<td>1,185</td>
<td>3.0</td>
<td>10.2</td>
<td>6.5</td>
</tr>
<tr>
<td>V. Residual (predominantly labour intensive)</td>
<td>3,877</td>
<td>5,389</td>
<td>7,532</td>
<td>6.8</td>
<td>6.9</td>
<td>6.9</td>
</tr>
<tr>
<td>TOTAL OF THE ABOVE</td>
<td>12,381</td>
<td>16,751</td>
<td>27,241</td>
<td>6.2</td>
<td>10.2</td>
<td>8.2</td>
</tr>
<tr>
<td>B. IMPORTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. R&amp;D intensive &amp; high wages</td>
<td>221</td>
<td>553</td>
<td>1,326</td>
<td>20.1</td>
<td>19.1</td>
<td>19.6</td>
</tr>
<tr>
<td>II. R&amp;D intensive, high wages and capital intensive</td>
<td>933</td>
<td>1,123</td>
<td>2,480</td>
<td>3.8</td>
<td>17.1</td>
<td>10.3</td>
</tr>
<tr>
<td>III. Capital intensive &amp; high wages</td>
<td>2,668</td>
<td>4,121</td>
<td>7,564</td>
<td>9.1</td>
<td>12.0</td>
<td>11.0</td>
</tr>
<tr>
<td>IV. Capital intensive</td>
<td>344</td>
<td>621</td>
<td>1,609</td>
<td>12.5</td>
<td>21.0</td>
<td>16.7</td>
</tr>
<tr>
<td>V. Residual (predominantly labour intensive)</td>
<td>2,707</td>
<td>4,649</td>
<td>9,677</td>
<td>11.4</td>
<td>15.8</td>
<td>13.6</td>
</tr>
<tr>
<td>TOTAL OF THE ABOVE</td>
<td>6,873</td>
<td>11,067</td>
<td>22,656</td>
<td>10.0</td>
<td>15.4</td>
<td>12.7</td>
</tr>
<tr>
<td>C. NET EXPORTS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I. R&amp;D intensive &amp; high wages</td>
<td>1,800</td>
<td>2,067</td>
<td>4,096</td>
<td>+267</td>
<td>+2,029</td>
<td>+2,296</td>
</tr>
<tr>
<td>II. R&amp;D intensive, high wages and capital intensive</td>
<td>1,537</td>
<td>2,641</td>
<td>4,392</td>
<td>+1,104</td>
<td>+1,751</td>
<td>+2,855</td>
</tr>
<tr>
<td>III. Capital intensive &amp; high wages</td>
<td>716</td>
<td>127</td>
<td>-1,334</td>
<td>-589</td>
<td>-1,461</td>
<td>-2,050</td>
</tr>
<tr>
<td>IV. Capital intensive</td>
<td>285</td>
<td>109</td>
<td>-424</td>
<td>-176</td>
<td>-533</td>
<td>-709</td>
</tr>
<tr>
<td>V. Residual (Predominantly labour intensive)</td>
<td>1,170</td>
<td>740</td>
<td>-2,145</td>
<td>-430</td>
<td>-2,885</td>
<td>-3,315</td>
</tr>
<tr>
<td>TOTAL OF THE ABOVE</td>
<td>5,508</td>
<td>5,684</td>
<td>4,585</td>
<td>+176</td>
<td>-1,099</td>
<td>-923</td>
</tr>
</tbody>
</table>

Note: To the extent that they could be identified, products under the United States Canadian automotive agreement have been excluded for the whole period. For source and other explanations, see GATT, op cit, Appendix, pp.49-53.
ket of those products in which they compete. Thus there is limited scope for gaining markets from competitors as a result of improved price competitiveness. Consequently the growth of American exports is more dependent on real income growth in customer countries than is found of other industrial countries. Of course, improvements in competitiveness do matter, but they are effective only indirectly by slowing down the undertaking of production of new products by foreign producers or the delaying by American firms of foreign direct investment to protect their market. Generally speaking, American firms will export from the United States until their market abroad is threatened by local production. If American costs of production in general do not rise or even decline relative to those abroad, then export markets are maintained for a longer period of time.

In contrast to exports, American imports of manufactures have shown great variability in response to cyclical conditions. Between 1953 and 1959, when American competitiveness was declining, the value of manufactured imports increased at an average annual rate of 10.4 percent. During the subsequent five years, however, when U.S. real growth was faster, but international competitiveness was improving, the average annual increase in value of manufactured imports was only 5.7 percent. During the inflationary years of 1965 to 1970, this average ballooned up to 19.1 percent per year. During the decade of the 1960s as a whole, manufactures as a share of total U.S. imports rose from 47.5 percent to 60.0 percent. There was a wide variety of products involved, including both capital and consumer goods. The production characteristics of imports are also shown in Table 2. All classifications increased, but the most important in both absolute and percentage terms were capital intensive and labor intensive products. Thus, during inflationary periods, imports have been spreading and deepening their hold on U.S. markets, putting particular pressure on high labor using industries not characterized as R&D intensive. Japanese producers have substantially increased their exports, but because of the kinds of products involved, less developed countries also have been able to increase their exports of manufactured goods to the United States, and without the assistance of tariff or other preferences.

The picture that emerges from examining imports and relating them to trends in the domestic economy is one of a process whereby imports of manufactures increase, thereby releasing labor resources which along with the natural growth of the labor force are absorbed
mainly by industries producing nontradeable and to a much lesser extent by export industries. This natural evolution, however, can be greatly upset if an expansion gets out of hand causing inflation. Under inflationary conditions, imports of manufactures increase at too fast a pace and exports are retarded, but only slightly. Since the inflation itself brings forth a policy response which usually leads to general unemployment, the workers displaced by imports have a difficult time becoming reemployed. As inflation is conquered, the policy is reversed, the unemployed are absorbed, but not particularly in manufacturing. Import growth is slowed markedly and conceivably even reversed, while export growth might increase but again only slightly.

Responsibilities of the United States in World Trade

All countries, including the United States, have a responsibility to their own citizens and those of other countries to so conduct themselves as to try to maximize economic welfare. The United States may have special responsibilities in this regard, however, because of its size and wealth and the importance of its trade to other countries. The European Economic Community and Japan also have such special responsibilities. It might be well to spell out these responsibilities to other countries before turning to domestic adjustment which will occupy the remainder of this paper.

The United States has a responsibility not to create distortions in world markets and to help remove those that already exist. Such distortions may appear in the U.S. market for imports and also through exports. The main instrument for avoiding distortions is domestic stabilization policies. If excesses of inflation and deflation can be avoided, the instability of U.S. import growth of manufactures can be reduced and more efficient investment fostered in supplier countries (as well as at home). Furthermore, the terms of trade loss to other countries due to U.S. export price increases -- losses that are hard for others to avoid because of the lack of alternative suppliers -- will also be prevented. But if errors of demand management are made, and they cannot always be avoided, then it is imperative that the United States not compound the error by maintaining an unrealistic exchange rate for the dollar. Exchange rate changes should be prompt to avoid the misallocation of resources that an overvalued or undervalued dollar will cause.
A further responsibility exists to resist using policy measures whose intention is to distort directly international trade flows. In view of the leadership role exercised by the United States during the last 25 years, American protectionist moves are more visible and damaging to the world trading system than are those of other countries. Thus, it is improper to try to solve domestic income redistribution problems by trade restrictions. Resisting protectionist pressure, of course, is infinitely easier when the domestic economy is not suffering from inflation or severe unemployment, and when the dollar is not overvalued. Thus, success with stabilization policy is a necessary condition for responsible commercial policy. It would be even more desirable for the United States to reduce the trade barriers that already exist. Such a development is only possible through a process of multilateral negotiations of the kind already under discussion at GATT.

The United States has at least an equal or even greater responsibility to its own citizens in determining its international economic policy. Fortunately the policy prescriptions are much the same as noted above. Wise domestic stabilization policies combined with the maintenance of an equilibrium exchange rate serve the general interests of all those concerned. But, in addition, the United States needs to defend the interest of Americans as consumers. In some markets, such as those for sugar and petroleum, in which prices are not determined in a competitive manner, some government participation or intervention may be required to guarantee adequate supplies at responsible prices. However, for most products an absence of government restrictions serves the consumer interest better. Additional responsibility of the government relates to its concern for Americans in their role as producers of import-competing or export products. The concern relates to the resource transfer mechanism and the income redistribution consequences of international trade. Welfare theory has long recognized this responsibility, but it is only within recent years that policies to this end have been attempted.

American Adjustment Assistance Programs: Theory and Reality

From 1934, when the Reciprocal Trade Agreements program was began, until 1962 when the Trade Expansion act was legislated, there was no policy to aid Americans to adjust to increased import competition. American legislation did have an "escape clause" provision, but invoking this mechanism did not aid factors of production to adjust,
it merely restored trade barriers, which obviated the need for adjustment. In any event, few escape guard cases were ever approved. The disregard of adjustment costs could be rationalized on a number of grounds. First, since reducing trade barriers was expected to improve the national welfare, the gains to the society must exceed the losses, and the losses themselves were expected to be small in a growing economy. Second, it was recognized that many disturbances affect the economy, including changes in government expenditures, automation and technological change in general. These disturbances are much greater than changes in imports, so no special case could be made for import adjustment assistance. Finally, the government could fulfill its responsibility to the economy by following a general full employment policy without having to concern itself about particular industries, firms, or workers.

This rationale was never fully convincing. From a theoretical point of view, unless one had a cardinal measure of utility, one could not be sure society as a whole was better off with more liberal trade unless losers were actually compensated for their loss —and full compensation was not provided. Secondly, there was always an additional gain to be had if adjustment to disturbances could be speedily and efficiently concluded. Since disturbances from import competition arise abroad, they are less easily anticipated and thus make adjustment quite difficult. Policies that aid the process through adjustment assistance would promote society's welfare and are defensible from an equity point of view on the grounds that the government contributed to the disturbance by reducing tariffs or other barriers. Finally the political cost of not recognizing the adjustment losses became overwhelming. Injured firms and workers turned to the Congress to limit imports, and it became obvious that some policy was necessary to meet their grievances if liberal commercial policies were to survive. Thus, the Trade Expansion Act of 1962 recognized the principle that the costs of a liberal commercial policy that helps society as a whole should not be borne by the few who happen to be committed to import-competing production.

Nature of Losses of Import-Competing Producers

An effective program of adjustment assistance must recognize the losses resulting from higher imports and deal with them promptly. Losses can be incurred by business firms, workers and by whole communities as well. The business losses result from an undermining of profits and a loss of capital investment that is product-specific,
i.e., not transferable to other product lines. There is little support in the United States for helping firms recover these losses. Private enterprises take risks when investing their capital and are expected to absorb losses if they unhappily should occur. Nevertheless, if firms can be helped in various ways to speed their adjustment to a new competitive situation, then some government aid seems justified. For workers, the losses can result from unemployment and/or a change of employment to a lower-paying job. As noted previously, workers in import-competing industries in the United States tend to have below average skills and already receive rather low wages. There is much support for helping these workers, since they are already relatively disadvantaged in the American economy. The third area of loss - to whole communities - poses some of the most difficult and serious problems for policy makers. A plant may have to be closed because of import competition that was previously the economic backbone of a community. Thus, in addition to losses to the firm and its workers, professional people and merchants serving the area lose customers, governments lose tax receipts, and the economic viability of the area can be weakened. This negative externality, if it should occur, clearly requires a government policy to alleviate the distress.

Programs of Adjustment Assistance—Trade Expansion Act 1962

The Trade Expansion Act provided for adjustment assistance for entire industries and also for particular firms and groups of workers within otherwise healthy industries. The industry-wide provisions were merely an extension of the escape clause of previous legislation and still provided for higher tariffs as a possible remedy but added adjustment benefits as an alternative solution to the industry's problem. To qualify for adjustment assistance, firms or groups of workers had to convince the Tariff Commission (1) that they were suffering or were threatened with serious injury, (2) that the major cause of the injury was increased imports, and (3) that the increase in imports had occurred as a result of concessions granted in a trade agreement. This triple hurdle for qualification proved very difficult to surmount, particularly because the concept "major cause" was interpreted to mean more important than all other causes combined. As a result, not a single petition was accepted

in the first seven years under the law. Following November 1969 when the Tariff Commission decided to ease its stringent requirements a little, approximately one-quarter of the 150 petitions considered (until April 1972) were accepted.

If a petition was accepted, then the claimant would become eligible for the benefits specified in the legislation (following a procedure set up for administering the program). Workers made unemployed, could obtain 65 percent of their weekly wage which was non-taxable for federal income taxes, but not more than 65 percent of the average wage in manufacturing. If workers were under 60 years of age, they could receive benefits for 52 weeks plus an additional 26 weeks if they were enrolled in a training program. For workers over 60 years old, 65 weeks of total eligibility was provided. To be certified, a worker had to be employed by the affected firm for half of the 52 weeks prior to layoff and had to be employed at least half of the three years prior to unemployment. Furthermore, workers were eligible for training, testing and counselling services available under existing federal programs, but no special training programs were specified. In addition, some relocation allowance was to be given to workers who had to move their residence in order to find suitable employment.

For firms found to be eligible for adjustment assistance, three types of assistance were provided. First, firms could obtain technical and managerial assistance and advice in order to help them find new market outlets or develop new products or methods of production. Second, firms could obtain financial assistance either directly from the government, or from a private lender with government guarantees. Such loans could not be longer than 25 years, nor at a rate of interest less than 4 percent. The third type of assistance was some relatively minor tax relief. Eligible firms are permitted to carry forward business losses for tax purposes for a period of 5 years rather than the 3 year rule applicable to other business firms.

A number of aspects of this program can be criticized. As is widely recognized, the eligibility requirements clearly were made too restrictive. Since so few petitions have been approved and

all relatively recently, it is hard to give a proper evaluation of the program. One notable feature of the program, however, has been the inordinate delays in actually getting assistance to eligible recipients. In some cases as much as a year has passed, forcing much unnecessary suffering on workers and the demise of business firms that might have been saved. No wonder organized labor calls the program "burial assistance" rather than adjustment assistance. These delays have resulted from procedural problems that have yet to be solved. Furthermore, the training provisions of the bill are much too weak. Training is necessary to prevent a downgrading of worker skills and lower incomes. A greater economic incentive must be provided to workers to enter training - possibly full pay given to earnest participants - and meaningful training programs tailored to the particular situation and made available promptly.

Designing a meaningful training program is by no means an easy task. The nature of the American labor market is such that there is fairly frequent turnover of jobs. Many workers go directly from one job into another or directly into a job as soon as entering the labor force without an intervening spell of unemployment. Experience of workers who voluntarily quit jobs and become unemployed indicate relatively short spells of such unemployment. On the average, workers who are fired from jobs suffer an unemployment period of about 11 weeks (which varies according to the aggregate state of the labor market). While such a period of unemployment is serious, it is not overly financially burdensome because of unemployment insurance. However, workers who suffer layoffs because of plant closings may be in for an extensive period of unemployment. One follow-up study indicated that 30 percent of the workers were still unemployed one year after a plant closing. Furthermore, studies indicate that older workers have more difficulty becoming reemployed than younger ones, and less educated and unskilled workers have a harder time than educated ones. Also the degree of regional unemployment, sex, and race are significant variables. To be successful, training programs must fit the particular characteristics of the workers laid off and be designed for the labor market of the region where the unemployment is found. Under the Trade

Expansion Act, adjustment assistance has not reached this stage of sophistication.

**Adjustment Assistance Under the Canadian-American Automobile Pact**

In order to forestall the application of a Canadian export subsidy policy directed specifically toward automobiles - a policy that would have led to countervailing duties by the United States and thus a substantial worsening of the commercial relations between the two countries - the United States and Canada negotiated a bilateral agreement to provide for free trade (more or less) for automobile products between the two countries. The automobile agreement was signed on January 16, 1965 and was subject to review and cancellation upon 12 months notice. American automobile companies were pleased by the agreement, since they were also the major producers in Canada and could anticipate higher profits despite the fact that they had to make commitments to raise their Canadian production substantially. The Canadian Government made available some assistance to both firms and workers for the transition to the new situation.

The United Auto Workers, representing both the Canadian and American workers, were less enthusiastic about the agreement because of the injury that might occur to Americans as a result of greater Canadian output. The Canadian local unions, naturally, were more favorably disposed toward the plan. Indeed, if special provisions were not made for American workers, it is not clear that the Congress would have approved the agreement. The union recognized that some upset would surely result and that little protection was provided by the adjustment assistance provisions of the Trade Expansion Act, since not a single petition had yet been approved. Thus, the union demanded and received a more liberal adjustment program in return for their support of the pact.

The main weakness of previous legislation that was changed concerned eligibility requirements. The concept of injury was changed to "dislocation," which was defined as increased idle capacity or inability of a firm to operate at a reasonable level of profit and unemployment or underemployment of 5 percent of the work force or 50 workers, whichever was less. Dislocation was to be attributed to the operation of the agreement if U.S. production was reduced and imports from Canada increased or exports to Canada decreased.
Thus, the "major cause" criteria was eliminated. Also, eligibility was to be determined by a new Automotive Agreement Adjustment Assistance Board rather than the Tariff Commission, and they were charged with making their findings within 60 days of the filing of a petition. The benefits to be provided eligible claimants were the same as under the previous legislation, implying that they were considered to be adequate.

Under the stimulus of the pact, the two-way trade in automotive products increased from $730 million in 1964 to $5 billion in 1968. A notable characteristic of this trade was that 88 percent of the 1964 total originated in the United States, but only 54 percent in 1968. Thus the concern of the union that some upset could occur was justified by the events, but the absolute amount of domestic dislocation was surprisingly small. Possibly the rapid expansion of the overall economy should receive most credit for keeping the dislocation to a minimal amount. Nevertheless, some dislocation resulted, and 21 petitions for adjustment assistance in behalf of workers were filed and, unlike the previous experience, two-thirds were found to be eligible. About 2,000 American workers received benefits representing 0.3 percent of the 1964 work force in the industry. A total of close to $4 million was disbursed in benefits or roughly $2,000 per eligible worker.

Despite the greater success of adjustment assistance under the auto pact, not all problems involved have yet been solved. It is by no means certain that the same degree of success would be possible, even if an identical program was available for all import-competing industries. Increasing the scope of a program raises the administrative difficulties more than proportionally to the number of workers involved, and administration is a serious problem. Furthermore, a disappointingly small share of the benefits paid out under the pact went for retraining purposes -- less than 0.2 percent. Possibly auto workers have sufficient skills to enable them to obtain good jobs elsewhere, but it would be surprising if this were the only explanation. Unless skills of workers are enhanced, then chances are that they will suffer lower lifetime earnings, and thus not be fully compensated for their welfare loss. Also older workers require special treatment or else they may merely be forced out of the labor market without compensation. Possibly partial early retirement benefits should be allowed, which would permit older workers to accept
lower paying jobs without reducing their standard of living. Finally no attention was given to the negative externality involved when the economic viability of a community is undermined.

**Area Adjustment Programs**

The economic viability of a community can be undermined if a single plant is the major employer, and it is forced to shut down. If a number of plants in the same industry are faced by a similar economic adversity, such as might arise from import competition, and the plants are clustered together geographically, then the economic base of a rather large region might be weakened. From a number of points of view, this is the most serious problem that can arise from liberalizing trade. Under such circumstances, the workers directly involved will have a harder time finding jobs and are likely to remain unemployed for quite a while. Workers may be forced to relocate to another area to find work which not only involves moving expenses but may also result in capital losses to them as they are forced to sell their houses in a weak real estate market. In order to avoid the economic and psychic costs of moving, some workers accept jobs much below their skill level, and both they and society lose as a result. In contrast, workers who lose their jobs due to import competition but who are located in dynamically growing areas will have little difficulty finding alternative employment and society gains from the better allocation of resources.

Even if the workers are successfully relocated, an economic and social loss will result to a community if its economic base is destroyed. Those who leave the area are the younger, more educated and most vigorous workers. Simultaneously, numerous professional people will leave in search of a better practice and managers will leave either because they have lost their jobs, or simply in search of better prospects elsewhere. The merchants of the area will suffer a loss of business, resulting in lower profits and possibly capital destruction. The local governments in such localities will lose tax revenues both from sales and property taxes. With revenues down, government services such as education cannot be maintained. With inadequate public services, the area becomes a less attractive place for existing residents and will be unable to attract new ones. Thus, a vicious cycle of decay can set in. In circumstances such as these, adjustment assistance must have a geographic focus, rather
than a firm or worker focus.

Neither the Trade Expansion Act nor the Canadian-American Automobile Agreement provide the proper focus in their adjustment assistance provisions to deal with a community-wide problem resulting from import competition. There are other U.S. government programs, however, that do have an area orientation that provide useful insights into dealing with such a problem, even though addressed to other causative factors. Three such programs are discussed below; the Economic Adjustment Program in the Department of Defense, the Economic Development Administration in the Department of Commerce, and the independent Appalachian Regional Commission.

**Economic Adjustment Program in the Department of Defense**

A very important element of instability can be introduced into the U.S. economy through variations in defense expenditures by the government. Large increases can generate inflations, and sharp reductions can cause recessions. Even rather mild reductions can have a serious impact on communities heavily dependent on such expenditures. Without overall reductions, a particular community can be seriously affected by a switch in production or the closing of a military base in its area. Indeed, it was in order to make military base closings more acceptable to the Congress that the Defense Department began to treat the economic impact of its decisions more seriously. It has been estimated that since 1968, two million defense-associated jobs have disappeared, so the problem is not a trivial one.

The program was begun in the early 1960s when an office was set up within the Defense Department. In March 1970, the activity was enhanced with the formation of the cabinet level Interagency Economic Adjustment Committee with Presidential endorsement. The change in organizational structure also marked a change in mode of operations; from an informal coordinator of existing programs to a more aggressive planner for defense-impacted areas. Interestingly, no funds are provided in the defense budget for this purpose, so there is no system of grants or loans. Assistance to communities is given in the form of counselling and technical support for developing a strategy for economic expansion and diversification. However,

such counselling includes help to obtain funds from other government agencies which have appropriated monies for this purpose.

The Office of Economic Assistance can anticipate problems before they arise, since developments like base closings are known years in advance and even hardward cutbacks have some lead time. When an area is expected to suffer a significant impact - defined as a loss of employment of about 2 percent of the work force - the office attempts to convince community leaders to undertake the formation of a recovery plan through its own efforts which the office would support if requested. The office can supplement local planning by providing technical expertise from its own staff. Also the office can assist in making available surplus federal assets, including property, which may be substantial if a base closing is involved. Such property can be used for educational purposes, for factories, for industrial parks, and for housing developments. The office also serves as a coordinator and troubleshooter for the community in qualifying and obtaining funds under various programs.

It is very difficult to evaluate the impact of such a program. Close to 150 projects have received help since 1961. Since 1970 alone, about 50 communities have completed adjustment assistance proposals. It has been estimated that unemployment has been reduced by 70,000 people in these communities because of the operations of the office. Of course, it is impossible to know what might have happened to these communities in the absence of the program, but in all likelihood they would have been worse off. The success of the program can be attributed to early detection which dealt with problems before they got out of hand, to the availability of useful federal assets, and to the streamlined administration of the program which prevented costly delays and encouraged the interest of responsible leaders of the communities themselves.

Economic Development Administration of the Department of Commerce

In the early 1960s one often heard the argument in the United States that regional development efforts were not directly responsive to the problem of general unemployment because they work primarily by attracting economic activity from elsewhere within the country; and if full employment was attained, regional programs would be unnecessary. The first half of the statement is essentially correct, but unfortunately the latter half has not proven to be the case.
As full employment was approached in the mid 1960s, various areas and regions of the country seemed to remain chronically depressed. The characteristics of such areas are rates of unemployment above the national average, median family incomes below that of the nation, declines in population, and occasionally sharp increases in unemployment. In response to this problem, the Economic Development Administration (EDA) was created within the Department of Commerce by legislation (building upon earlier efforts in the same agency). It is important to note that the EDA is dealing with a more difficult problem than just a negative defense-impact because they get involved only after the economic decay has long been present and has resisted the curative powers of general prosperity and they began with the very worst cases.

The Congress authorized a total of $3.7 billion over a five year period, of which $1.3 billion was actually appropriated by 1970 for public works projects, business development, technical assistance, and planning and administrative grants (partially in support of the Defense Department's program). In addition to operating programs, the EDA was authorized to begin a continuing program of study, training and research to determine the causes of underdevelopment.

A chronically depressed district, meeting the requirements of the law, can petition the EDA for assistance. A district must include at least two counties and a growth center, but eligibility will not be granted unless an approved development plan is submitted, although aid is provided to create such a plan. About 1,000 districts have been qualified and they are found throughout the United States and some associated territories (Puerto Rico, Guam, and Samoa). Four tools have been utilized to help revitalize these districts; public works grants and loans, business development loans and working capital loan guaranties, technical assistance and planning and administrative grants. As seen in Table 3, most of the money has been spent on public works probably reflecting the fact that these are natural expenditures of governments and the critical role of social overhead capital in the development progress.

Since the EDA is treating problems that evolved over a long period of time, it is unlikely that they will discover instant cures for them. As much effort needs to go into discovering what to do as in doing it. The basic research being undertaken will only have a payoff over the long run. Some lessons may already have been learned.
Table 3 Program Expenditures of the Economic Development Administration (through 1969)

<table>
<thead>
<tr>
<th>PROGRAM TOOLS</th>
<th>TOTAL PROJECTS APPROVED</th>
<th>OBLIGATIONS (millions)</th>
<th>DISBURSEMENTS (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Works</td>
<td>1672</td>
<td>$802.5</td>
<td>$349.0</td>
</tr>
<tr>
<td>Business Loans</td>
<td>216</td>
<td>183.1</td>
<td>97.4</td>
</tr>
<tr>
<td>Technical Assistance</td>
<td>722</td>
<td>43.3</td>
<td>32.2</td>
</tr>
<tr>
<td>Planning Grants</td>
<td>167</td>
<td>15.4</td>
<td>13.4</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>2777</strong></td>
<td><strong>$1044.3</strong></td>
<td><strong>$492.0</strong></td>
</tr>
</tbody>
</table>


however. Effective government at the district level and efficient administration at the federal level are necessary conditions for success. When local leadership is lacking, sensible development strategies cannot be discovered or implemented. Likewise, inordinate delays by the agency in approving business loans can undermine a good opportunity by default. Furthermore EDA has found that they are generally successful with programs in district which on their surface seem viable economic units. Such districts may contain a pool of skilled workers or a valuable natural resource or are situated near large marketing areas. Conversely districts without some special resource are very difficult to develop and may not be developable.

**Appalachian Regional Commission**

A much different approach to area problems is found in the U.S. program for Appalachia. When President Kennedy first discovered poverty in the midst of plenty in the United States, he had this region in mind. In 1963 he requested a commission be formed to study the causes of the situation. Appalachia is a mountainous area in the eastern part of the United States containing part of twelve separate states. It is a large area equivalent in size to Japan (165,000 square miles) and with a population of 18 million.

The commission was easily able to document the poverty of the area. As of 1960, the per capita income was less than three-quarters of the national average, liquid assets were about half the national average, unemployment was 2 percentage points above the average, total employment in the area had actually declined over the decade of the 1950s while going up substantially in the country,
the educational level of the population was much below the national standard as was the state of health care, and much out-migration was taking place. But the commission also found potential for development in untapped natural resources and the locational advantage of being near to the richest areas of the United States. Appalachian poverty has resulted in part from its peculiar history of settlement by people seeking isolation and, therefore, they did not share in the growing prosperity of the areas around them.

A unique feature of the investigating commission report was a recommendation, which was accepted, to create a new and independent administrative body to coordinate the development efforts. Because of the multitude of governments involved - local, county, state and federal - and because existing governments had not dealt with the situation, a new government apparatus seemed necessary. The Appalachian Regional Commission (ARC) was created for this purpose and it was assured high level support from both state and federal governments. A small staff headed by an executive director was appointed to serve the commission. The Appalachia experiment has been the most comprehensive development effort ever undertaken for an area of the United States.

The commission adopted a development strategy for Appalachia as follows: (1) exploit the natural resources which produces local wealth, (2) invest that local wealth in human and social capital, (3) that investment will provide for a spiraling, self-generating development (independent of natural resources), and (4) progress will continue through further development of human and social resources attracted by the natural resources. Accordingly, four priority areas of investment in human and economic development were defined: access both to and within the region; programs to use better the natural resources of coal, timber, and available land; construction of facilities to control and exploit the abundant rainfall; and programs in which immediate improvements in human resources could be attained. The Congress passed legislation in 1965 under which $1.4 billion had been appropriated by 1971.

Since inaccessibility has been one of Appalachia's primary problems and a serious barrier to any development, the greatest expenditures under the program have gone for highway building (61 percent of the total). To help alleviate the inadequate revenue sources
of local governments, ARC's second largest expenditures were for supplemental grants (18 percent) which were often used in conjunction with other federal programs. Human resource development came next with expenditures for health services (9 percent) and vocational education (7 percent). Only relatively small amounts have been spent on natural resources directly and include mining (2 percent) and land conservation (1 percent).

The Appalachian experiment seems to be quite successful. As seen in a number of indicators shown in Table 4, economic progress in Appalachia now seems to be going forward at the same pace as the rest of the United States. Employment opportunities have risen substantially and unemployment has been reduced to about the national average. Total and per capita incomes, therefore, have shown a substantial increase. It is also clear, however, that the problem is not yet completely solved. The incidence of poverty in Appalachia is still substantially above the national average, although much improved. Furthermore, out-migration from Appalachia not only continued, it actually accelerated from 1965 to 1970 as compared to 1960 to 1965. But in the 1965-70 period, in-migration also speeded up to the point that there was little net loss of workers. Finally, the Appalachian Regional Commission has worked well politically and has acquired a good reputation. It may well be the model for future regional development organizations.

<table>
<thead>
<tr>
<th>Table 4 Economic Report on Appalachia 1965-70</th>
<th>Appalachia</th>
<th>Rest of United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment - number of jobs</td>
<td>9.0</td>
<td>10.6</td>
</tr>
<tr>
<td>Size of work force</td>
<td>9.0</td>
<td>11.1</td>
</tr>
<tr>
<td>Unemployment(^a) (1970)</td>
<td>5.0</td>
<td>4.9</td>
</tr>
<tr>
<td>Total Personal Income (1965-69)</td>
<td>36.1</td>
<td>39.2</td>
</tr>
<tr>
<td>Per Capita Income (1965-69)</td>
<td>35.4</td>
<td>33.8</td>
</tr>
<tr>
<td>Incidence of Poverty(^b) (1970)</td>
<td>18.1</td>
<td>13.7</td>
</tr>
</tbody>
</table>

\(^a\) In percent, not percentage change.
\(^b\) Defined as annual family income below $3,000. In percent, not percentage change.

The U.S. Adjustment Problem and its Relationship to Other Countries

During the remainder of the decade of the 1970s, the United States is unlikely to be faced with international-trade-induced adjustment problems of the same intensity as those of the last dozen years, but substantial ones nevertheless. The nature of the problem, however, may be much the same. Namely, how to efficiently transfer resources out of labor intensive manufacturing industries into expanding industries which are likely to be producing nontradeable goods and services. What is clear is that some kind of adjustment policy is necessary and one that meets the needs of business firms, workers, and communities.

The most important condition that will aid in the adjustment of business firms is a generally prosperous, non-inflationary economy. Most of the government's responsibility to business is taken care of in fulfilling this condition. Given the evolving nature of U.S. comparative advantage, however, the government can also help through its support of research and development activities and particularly by improving the mechanism through which new technology is disbursed throughout the economy. This is not to suggest that only R & D intensive firms can meet international competition. Well-managed firms operating close to markets will always be able to survive because of the superior service they can provide, but success rests solely on managerial capabilities which is hard for the government to influence through adjustment assistance.

The problem of providing adequate adjustment assistance for workers is more difficult. The workers likely to be displaced by international competition are those having few skills or outmoded ones. Society's responsibility is not completed until the affected workers are restored to the same lifetime income stream from which they are displaced. The most promising approach to this adjustment is retraining programs rather than merely providing unemployment insurance. To be effective, training programs must provide strong financial incentives for entry and completion by workers, and must provide truly worthwhile skills as determined by labor markets. For elderly workers, however, early retirement or preferably semi-retirement schemes may be necessary.

The most serious problem of adjustment, however, comes from the negative externality when a community's economic base is undermined.
This problem requires an area focus which has not yet been introduced into American trade legislation. A concept of an international trade impacted area needs to be formulated. From the experience of other area programs, it appears that there is great advantage in acting promptly before the self-reinforcing decay gets out of hand. Since international trade disruptions occur because of events arising in other countries, it may be impossible to design a preventive action program, but policies designed to slowdown the speed of dislocation may be the next best approach. Thus market disruption provisions in trade agreements are desirable from both a theoretical and practical point of view. Care must be taken, however, not to let such safeguards become a means for preventing needed adjustments.

To have a reasonable chance for success, an area adjustment program must be broadly based and comprehensive in design. Success is likely to come from short run expedients like tax credits for plant and equipment expenditures in development areas (as tried by the British with disappointing results). Attention need be given instead to the basic problems of the area which usually require social overhead expenditures for both real and human capital. It is also very important – if not critical – to have an administrative apparatus that works and is in contact with all levels of government.

Many countries have an interest in the ability of the United States to design and implement adequate adjustment policies. Realistically, unless a workable adjustment program gets enacted, the United States is likely to be more protectionist in the future and the growth of world trade will suffer. Less developed countries in particular might lose their opportunity to sell even greater amounts of labor intensive manufactured goods to the United States. Thus LDCs have an interest in agreeing to market disruption clauses in trade agreements. Furthermore, other countries may learn from U.S. experience with adjustment policies and be able to improve their own adjustment efforts. Finally, the United States may yet have some valuable lessons for other countries concerning development issues in general. Some experimentation may occur in the United States and the experience may be transferable.

The Outlook for Commercial Policy

As seen from the United States, one can be cautiously optimistic
about the outlook for commercial policy. President Nixon has apparently recognized that a liberal commercial policy is in keeping with his desired foreign policy and an aid in achieving a healthy domestic economy. In order to get a liberal policy endorsed by the Congress, however, the President must be prepared to pay the cost in budget terms of achieving an adequate adjustment policy and in political terms of facing up to those interests who see nothing but harm from expanding international trade.

Clearly the United States no longer is powerful enough to determine the outlook for commercial policy for the world by itself. Other countries also must be willing to liberalize their own trade restrictions, including those that affect U.S. exports. The United States cannot accept an agreement that excludes agriculture or high technology products like computers. Either the U.S. will obtain equal access for its exports or a period of trade policy retrogression is in the offing.

As is always the case, the world needs wise political leaders who can recognize the cooperative nature of the world economy. If our politicians are both strong and wise, they will stand up to the pleadings of special interest to protect the general interest of their own countries and that of the world community. It is all too easy to blame domestic ills on foreign devils, but a price is ultimately paid for such irresponsible behavior. The next test of leadership will be shortly at hand and history will give a prominent place to those that pass the test.
COMMENTS AND DISCUSSION OF
KRAUSE'S PAPER

Mr. Royer opened the discussion: The Paper submitted by Professor Krause is both thought-provoking and moderately reassuring in its conclusions. Its findings are not only important from a theoretical point of view but also very relevant in the context of the forthcoming trade and monetary negotiations. I fully share Professor Krause's view that all major trading nations have a dual responsibility to maximise economic welfare towards their own citizens and to contribute to the strengthening of the machinery for international economic collaboration.

The GATT negotiations may well tend to a deadlock unless the negotiators of major countries take to heart Professor Krause's findings about the structural changes which took place in the U.S. production and trade patterns. As he rightly points out, the U.S. has become a mature industrialized country similar to the U.K. in the course of the 19th century and its external policies should be adjusted accordingly. With a declining share of tradeable goods industry which may shrink to less than 30 percent of the labour force by 1980 and a growing concentration of export opportunities in agriculture, new products of science-based industries and to sales to subsidiaries abroad, the approach to trade negotiations has to be radically changed. It should also be recognised that the growing proclivity to import consumer goods and a wide range of producer goods reflects a natural trend which is likely to stay and should not be treated as a result of malpractices of foreign competitors or as a fleeting by-product of abnormal inflationary pressures. Last but not least, one should not disregard the impact of direct investment income in the U.S. balance of payments. The idea that a $5-10 billion balance of trade surplus continues to be required to keep the balance of payments on an even keel and to guarantee full productive employment should be discarded and the traditional balance of trade indicator needs to be replaced by a balance of pay-
ments on current account. Direct investment income provided $7 billion in 1971 and Professor Krause estimated that the net U.S. surplus in investment income would reach about $11.5 billion in 1975 and $16 billion in 1980, which would go a long way to cover foreseeable trade deficits.

Professor Krause's paper would contribute much to a better understanding of the real problems to be dealt with in the forthcoming negotiations.

Concerning the moderate optimism shown regarding future U.S. commercial policy, it is clear that all governments have to meet resistance in their Parliaments and to oppose pressures from sectional interests where they wish to pursue a liberal line, but misgivings which are aired from time to time are not based singly on the fact that the U.S. is a big and powerful country which serves as a model or an example. There are other special features. Contrary to what took place in other industrialized countries with a long tradition of trade bargaining where international commitments as trade matters are part of the law of the land and respected as such by public opinion, the U.S. started much later and Congress still feels that commercial policy can be determined unilaterally by the American government. Even today, Congress is not bound by the GATT which represents the main protection of foreign trading interests and it can at any time pass a resolution or adopt a ruling inconsistent with its provisions, which would force the Administration to leave the agreement or to obtain a new waiver which would fatally undermine the existing trading institutions. The Administration, in recent years, has not been very active in educating public opinion and in refuting the partisan and often spurious arguments of protectionist lobbies, to which it has sometimes given a surface of respectability in supporting them in international discussions.

Apart from this psychological atmosphere which has to be dispelled the success of the GATT negotiations largely depend on a meeting of the minds of major trading nations on two major issues: the adoption of an escape clause which should improve the credibility of the government's commitments by introducing an element of objective assessment of facts, and a multilateral system of consultations and follow-up and a basic agreement on the objectives, terms and procedures for adjustment assistance. The two problems are closely linked and any deviation from the standard rules of conduct should
be made dependent on the implementation of a concrete and binding plan for adjustment. It would be unreasonable to believe that developing countries and developed countries as well would accept the method applied during the Kennedy Round which simply excluded, partly and wholly the "sensitive" industries from the scope of the negotiations.

The adjustment assistance method cannot be left entirely to the discretion of individual governments. While the detailed machinery would remain national, there should be some consensus on the basic objectives and specific targets to be met. The experience of the United States which Professor Krause described fully will be of great value for other governments although results have not been very satisfactory so far. The International Chamber of Commerce which is working on a consultation in depth with business in all member countries on this subject believes that there should be a continued survey of the competitive position of industries to enable advance planning of appropriate remedies and that, following the Japanese and Continental European countries, industry itself should play an important role and often take the initiative, relying, where necessary, on governmental assistance.

Moto-o Kaji continued the commentary. It is my great pleasure to be given a chance to make a comment on Dr. Krause's paper, because I have been reading his papers and articles for many years and impressed by them very much. In the paper which Dr. Krause presented here, he discussed various problems. But, if I may sum up, it can be divided into two parts. In the former part of the article he mainly discusses the balance of trade of the United States in connection with changes in the domestic economy and he deals with it in the wide scope. Namely, he discusses the U.S. roles in world trade, then he turned into relatively specific problem, that is, adjustment assistance problems in the United States. He does it both in theoretical aspects and in reality. Unfortunately, I am not familiar with each one of the particular measures of adjustment assistance. So, in my comment I would rather confine myself in general argument on the problem of adjustment assistance by the Government.

Let me come into the first part. Here, Dr. Krause describes very clearly what was the external economic policy of the United States in the Post-World War II period. When he reaches August 15,
1971, he evaluates so called "New Economic Policy" whether it was a complete reversal of the policy or merely a modification. His answer to that is that it was a modification. I agree with his conclusion, but by slightly different reasoning of it. In his case, he emphasizes the fact that the various factors brought about that policy change are by chance duplicated at that time. And New Economic Policy either alleviated or modified these factors. Also he stresses that the U.S. policy in the future will be formulated in a more rational atmosphere since such a combination of factors is unlikely to be repeated.

In my view, the U.S. Government started to adopt the balance of payments policy when the late President Kennedy sent the message to the Congress in 1963. Although interest equalization tax was the only measure to be realized at that time, there had been a kind of trends towards more and more attention is paid to the balance of payments problem since then. It seems to me even, the so-called "benign neglect policy" was taken as a strategy to cope with the difficulty in balance of payments. If this reasoning is admitted as one of possible explanations, it may be allowed to say that the U.S. Government will take much more positive policy in the future than in the past.

As for Dr. Krause's analysis on exports and imports of the United States, I did not have any serious disagreement with him. One point which I would like to make concerning his explanation of the relation between the shift in domestic demand and international competitiveness of tradable goods produced in the United States is as follows. On page 392 of his article, he pointed out the concentration coefficient of the U.S. exports got bigger during the 1960's and related it to the fact that the U.S. economy is moving toward service production. But that coefficient for Japan's exports is higher than that of the U.S. in absolute magnitude. Although in Japan's case that coefficient got a little smaller in the same period. I just wonder how Dr. Krause would explain this fact.

On his discussion on the responsibility of the U.S. I have one thing to add. I fully agree with his view, that is to say, wise domestic stabilization policy should be taken by the U.S. in order not to create distortion in the world market. Every other government should follow the same way. What I would like to add is that the anti-monopolistic policy should be included as a part of the
stabilization policy. In this connection, I should like to express my view on the inflation in the U.S.

As Dr. Krause showed on page 390 in his article, the rate of inflation in the U.S. was greater from 1953 to 1959, smaller from 1960 to 1964, and then much greater from '65 to '70 than that of her major competitors. Dr. Krause associated this phenomenon with short run business cycle condition. But my interpretation is a little different from his. As for the inflation in the latter part of 1960's, my judgement is that the inflation was brought about by the excessive demand. However, the one we saw in 1950's was different. In my view, it can be called "cost-push" inflation. In other words, the whole series of the change in the price level cannot merely be associated with the cyclical change. And downward rigidity of the price level in the U.S. would have very great influence for the relative strength of dollar in international economy.

On the second part, I don't have much to say, since I'm not familiar with the specific adjustment assistant program. Only I can do is to make a general statement on this problem. As it was described in Mr. Namiki's paper which was presented here yesterday, Japanese Government has been taking various kinds of, so called, industry policy. In my view, many of them could be, some way or another, classified as the adjustment assistance. Some of them are labelled the policy to promote structural change of the industry. But in some case, they resulted in having made an adjustment delay. After all, we do not have the established theory of adjustment assistance which is to be applied when we are to institute such measures. I personally prefer overall nation-wide policy to encourage mobility of labor and capital and to stimulate diffusion of new technology than to take the specific measures. I hope that Dr. Krause would admit my view.

Later discussion was concentrated on the nature of protectionist pressures in the United States and their effect on the trading opportunities from developing countries.

Several participants suggested that Krause's paper had, perhaps, not given sufficient attention to the vicious effects on the American protectionist lobby on the trading interests of developing countries.

Professor Krause explained that the nature of the political me-
chanism in the United States, and for that matter probably in most countries, was such that, unless there was a strong Administration stand against protectionism, the political system automatically threw up protectionist policies. Thousands of protectionist bills are presented to Congress each year as a direct result of pressures from manufacturing interests affected by foreign competition. There has been much greater sensitivity in this political response as the range of declining industries has widened. But there may be some cause for optimism about the future stance of the present Administration. Much depends on the President's view of his role in the larger stream of history. There is evidence that this view will be favourable to liberal international economic policies.

Professor Krause expanded on his comment that the United States economy was adjusting to a 'mature creditor' position. For example, the United States, like other countries, would become more dependent on imports of oil. The crunch would come if she were to lose her ownership position in oil, since this would involve a large loss in service payments as well.
I. The Policy Question - Changing Objectives

For the greatest part of the last century, the principal objective of industrial policy in Canada was economic growth -- growth through settlement of the west, growth through exploration and exploitation of mineral resources, growth through application and adaptation of technology to processing, growth through protection of manufacturing activities to supply the requirements of an expanding population. Today growth is still important, particularly in the relatively short term, since in the 1970s the Canadian labour force is growing more rapidly than in any other "developed" country. But the aims of industrial policy are today much more mixed. Growth in productive capacity is only one of the objectives that occupy the attention of policy makers in setting the course of industrial policy. Among the other objectives are the following:

1. The industrial efficiency objective. There has been a growing recognition of the need to rationalize Canadian industry in order to make it more efficient and able to withstand and participate in international competition, without traditional protective measures or a substantial depreciation of the exchange rate. This objective, while perceived in part in the 1950s, has only since 1960 become a main theme of public policy discussion. It is an issue that creates difficulties for political debate and comes out usually in imbalanced form. Some politicians and
polemicists concentrate entirely on the foreign ownership question (e.g., Kari Levitt, Silent Surrender, and the writings of the "Waffle Group" and others in the periodicals Canadian Dimension and Canadian Forum). Others are pre-occupied with the relationship between primary and manufacturing industries (see the writings and speeches of Eric Kierans). But, in fact, as the Report of the Task Force on Industrial Structure emphasized, the issue is a conglomerate one, with commercial policy and competition policy occupying a central role and foreign ownership policy deserving no more than equal attention.

It should be added that this issue is now related by some to the concern over inflation, and particularly the trade-off problem. Although this problem is not solely the consequence of industrial structure, the achievement of a more efficient industrial structure, particularly by methods that increase the degree of effective competition, should make it possible to achieve somewhat higher levels of employment with any given level of inflation.

2. The "Quality of Life" objective. The need to re-examine consumer preference patterns and to give fuller scope to those allocations of resources that contribute to a better and more distinctive quality of Canadian life. The presumption that this requires government intervention is based on the recent focus on issues such as pollution and dissatisfaction with the processes of allocation governing the choices between work and leisure and between private consumer durables and public services. While these issues go beyond questions of industrial structure, they are in important respects related to it. First of all, if important gains in efficiency can be derived from a rationalization policy, the income effect will make possible those public services that contribute to a higher quality of life and (or) some redistribution between work and leisure. More particularly, if structural

rationalization takes place by means that increase the scope for development of distinctive Canadian products, it may better serve the quality of life objective. One cannot be too sanguine about this, because the fact is that Canadians have very similar living conditions and life-styles to other North Americans and are unlikely to want very different types of material goods.

3. The "just society" objective. This issue is only indirectly related to industrial policy. However, in so far as interregional income shifts are considered a necessary part of the move toward a "just society," industrial policy may have considerable relevance. For example, the elimination of tariffs has always been attractive to many people in the Atlantic and western provinces. The fact that the primary industries have already been granted a number of tariff "concessions" and other subsidies may mean that the net effect of an industrial strategy would not much affect the relative role of these industries in the Canadian economy. However, efficiency gains, particularly in the manufacturing sector, would raise real incomes in the outlying areas as in Central Canada. Whether this would lead to further redistribution of gains to the benefit of the outlying regions is not clear, but at least there would be more income available for this task.

4. The Canadian independence objective. This is treated separately as it is presumed that Canadians will pay some price in economic benefits foregone in order to "safeguard Canadian sovereignty and independence," to use the terminology of the foreign policy review (Foreign Policy for Canadians, 1970, p. 14) The question is, what economic benefits derived through industrial policy must be foregone to preserve Canadian sovereignty and independence. The main concern of most of those who raise this issue is that foreign ownership of much of Canadian industry restricts the scope for Canadian decision making. Some make an illogical leap from this position into opposition to close trade ties between Canada and the United States. Some go even further to argue the political and geographic nonsense about closing the 49th parallel.
Whatever policy is adopted toward further takeovers by foreign capitalists, the key question, it is usually agreed, is whether those international enterprises that already operate in Canada can be encouraged (or forced) to operate more fully in Canada's interests. The policy of rationalization required to meet the first objective (industrial efficiency) should have precisely this implication. The shortcomings of foreign subsidiary behaviour are in substantial part the consequence of the Canadian policy environment in which they have been operating. In so far as it is necessary to have a particular set of guidelines for foreign-controlled firms, the scope and significance of such guidelines need not be very great if the general rationalization policy were well designed.

There can be much dispute over what constitute the economic and social substance of an independent and sovereign Canada. There is some evidence that most Canadians would place a higher priority on qualities of life and culture that are largely independent of the ownership and management of manufacturing or natural resource exploitation activities. Presumably in this area all that Canadians might expect is an opportunity to develop the skills that would enable them to compete for these managerial jobs in Canada. For most Canadians who do not qualify for senior managerial posts, the key factor distinguishing Canadian economic life would be a wider or a better choice among consumption activities, between work and leisure, etc. Neither of these objectives is made more difficult by making the economic structure more efficient.

II. The Policy Cornerstone - A Liberal Trade Strategy

All analyses of structural issues in Canada point to the significance of the international sector for the goods-producing industries of Canada. It has been estimated that opportunities for improving the performance of the Canadian economy through a free trade policy could result in as much as a 10 percent improvement in per capita income. More conservative and partial estimates are in the neighbourhood of 5 percent. Even the latter is almost certainly substantially more than could be achieved by any other "structural" policy. Furthermore, it is very probable that trade liberalization could make a further indirect contribution in making it easier to achieve full employment, because it would limit the inflationary implications
of any given rate of monetary expansion. Thus is it reasonable to base the discussion of industrial strategy and of the broad range of adjustment policies on the commercial policy foundations.

Essentially, industrial strategy can be approached through two limit cases -- a strategy based on free trade, and one based on the present commercial policy mix. Intermediate positions are both possible and likely, but they should presumably go some way to achieving the aims of free trade. For the purposes of the present paper, I shall at the outset state the essentials of a liberal trade position and discuss the package of "adjustment" policies required to complement trade liberalization, as conceived. At the end, the implications of adjustments without trade liberalization will be briefly indicated.

The essential ingredients of any trade policy serving Canadian interests would appear to include:

1. in agricultural trade -
   (a) scope for continued sale of the major products of extensive agriculture, especially wheat, feed grains, and oil seeds;
   (b) opportunity for rationalization of livestock and dairying sectors and of other more specialized and labour-intensive sectors;

2. in industrial materials -
   (a) scope for continued sale of industrial materials such as pulp, lumber, non-ferrous metals, and petroleum;
   (b) scope for expansion of industries processing industrial materials;

3. in manufactures -
   (a) the rationalization of production and trade in consumer products and capital equipment;
   (b) scope for the development of trading activities in technologically-intensive manufactures well suited to Canada's skills and domestic priorities;
   (c) the systematic reduction of activity in industry sectors that prove incapable of meeting the competitive challenge of imports, especially from the low-wage cost countries, especially some lines of textiles and "light" manufactures.
It is not the main purpose of this paper to spell out the practical trade initiatives that might best serve the above objectives. However, it is necessary only to glance over the list to appreciate that Canada's interests are not likely to be restricted to one region. For grains, the Far East and Eastern Europe will continue to be important. For livestock products the North American market is likely to dominate. For industrial materials, all developed country markets are relevant. For manufactures, again, all markets can be relevant, though for different groups of products, and the North American market is likely to continue to be an essential base for export expansion.

The foregoing suggests that Canada is bound to be interested in multilateral initiatives, but might also explore bilateral initiatives that more directly and immediately serve her economic and political interests, so long as these do not interfere with the success of multilateral schemes. Bilateral deals could provide an opportunity for Canada to exert more leverage in product categories of particular interest to Canada. Furthermore, should the multilateral approach be for any reason delayed, Canada can make headway toward structural rationalization as a consequence of appropriate bilateral moves. This could be important in preparing Canadian industry to face the adjustment implications of a "Nixon" round moving toward comprehensive free trade in industrial products. It could thus lead to a wider scope for the Canadian government in GATT negotiations.  

Any program of domestic adjustment policies must enable Canada to obtain the benefits of trade liberalization while spreading the costs of adjustment equitably and avoiding conflict with other social objectives. Adjustment is fundamentally a time concern. Eventually any institution adapts to change or it dies. To refuse to adapt becomes an unwillingness to accept reality. But the pacing of change is very important. Thus a program of policy for adjustment should put a primary emphasis on timing. Three groups of policies will be discussed, each related to a somewhat different time dimension. They are: (i) short-term adjustment policies - 5 to 8 years; (ii) rationalization policies - 8 to 12 years; (iii) environment policies - permanent. The specific nature of such policies will be detailed below,

with particular emphasis on the first two categories as being uniquely related to adjustment in periods of trade liberalization.

III. Short-term Adjustment Policies

There are basically two elements in the immediate adjustment requirements of industry. One is sufficient time to make the physical or organization changes required in adjustment. The other is money for two purposes, to finance the changes of basically viable firms and workers, and to compensate those who must be moved out of their traditional line of activity because it can no longer be viable in the absence of the system of protection.

The transition period is a relatively simple requirement to define. It should be long enough to make possible the planning of the kind of capital changes required to modernize and specialize production activity so that, given the basic determinants of trade, it can become internationally competitive. But it should not be longer than necessary, as this unnecessarily postpones the day when the benefits of international integration will be realized. The twelve-year transition period in the European Economic Community appears to have been too long. Most investment plans can be drawn up and effected in five to eight years, with the upper part of this range applying particularly to entirely new units. For situations in which reorganization of established concerns is the main requirement, a much shorter period is required.

Certain characteristics of the transition period are peculiar to Canada. Because Canada is now one of the few of the industrially advanced countries which retain higher levels of protection, it would have a larger adjustment problem than its major trading partners. Except for Australia and New Zealand, all other industrially advanced countries have either a domestic market in excess of 100 million (Japan) or are part of an even larger industrial free trade group. It would thus be reasonable for Canada to phase out its trade barriers over a longer period than the larger trading units. For example, if multilateral negotiations led to the phasing out of tariffs in industrial products over a period of three to five years, Canada might be allowed five to eight years. Indeed, if the present levels of protection are considered to be essential to the survival of unrationlized industry, it might be practical to give Canada
a three-year moratorium on tariff-reduction and then to phase out her tariffs over the next five years. If the United States and other countries were eliminating their tariffs in four or five approximately equal cuts, this would give Canadian industry the opportunity to initiate efforts to penetrate foreign markets while retaining for a time the same preferred access to the Canadian market that it has enjoyed in the past. So long as the commitment to begin removal of Canadian trade barriers after three years is firm, no prudent firm would be likely to delay adjustment for long.

It might be expected that other countries would object to allowing Canadian industry this special timing arrangement. For both Canada and other countries, it would be much better if Canada were permitted a longer transitional period, rather than to opt for more limited tariff cuts. This option was discussed informally in connection with the Kennedy round, but the Canadian government opted for more limited tariff cuts. The official position, while not made explicit in this matter, appears to have been that reciprocal 50 percent tariff cuts (allowable under the U.S. negotiating authority in Trade Expansion Act of 1962) would expose Canadian industry to severe import competition without giving it access to external markets equal to that enjoyed by foreign industries that are less dependent on an external market. If trade barriers were virtually eliminated in the next GATT round (or in a regional grouping), this argument would presumably not apply. Because there would be no real alternative to the differential phasing of tariff cuts, the Canadian government might be expected to place considerable emphasis on this feature of adjustment policy.

Another interesting peculiarity of the Canadian position is the importance of international companies in the industries facing adjustment. These companies base their strength on well-established marketing facilities and would thus face a much easier adjustment process than firms that have been dependent entirely on the domestic market in Canada. This would give the international companies a distinct advantage in reorganizing their Canadian production facilities and expanding specialized export activity. For this reason, Canadian firms should prefer it if other countries phase out their tariffs gradually rather than eliminate them immediately. Alternatively, such firms might expect to get special help in developing international marketing facilities.
Capital assistance for the adjustment process is really only necessary to the extent that the firms cannot finance reorganization internally or through normal financial channels. The only reasons for special support for readjustment during the phasing out of trade restrictions are two: (1) the fact that demand for financing may be concentrated in a relatively short period; and (2) that the promise of capital assistance at favourable rates may itself improve the advance acceptability of the policy of trade liberalization among some industrial interests that would otherwise be reluctant.

For some entrepreneurs and workers, however, there is special case for financial aid. These are the losers in the adjustment process - the firms and employees who may be too specialized or badly located to take advantage of the new opportunities opened up by the more liberal trading regimen. These productive factors must be retrained, moved, or possibly retired, depending on the assessment of the social costs involved and the most appropriate way of minimizing them.

Although it is difficult to assess the over-all need for such adjustment assistance, it is likely on the basis of past experience that special financial aid will not need to be very great. The kind of industry sector most likely to require aid is a declining resource-based industry such as the Belgian coal industry in the EEC. In Canada there are few resource-based sectors where trade liberalization would bring on a declining trend. Possibly some of the specialized lines in agriculture would fall in this category. Among manufacturing industries, while many of them are likely to be under pressure from external competition, they are mostly concentrated in central Canada, and the factors of production are in many cases reasonably mobile and adaptable. The most important example of a manufacturing industry likely to require assistance is the textile industry, especially that part of it that is relatively labour intensive, and (or) concentrated in regions where alternative employment is limited. For this reason, particular attention will be directed to the policies being introduced to assist the textile sector. But first let us examine adjustment assistance arrangements more general-

3The question of the length of this transition period and methods of phasing out trade restrictions is discussed in "A Possible Plan for a Canada-U.S. Free Trade Area," staff report by the Canadian-American Committee, Private Planning Association of Canada, Montreal, 1965.
Roy A. Matthews in his extensive study of adjustment policies has stressed that such programs are to support "specified actions by firms or workers and for only as long as those actions are being executed." In this way they differ fundamentally from the traditional "escape clauses, lists, peril points," etc., by which "injured parties are given deferment over many years . . . from the tariff reductions intended to bring about a reorganization of industry." Thus he emphasizes that its purpose is to aid adjustment, not to avoid it. He draws the same distinction, pointed out above, between assistance to those capable of adjustment and compensation of those who are incapable. But he also calls attention to the difficulty of identifying marginal cases.

Assistance to firms and to workers are treated separately in Matthews' study. Among the main policy instruments suggested for firms and industries he includes:

(1) For firms that are clearly able to meet the challenges of trade liberalization, the only requirement is a mechanism which would ensure the major share of any risk on loans by commercial financial institutions.

(2) For firms that appear less capable of adapting, he feels that government may need to become more directly involved. One proposal is for adaptation committees for each major industry "to encourage firms to plan their preparations for free trade and to fit their company plans into a blueprint for the industry as a whole." Whether these blueprints are put to a Council on Industrial Reorganization, as Matthews suggests, or directly to a government agency responsible for approving financial or other support, it could promote more systematic adjustment. However, in either case it ultimately places a heavy responsibility upon the government that must acquire information and make a judgment about the future viability of the industry.

As well as financial aid, government might be expected to provide technical assistance in respect of such activities as manpower plan-

---

5Matthews, op. cit., p.46.
ning and export sales promotion. These are signalled out by Matthews as factors that may be crucial to effective adjustment, the former presumably because ineffective manpower planning is likely to give rise to serious political opposition to adjustment, and export promotion because many firms that have little past experience with export activity may need help in developing exports as a means of achieving the cost advantages of specialization. He also refers to research and development incentives. However, most of these policies are not uniquely tied to purely transition problems.

(3) For "hard core" situations, Matthews proposes either one of two alternatives: (a) Where the prospect for adaptation is in doubt but not considered hopeless, an adjustment assistance board would be established to enquire whether basic reorganization or new management was required. Depending on the findings of the enquiry, it might allow nature to take its course, or it might propose mergers or other basic restructuring, managerial changes, or as a final recourse, purchase by an Industrial Redevelopment Corporation that would exercise many of the powers now available to the Canada Development Corporation. 6

(b) Where the prospect for adaptation does not appear to exist, abandonment compensation is suggested, mainly on the grounds that to provide such compensation makes a liberal trade policy "much less liable to obstructionism from those who fear adverse consequences." Such assistance might also be available to a firm that was abandoning a particular line of industrial activity if new activity arising out of the liberalization of trade were clearly not sufficient to absorb the labour and capital employed in the abandoned branch of the business.

These last proposals, particularly 3(a), may involve a degree and form of intervention that is unacceptable and unworkable. The Canada Development Corporation was a very controversial issue without the added burden of having to deal exclusively with situations involving doubtful industrial viability. The abandonment compensation approach has a quite hopeful precedent in the British scheme for the Lancashire Cotton Textile industry. Matthews praises one feature of the compensation system adopted in the British case:

to underline the principle that compensation was intended

to benefit the firms that either closed down completely or markedly reduced the scale of their operations, the firms in the more promising lines which remained in business actually paid levies towards the compensation of their less fortunate brethren...7

Moving to adjustment assistance to workers, one finds that the groundwork is more fully laid in policies already adopted. Where re-employment is feasible, the components of worker assistance include:

(a) assistance in finding new employment — the information service;
(b) assistance in retraining — educational finance and facilities;
(c) assistance in moving to the place of new employment — relocation finance;
(d) assistance in living during the adjustment period — living costs finance.

Underlying an effective worker assistance program is manpower planning.8 Already available to serve this function is the Manpower Consultative Service, but Matthews expresses the hope that industry adaptation committees cited earlier might help to bring about wider use by private enterprises of such techniques.

Where financial aid is involved, it seems likely that the major part of the costs can be borne by the adjusting industry, since the assumption is that the enterprise employing the retrained or relocated worker will be viable. In many cases, what is required is a somewhat longer-term form of credit than is normally available for such expenditures. Social assistance is more likely to be required where workers are being retrained to work in an entirely new industry and where living costs must be financed for a considerable period.

Where workers are employed in a firm or activity that must be abandoned, the key requirement is sufficient warning that the relevant manpower agencies have time to locate opportunities and otherwise deal with the problems of those that will be thrown out of work. Matthews cites the Swedish case, where in a given year "30,000 people may be traveling around the country at the government's expense."

For this type of situation, the net effect of free trade on employment, the type of aggregate demand policies and the regular arrange-

7 Matthews, op cit., p. 63.
ments for unemployment insurance are all important. But special new transitional policies may be required, for example, to enable older workers to retire early at near full pension rates, and perhaps higher-than-normal levels of unemployment insurance benefits to be scaled down as the percentage of unemployed workers declines.

Canadian experience with adjustment assistance tied to changing international trade conditions is of recent origin. The first important example was the Automotive Adjustment Assistance Program, adopted in 1965. This was followed in 1967 by a General Adjustment Assistance Program, designed to accommodate the changes brought about by the Kennedy round of tariff cuts. In 1971, the Textile and Clothing Board Act was framed to deal with the problems of this industry.

The automotive program was designed to assist auto parts manufacturers and auto workers. Although the automobile industry was expected to enjoy substantial growth as a consequence of the Canada-U.S. automotive agreement, the government was not sure that the parts producers and workers would all share in the benefits. It therefore introduced a loan program on favourable terms to assist the expansion and re-equipment of the parts producers. An Adjustment Assistance Board was established and the Industrial Development Bank was given responsibility for administering loans. A parallel program was established to assist workers with benefits ranging from 62 to 75 percent of weekly pay for up to one and a half years.

The General Adjustment Assistance Program adopted some of the same principles. It provides for government-insured loans, in special circumstances direct loans to those unable to get insured loans, and financial grants to pay for consultants' services. Export and manpower advice is available from the relevant government departments. Up to September, 1970, fifty formal applications for assistance had been received, and government loans had been authorized in 26 of these cases. To qualify, firms must have either suffered from the tariff reductions of the Kennedy round or have significant new export opportunities abroad. Matthews points out that these criteria do not specifically allow for support of a firm endeavouring to reorganize and specialize so as to exploit better the domestic market.

The Textile and Clothing Board Act is a more interesting and con-
troversial case. It resulted from a review of the textile and clothing industries and of related commercial policies beginning in 1968 and culminating in the 1971 legislation. Important factors in generating the legislation were the apparently unsatisfactory employment situation in the regions where the industry is concentrated and an impression that the Canadian industry had not adequately adapted to the realities of international comparative advantages. There may have been a too rosy expectation that the industry might benefit from increasing capital intensity in some lines of production, from the shift to man-made fibres, and from the importance of market-oriented non-price factors. The Textile and Clothing Board was described as an experimental approach that might be applied to other industries affected by low-cost exports. The Board is an independent investigative body to ascertain the nature of injury or threatened injury and the validity of requests for non-tariff protection. This Board has to be satisfied that the threat exist and that viability is attainable. Otherwise no action is recommended. The Board may release the evidence used to reach its judgment, except for confidential data supplied by firms or information that in the judgment of the Minster of Industry Trade and Commerce might adversely affect Canada's negotiating position.

An enquiry can be initiated by an individual firm, by the industry, or by the Board or the Minister of Industry Trade and Commerce. Adjustment plans are reviewed by the Apparel and Textile Division of the Department of Industry Trade and Commerce. If injury is found, the TCB may recommend immediate temporary measures of protection. A report containing final recommendations must be made in 180 days. The Board oversees the adjustments by the firm as outlined in the plans it has submitted. It is called upon to "recommend modification or removal of the special measures of protection as soon as circumstances warrant," after seeking the views of any producer affected.

The Department of Industry Trade and Commerce's office of Special

---

9 See an unpublished research paper by Anthony Reynolds, prepared for the School of International Affairs at Carleton University.

10 The Board is made up of three members, with seven-year terms. The first members include a senior public servant from the Department of Finance as Chairman, a professor of labour relations, and a former president of a leading electrical equipment firm.
Import Policy and the Interdepartmental Committee on Low-Cost Imports Policy receive the report, and these bodies forward recommendations to the Minister, who may then take them to Cabinet. The factors upon which the application of temporary non-tariff protection is to be decided include the following:

(a) any relevant manpower and regional considerations and any program or service provided by a department or agency of the Government of Canada that deals therewith;

(b) the provisions of the General Agreement on Tariffs and Trade, of the Arrangement Regarding International Trade in Cotton Textiles, and of any other relevant international agreement;

(c) the probable effect of any proposed special measures of protection on various classes of consumers;

(d) the conditions prevailing in international trade relevant to textile and clothing goods.\[11\]

The first and fourth of these factors can be readily used to justify protection. For example, relating to the first, the Minister of Industry Trade and Commerce, Mr. Jean-Luc Pepin, said on February 25, 1971:

It may be that the Board in the next year or two because of the unemployment situation now will make certain decisions indicating a certain preoccupation with regional employment. If we should solve this problem... it may be that next year or the year after the Board will change slightly its orientation.\[12\]

As for the fourth, a senior official of the Department's Office of Special Imports Policy stated:

If other countries increase the access to their markets for the low-cost producers, then we feel we can do the same. But we feel there is no real reason why we should do it if nobody else does.\[13\]

The test of viability is also apparently flexible. The Acting Executive Director of the TCB stated on February 4, 1971:

Situations could occur where firms can show that their technology is as modern as possible. They are as efficient in terms of output per man hour as any firm in the world can be, yet they still have problems. If under this continued efficient development they commit themselves to maintaining their technology at this maximum level, and if the Board is not convinced that they have no prospects of becoming viable in the years ahead, the Board...\[11, 12, 13\]
could accept these plans.\textsuperscript{14}

This suggests that technical efficiency rather than allocation efficiency is to be given priority attention. Trade Minister Pepin enlarged on this, on February 25, 1971:

You have two criteria of international viability . . . one which applies to other industrialized countries of the world. Are we competitive with the Americans, British, French, Italian? . . . The other criterion is are we competitive with low-cost countries? That is a different ball game. With respect to the low-cost countries, the assessment will be different. There I do not think it is to be expected that the standards as applied to the industrial countries will apply in the same way.\textsuperscript{15}

This statement provides no guidance as to criteria of viability to be applied in the latter case. Furthermore, it appears to include at least one developed country, Japan, in the "low-cost" group, thus inviting a charge of conflict with GATT principles.

The degree of protection practised under this arrangement depends on the interpretation of the permissive guidelines by the Board. The first three cases on which reports were issued do not provide conclusive evidence. It recommended new voluntary export restraints on cotton yarns, a global quota on shirts, and no increased protection on seaters. In reaching these decisions, it appears to have been guided by the concurrence of substantial and opposite changes in domestic production and imports, by the presence of higher than average unemployment in the relevant localities, and by expectations that technological change would improve the relative position of Canadian producers. In the case of shirts, the Board put considerable emphasis on the viability of Canadian producers of better-quality or highly-styled shirts. In the instance of sweaters, the Board felt that the industry had already adjusted, so that the call for added protection was rejected.\textsuperscript{16}

The approach adopted for the textile industry represents a significant departure from the adjustment assistance approach of the General Adjustment Assistance Program. It falls closer to the traditional U.S. "escape clause" or "peril point" provisions or the

\textsuperscript{14}Ibid., p.127.
\textsuperscript{15}Ibid., p.128.
\textsuperscript{16}A fuller evaluation of these cases is contained in an Appendix, prepared by Anthony Reynolds.
new "safeguards" approach. The Import and Export Permits Act was amended to allow additions to the Import Control list of textile articles that the Board decided were causing injury or threatening injury to Canadian producers. For other goods, a similar addition to the list could be effected by the Anti-dumping Tribunal. Such items would remain on the list for a period determined by the Governor in Council. This power could be used to restrict imports of items on which negotiations toward a voluntary export restraint had not achieved agreement. It thus raises questions about the voluntariness of the alternative available to the exporting country.

The recent record of the Canadian textile industry raises a number of questions about the adjustment process. First, it suggests that a period of higher than normal unemployment may encourage the evolution of direct forms of protection. Secondly, it suggests that it is very difficult for a single developed country to accommodate the actual or expected growth in exports of those manufactures most likely to represent the leading industrial sectors of such countries. Canada has been one of the more liberal importers of such products, but unless a joint initiative of a number of the major developed countries can be brought into being, it seems likely that the drift toward the practices of the least liberal countries may continues. The greater the success of East and Southeast Asian countries in the efficient production of such products, the more urgent such a joint initiative becomes.

This section on short-term adjustment policies cannot be concluded without some reference to the use of exchange rates in the adjustment process. A country can adopt either a flexible or fixed exchange rate in meeting the short-term challenges of trade liberalization. Furthermore, if it adopts the latter alternative, it can choose a rate that is most conducive to easy adjustment. Some Canadian economists have supported the deliberate use of the exchange depreciation, usually in conjunction with unilateral tariff cuts, as a means of encouraging Canadian industrial adjustment. While this policy is intended to serve longer-term rationalization objectives as well, its immediate effects are put forward as a means of easing the immediate impact of international competition.

In assessing the use of a flexible rate, it is important to take full account of the uncertainty effects. During a period of transition, it is likely that fluctuations in the exchange rate would be wider, especially if exchange rate fluctuations are used as a sub-
stitute for other adjustment policies, thus generating greater uncertainty in the minds of business investors and traders. From this viewpoint, a fixed rate would be preferable. But fixed at what level? If a deliberate effort were made to undervalue the exchange rate, this would provide an added stimulus to exports and deterrent to imports. It is not clear that this would be conducive to appropriate adjustment. Those industries that are dependent upon imported equipment or components would be handicapped, while resource-based industries would receive an extra stimulus to export. To the extent that such industries face inelastic demand and price in foreign currencies, they would receive windfall returns. In short, the undervalued fixed exchange rate is a blunt instrument with structural effects that may merely postpone the preferred structural adaptation. Furthermore, any fixed rate poses the problem of when and how much to revalue in response to the realization of the efficiency benefits of trade liberalization.

These comments merely tough lightly on a problem that deserves more extended attention. But they do serve to raise appropriate questions about the value of the exchange rate as a substitute for more explicit policies of short-term adjustment. There is no doubt that even with an appropriate package of adjustment assistance policies, some variation in exchange levels may be a necessary feature of the adjustment process. The complementary use of the flexible exchange rate would seem the best exchange rate policy under these circumstances.

IV. Rationalization Policies

This second category of adjustment policies relates to the need for structural reorganization of a kind that is associated with the less than perfectly competitive structure of industry. Canadian industrial structure has a number of peculiarities associated with the relatively limited size of the domestic market, its protected character, the role of foreign investment, etc. Because of the long-established character of these structural relationships in many Canadian industries, it is assumed that policies designed to encourage and assist restructuring should be continued in effect for a longer period than the purely transitional policies already described. Perhaps the main reason for a longer period, possibly of eight to twelve years, is to give scope for a second adjustment stage once
the individual firm has tried to achieve viability through internal reorganization.

The most familiar instruments of structural rationalization are mergers, specialization agreements, and export agreements. Canadian law, like that of the United States, has been basically opposed to mergers and agreements among competitors, though the courts have been used with very differing degrees of effectiveness in this matter. The provisions of the law respecting agreements have been relatively effectively used to control business practices, while mergers have largely evaded the law, though it is often argued that this may have been the consequence of the selection and handling of the few cases prosecuted to date. In any case, because of the comprehensive coverage of the combines legislation, any effort to use mergers and agreements to achieve more efficient industrial structure following a move toward trade liberalization will require explicit exemptions of some kinds of activity that might otherwise be suspect. There are those who regard the simplest solution to be suspension or elimination of the competition laws under these circumstances. However, as only a fraction of any economy, even one as open as Canada's, is fully exposed to international competition, this option is not likely to be seriously considered. The only alternative is to permit a range of exceptions to the application of the competition laws for those industries that require mergers and agreements to become capable of international competition. How important are the three practices cited as instruments of structural rationalization?

Mergers are essentially a means of creating fewer larger firms and thus of realizing economies of large-scale operations. The most important economies relevant to the international market are those related to distribution and selling activities and research and development costs. These are of central importance to many international or multinational companies, and it is frequently by becoming part of the corporate family of such companies that national enterprises can gain access to international markets. Thus the most important vehicle of rationalization may be foreign investment. However, it is by no means essential to rationalization. A group of small nationally-based firms could combine their assets to put themselves more nearly on a competitive par with the international companies. Companies may also gain access to technology and marketing facilities.
by licensing or franchise agreements. However, these latter arrange-
ments frequently restrict the holder of the license or franchise to
operations within a national market. If a Canadian-owned firm wishes
to become a participant in the international pattern of production
and exchange relationships, it is likely to find it easiest to do so
as a branch of a multinational enterprise.

The policy on mergers should therefore be closely linked with
policy on foreign investment. A national government that restricts
foreign investment thereby restricts the possible role of mergers in
rationalization. If it also controls mergers that are likely to
have restrictive effects within national markets, the use of mergers
for rationalization of industry may be further limited. On the
other hand, the policy for ensuring competitiveness in the national
market need not be so restrictive of mergers if import competition
is permitted to be active. Larger Canadian firms can be formed
through mergers without a resulting concentration of economic power
(monopoly pricing, etc.) if external competitors are able to keep the
domestic concerns in check.

It should be added that mergers are not the only means of achieving
efficiency through enlarging the scale of individual enterprises.
This can be achieved by the initiative of individual firms, growing
by winning markets away from firms that operate less efficiently or
fail to keep up in the competition to produce superior or at least
newer products. Much of this kind of activity now consists in the
rivalry of conglomerate concerns crossing industry lines to compete
for the first time in products not previously manufactured. It often
involves a combination or takeovers of small competitors and the
building of a new division in the parent company to challenge the
larger established firms, whose market share and consequent profit
position have become an attraction to the entrant.

It may be concluded that merger activity as a vehicle of rational-
alization is at every turn affected by the attitude toward inter-
national enterprises. In purely domestic markets where mergers are
more likely to be motivated mainly by market control considerations,
competition policy, if effective, is more likely to reduce monopoly
profits rather than to bring about structural changes.

Export agreements. The purpose of export agreements as an excep-
tion to the competition policy prescription on agreements is to en-
able firms in any one industry an improved competitive position internationally. This improved position can arise out of two major alleged advantages: (a) an improved bargaining position; (b) lower costs of doing business jointly. Neither of these benefits is readily captured via the export agreement route.

An improved bargaining position requires that a sufficient number of the world's competitors in any given industry are included. Rarely do Canadian suppliers themselves dominate world supply to a degree that would be required for Canadian action to succeed unilaterally. If other countries' firms must participate to assure success, then the question arises — how are the benefits shared? Will Canadian producers get as large a share of the market as they would in the absence of such agreements? If Canada's producers are among the more efficient suppliers, agreement might require them to grant shares to less efficient producers elsewhere.

A most important point relates to the extent of the agreement. Complete cartels are extremely difficult to organize, even in a domestic market (when the government permits them), and much more difficult internationally. This is because some individual enterprises, usually those with some competitive advantage, refuse to abstain from all forms of market rivalry. One of the most important consequences of a partial cartel will be investment rivalry -- the competition to add capacity faster. The consequence of this can be longer periods of excess capacity, reducing if not eliminating the gains of more secure prices.

One market situation in which cooperation among sellers appears promising is that involving state trading corporations, especially in Eastern Europe. Here the individual producer can be at a considerable bargaining disadvantage, though how much depends upon the importance of the state trading sector as buyers in the particular product market. To date there is little evidence that suppliers will cooperate in such dealings. (This difficulty probably arises partly out of the advantage that companies with a non-U.S. base may enjoy in the Communist capitals.)

The second alleged advantage of export agreements -- lower costs of doing business -- is probably more substantial, though only in certain industrial sectors. Independent firms that get together in a common sales effort can clearly save on numbers of sales outlets, can gain some advantage from coordinated service, warehousing, and
perhaps even transport facilities. The size of such gains depends on the absolute and proportionate importance of distribution costs and the necessity of locating service and warehousing facilities near to the market.

In some industries, warehousing and other on-the-spot services loom very large. This applies particularly to machinery and consumer durables. Specialized machinery producers can presumably gain some advantage from a common sales outlet, whereas no one of them might be able to justify maintaining a full-time office. This is especially true in relatively smaller markets. However, the scope for such joint distribution is limited by the necessity it would impose on salesmen and servicing personnel to be familiar with the products of a variety of producers. To date, many machinery producers appear to prefer to depend on having such personnel available on call from the main factory locations or a very few other centres, with modern transport making dispersed facilities of this kind less necessary. In the agricultural machinery industry, firms have normally preferred to keep large distribution networks entirely within individual corporate control, though recent evidence makes it very doubtful that this constitutes a really economic solution.17 Consumer durables firms have had greater, though by no means uniform, success with the same policy, because of the concentration of their market in urban centres.

However, those economies of scale in distribution that figure prominently in the literature of industrial organization relate to the design, packaging, and selling of the product. The scope for making savings on these does not appear to relate to the joint export agency, because such agencies cannot directly spread such costs so long as producers retain the individuality of their products and selling activities.

The major value of export associations would appear to be in the early stages of penetrating a new foreign market, e.g., where Canadian firms are trying to establish their competitive position in the United States. It seems likely that in many cases individual firms will find it to their advantage in the longer run to develop individual distribution arrangements.

17 Report of the Royal Commission on Agricultural Machinery.
Specialization agreements The purpose of specialization agreements is not closely related to that of export agreements. Specialization arrangements are designed to enable the production reorganization of an industry so that each firm can achieve longer production runs and a concentration on the development of particular product lines. This is a purpose that can be served within a particular firm if that firm has access to a sufficiently large market. The fact that specialization agreements are considered necessary is itself an admission of inefficiency in the structure of industry and of the inability of firms individually to reach a more efficient organization of production.

It is clear from the literature cited on page 421 of this paper why oligopolistic industry becomes inefficiently structured and finds it difficult to escape from the structural tangle. It is sometimes suggested that government should compel firms to specialize so that for each line of product sold in Canada all available economies of scale in production can be exploited. This could mean that the number of units (and firms) producing some lines of product might be reduced from five or ten to one or two. The other alternative is simply to abandon protection of industry, thus making it impossible to sustain the prices that protect inefficiency and short runs. This will ensure something like the same adjustment, but without direct government involvement.

A number of issues arise in evaluating the usefulness of specialization agreements. They include (i) who should participate? (ii) what range of products should be covered and what, if any, omitted? and (iii) how long should the agreement last? But fundamental to the answer to the above questions is the issue - what is the object of the specialization agreement? If it is to be related to trade liberalization, i.e., to enable firms to survive and prosper under free trade at the end of the transitional period, then the object is clear. The period involved is that required for modernization of capital equipment and reorganization of production. The difficulties over which firms to include, and which products, remains, but so long as there is a terminal date for the agreement and it is possible at some stage for new producers to enter the industry, however defined, there should be little serious consequence in defining a range of products and identifying the relevant producers. It may still be difficult to get agreement, especially as producers will
almost certainly estimate different degrees of profitability and different probabilities of achieving profits from the various lines of product under consideration, and some will be reluctant to be excluded from what are thought to be the most promising lines.

However, if such agreements were to be contemplated in the absence of a clear-cut objective, the difficulties would be compounded. Many of those who support specialization agreements see them as a means of augmenting profits under the existing protection. Undoubtedly an agreement under such circumstances would have some economic benefits - the reduction of costs of production and the expansion of export capabilities. But they also have severe economic and political limitations. On the economic side, it is unlikely that they would result in a sound pattern of productive activity, because the choice of pattern would be affected by the particular degree of protection to each product line and the extent of trade barriers imposed by the countries to which the products might be exported. Part of this problem could be corrected by uniform tariff levels, but uniform levels of effective protection are not easily achieved. More serious is the probability that a two-price system would be sustained indefinitely, with domestic consumers experiencing little or no direct benefit of the cost reduction. One of the more serious aspects of such a system is that it would be difficult to terminate such agreements, because so long as protection prevailed, new producers could then enter the domestic market under the umbrella of protection, and inefficiencies could then reappear. Politically, such a system would require continued government surveillance and hence greater bureaucratic costs. It could also cause difficulties in dealings with importing countries, especially if any feature of the agreement appeared to represent subsidization of exports, which could provoke countervailing duties.

In the context of competition policy, it is essential that the acceptability of specialization agreements be conditional upon clear-cut guarantees that their benefits will be passed on to consumers, and that they will not become a source of new rigidities either in the form of barriers to entry of new producers or in the form of government regulation where this is merely a replacement for effective market discipline. In most cases, these aims can be achieved by making the agreement conditional upon the elimination of trade barriers and giving it a definite term.
In the Canadian competition policy to date, two of the three instruments, mergers and export agreements, have been the subject of legal provisions. But until the revisions of the new competition bill (C-256) under consideration in 1971 and 1972, these legal provisions paid no direct attention to the rationalization problem. The two most celebrated merger cases\(^{18}\) focused on industries where structural rationalization was not a major rationale for mergers.

It might be argued that since many, indeed most, mergers have not been challenged by combines authorities, many of these were considered to have substantial positive effects upon efficiency. However, the evidence for this optimistic conclusion simply doesn't exist.

As for the export agreements provisions introduced in the 1960 amendments of the Combines Investigation Act, these were a last minute concession to the pressures from primary product exporters and bore the blemishes of hasty preparation, purporting to make possible the separation of restrictive effects of such arrangements on the domestic markets from the international benefits to Canadian producers. In fact, whether because of the drafting or inherent limitations of such policies, the 1960 amendments relating to export agreements have had almost no significance.

The new legislation (Bill C-256) leading out of the Economic Council of Canada's *Interim Report on Competition Policy* has made mergers, export agreements, and specialization agreements all the subject of discriminatory consideration by an administrative Tribunal, thus recognizing the difficulty of applying appropriate criteria through the regular courts. The Tribunal is charged with the requirement of reviewing these practices to determine whether they satisfy certain specified criteria. These are spelled out in more detail in the merger provisions, but in all three cases they relate to the prescription that the practice should lead to benefits, usually in the form of lower costs, and that these benefits should be passed on to the public "within a reasonable time in the form of lower prices or better products." Evidence of benefits in improved efficiency would include the following:

(a) the economies of the particular market or industry, including the minimum efficient size of plants and firms therein;

(b) the size of each of the parties involved in the merger and of any resultant firm, relative to the minimum efficient size of

\(^{18}\) Those concerned with Canadian Breweries and the western sugar refineries.
firms in the particular market or industry;  
(c) any likelihood that the merger will bring about economies of scale;  
(d) any likelihood that the merger will facilitate the meeting of import competition;  
(e) any likelihood that the merger will facilitate entry into or expansion of export trade; and 
(f) any likely effect of the merger on research and development.  
In the case of specialization agreements, no such criteria are specified, but similar effects are presumably associated with the general requirement that to be approved by the Tribunal, the agreement must be "likely to lower costs significantly through economies of production, distribution or supply, or is necessary to meet import competition" and that benefits will be passed on to the public. In the sections on export agreements, the key statement about lowering costs is excluded, but if the unspecified benefits of the export agreement are passed on in part to the public "within a reasonable time . . ." etc., the agreement will be approved. It should be added that in provisions governing both specialization and export agreements, an alternative criterion is specified. In the former case, the agreement may be approved if it "is not likely to lessen competition significantly," in the latter if it "is not likely to affect competition in Canada adversely." Especially in the latter instance, this means that the efficiency criterion can be avoided entirely. This apparently reflects the expectation that in some such agreements the major benefit to the participants will be in the form of the pecuniary advantages of a better bargaining position.

C-256 may of course experience further substantial changes before becoming law, but it seems likely that these rationalization provisions will survive changes in ministers or even in governments, as they have been widely demanded.

This is an appropriate point at which to pose the question concerning the role of foreign investment policy as a feature of a structural rationalization program. The basic issue is this: given the importance of the tariff and other domestic policy elements in determining the structure and behaviour of Canadian industry, including the substantial foreign owned sector, if Canada moves to a trade
liberalization policy and appropriate transitional and rationalization policies, what need will there be for a policy specifically to deal with foreign owned enterprises? Can one not depend upon such enterprises to identify their own changed economic interest in such circumstances, and will not those interests become much more closely aligned with Canadian national interests? If trade liberalization provides an inducement to all inefficient firms to reorganize their production patterns, it does not need to be selective or discriminatory on the ownership basis. The argument to the contrary seems to imply that foreign-owned firms will not respond to ordinary economic incentives, or that they will not respond in the desired way. Sometimes it appears that those anxious to introduce special policies for such firms are assuming that foreign-owned enterprises en masse will retire to their home base if their protective support is withdrawn. For this to happen, it would be necessary to assume several conditions: (1) that the Canadian market was insufficient to support any efficient-sized production unit; (2) that there were no advantages in factor costs; (3) that the firms could sustain the financial loss associated with abandonment of capital.

In fact, none of these is likely to apply universally in any industry, so that the fear about foreign firms is really a fear that they will fail to sustain an adequate level of production and employment, which often means a level equivalent to levels attained under the protective system. The whole issue of structural rationalization within an industry thus poses the additional question: What share of national production and employment should a rationalized industry be expected to supply? The answer will depend on whether other industries are being rationalized at the same time, which of these industries has greater comparative advantages in the economy, etc. No single industry, whether foreign or domestic owned, should be judged by its ability to maintain a level of employment achieved under conditions of inefficiency. The rationalization process in a high wage economy is almost bound to result in more efficient use of capital and larger increases in output than in employment. A foreign owned firm should really only be judged in accordance with these same criteria, hence a special policy for foreign enterprises is not required.

One point needs perhaps to be made about foreign enterprises in situations of structural inefficiency. It is likely that there will be a higher incidence of foreign ownership in situations requiring rationalization. This is argued earlier on market-rivalry grounds.
Thus governments engaging in rationalization policy may find themselves dealing with many branch plant industries. It is understandable that there should be a desire to ensure that such firms do not act in a way prejudicial to the interests of the host economy. To guard against this, the particular character of each situation of structural inefficiency must be understood by those making decisions, whether in the parent firm or the branch. A government can be excused for requiring that proposals for the changed use of capital in such situations be reviewed by a public agency. Perhaps competitors should be given the first opportunity to buy the production facilities of an enterprise that is abandoning production, at replacement value appropriately depreciated. In this way, both the withdrawing enterprise and his rivals will be encouraged to take direct account of the relative advantage in becoming an external supplier or exporter rather than a branch plant operator.

To conclude, a special rationalization policy for foreign-owned firms has a very limited rationale. At most, the incidence of non-resident ownership may warrant some special information and review procedures.

To return to the starting point of this section, it may be seen that structural rationalization policies are essentially permissive exemptions from the competition laws. Whether more active intervention by governments is required in the design of rationalization schemes involving some or all of the instruments described is an open question. But one thing should be stressed - to the extent that structural rationalization requires departure from the normal application of competition policy, it should wherever possible include a built-in terminal date for specific arrangements. This is unlikely to be possible in the case of mergers, where one must therefore expect the forces of international competition to compensate for higher concentration in the domestic market. But in the case of export agreements and specialization agreements, it seems reasonable to set a terminal date, since beyond that time the advantages of new export outlets and production specialization will have been achieved if they are likely to be, and there is no reason to invite competitors to consort further lest they fall victim to unnecessary temptations to collude in pricing and the sharing of markets.

V. The Long-Run Policy Environment

In the course of the preceding discussion, several observations
have been made concerning the basic policy environment and its im-
portance to the successful adaptation of a national economy to the
challenges of international competition. This paper is already too
long to warrant extensive treatment of the long-run policy environ-
ment, but it is important to recognize explicitly the elements of
that environment and to indicate briefly their importance in making
possible the successful response of the economy to the opportuniti-
es created through trade liberalization.

The long-term policy environment can conveniently be classified
under three headings: (i) policies for efficiency and growth;
(ii) policies for economic stabilization;
(iii) policies for equitable distribution of
economic benefits.

Since trade liberalization is itself basically a policy for pro-
moting efficiency in industrial structure, all other efficiency and
growth policies should be explicitly related to the implications
of a liberal commercial policy. In general, the adoption of a 'free
trade' bias implies that the forces of international competition
will be relied upon to allocate many resources effectively and that
the role of other allocative policies can be treated as complement-
ary. Essentially these other policies relate to product and factor
markets and factor endowments.

Market policies that are most complementary to a liberal trade
position include competition policy and foreign investment policy.
Elements of competition policy that are most complementary to trade
policy include the control of restrictive structures and practices
in industries that are not subject to import competition. This in-
cludes all those industries that enjoy transport cost protection or
are closely tied to markets. The latter group includes virtually
all service industries. If competition is not encouraged in such
industries, one of the consequences may be to exert upward pressure
on the pricing of services and of other inputs of industries in the
international trading sector.

Competition policy can also be important in encouraging some
kinds of competition practice and discouraging others. In general,
Canadian policy is designed to prohibit price collusion, control of
retail pricing by manufacturers, misleading advertising, and other
trade practices that limit the consumer's range of choice. Control
of these practices can benefit final consumers, and so far as opti-
mal allocation of resources is concerned, it is largely complementary to the effects of international trade. One of the problems of Canadian industry in international competition is the advantage enjoyed by international companies in marketing. When this kind of advantage results in large-scale marketing facilities based on well fortified brand loyalties, it is difficult for new firms, especially when based on such a small domestic base as Canada's, to penetrate international markets or even to meet penetration of the domestic market. If competition policy reduces the rate of return to institutionalized marketing positions, it can not only raise the prospects for rational consumer choice, but it may also improve the competitive prospects for smaller-scale enterprises. It is doubtful, however, whether existing Canadian competition laws can make much of a contribution to this latter objective. Even the proposed competition bill probably does not go far enough in this direction. Public support for dissemination of consumer product information might make a larger contribution in this direction.

Specific policy to deal with foreign-owned enterprises has been a topic of much discussion in Canada in recent years. Apart from the variety of polemic and academic literature on this topic, there have been two principal federal government sponsored reports -- that of the Task Force on Canadian Industrial Structure and the so-called "Gray Report," entitled Foreign Direct Investment in Canada. The former of these two reports placed considerable emphasis upon tariffs and other trade policy and competition policy as factors explaining the unsatisfactory behaviour of some foreign-owned industry. The later study, while giving some recognition to the same factors, placed more emphasis on cultural and political effects of foreign ownership of economic and other institutions. So far as the economic role of the foreign-owned enterprises is concerned, it seems likely that the transitional and rationalization policies described earlier could guide international enterprises toward appropriate allocation decisions. If in addition competition policy is directed along some of the lines just outlined, it becomes even more likely that Canadian branches of international enterprises will behave much like their Canadian counterparts and will not enjoy any unfair advantage over them.

If particular incentives are required to ensure that the head office decisions of international companies give adequate recogni-
tion to Canadian interests and to Canadian potentialities under a free trade regimen, it would seem reasonable that they should take the form suggested in the section dealing with foreign-owned enterprises under Structural Rationalization Policies. Guarantees such as those incorporated in the Canada-U.S. automotive scheme are less acceptable, particularly if they are of indefinite duration and may thus contribute to doubtful resource re-allocations, going beyond the apparent original intent of the scheme. As soon as such 'guarantees' become or even appear to become built-in subsidies of a level of operation that could not be sustained under more truly international competitive conditions, it is not surprising that they give rise to intergovernmental controversy, even where the battle may be, in economic welfare terms, 'a storm in a teacup.'

One of the economic issues that lies behind much of the debate over foreign investment is the issue of optimum growth rate. Foreign investment has in the past enabled a faster rate of economic growth than would have been possible without it. At those times there was little if any objection and much enthusiasm for this effect. But the late 1960s and early 1970s have witnessed increased scepticism about growth, and this is now being cited in arguments favouring tighter controls over foreign investment. The fundamental questions posed are what rate of economic growth do Canadians want? and what policies are required to alter growth rates in the desired direction? The basic rationale for public policy on growth is that the private enterprise system does not allocate appropriate resources to certain kinds of investment. The main argument seems to focus on natural resource exploration and development and expenditures on technical research and development. The burden of the argument seems to be seen from opposite directions in these two cases - too rapid a rate of natural resource development and too low a level of research and development expenditure. In fact, the former phenomenon appears to be related to tax and other incentives that are common to both Canada and the United States, while the shortfall in industrial research and development activity arises out of the ready availability of imported technology. Part of the problem of achieving optimum patterns of investment in industrial research and development arises out of the pattern of protection. There is little opportunity to produce specialized technologically-intensive products in Canada because access to a large market that is often required to
spread the costs of developing such products is not as available from Canada as it would be from an American or European or Japanese location. If trade barriers affecting Canadian exports were eliminated, there would be a stronger prospect for Canadian-based production using Canadian designed products. In these circumstances, incentives given to research and development by Canada would have more significant effect on the identification of technologically-based areas of strength in Canadian manufacturing.

The main conclusion from this discussion of efficiency and growth policies is that while a liberal commercial policy does not eliminate the need for other policies to contribute a more socially acceptable industrial structure and growth rate, it gives unity and purpose to many programs that, in the absence of the trade policy position, might lead in directions having less long-term economic validity.

Policies for economic stabilization are in many ways independent of commercial policies and other policies affecting resource allocation. They have, however, two very important relationships to trade policy. The first is the important contribution of a high employment policy for the political acceptability of adjustments required in the transition period. In this connection, the high rate of labour force growth in Canada during the 1970s is posing a problem both for macro-economic policies and for the prospects of Canadians proposing or accepting substantive trade policy changes during this decade.

The other relationship has an opposite implication. A high employment policy poses a threat of inflation that is not readily countered except through measures that promote more flexibility and competitiveness in the economy. A liberal commercial policy is probably one of the best available means of easing the trade-off.

The components of an expansionary policy present additional problems beyond the scope of this paper, but the literature on Canada's experience with the adjustment mechanism indicates that, particularly with a flexible exchange rate, Canada retains a reasonable measure of autonomy concerning the mix of monetary and fiscal policy employed and the consequent pattern of effects on the current account and capital account in her balance of payments. She cannot, however, expect to attain an aggregate employment and price stabili-
ty record very different from that of the United States. Nor, as indicated earlier, is it likely that Canada could effectively use the exchange rate as a deliberate instrument of transitional policy.

Policies for the equitable distribution of economic benefits are also in a measure independent of trade policy. Systems of compensation can be devised to ensure that this objective is served no matter what the immediate effects of an efficiency promoting policy such as 'free trade.' However, such systems will work more readily the greater the gain in average real income that can be achieved.

The interesting question from the viewpoint of practical policy makers is whether the particular implications of trade policy liberalization are themselves likely to ease or accentuate distributional problems. In Canada, the main issue is the regional impact of policy. Traditionally it has been held that central Canada benefitted from the tariff, while the maritime provinces and, to a lesser extent, the west, paid the bill in terms of higher priced manufactures. More recent analyses indicate that the combination of tariff and non-tariff barriers has already achieved a kind of balance of government supports for resource and secondary industries. The effect of trade liberalization would thus depend on whether all barriers are eliminated and on the wider implications of the type of trade deal made with Canada's powerful trading partners. It seems unlikely, however, that a liberal commercial policy would accentuate inequalities of income distribution by region, or in any area, would require politically awkward compensation measures.

A Concluding Note

Returning to the fundamental assumption underlying the foregoing discussion of adjustment policies, one is tempted to ask, what kind of adjustment program could be devised in the absence of a liberal-commercial policy initiative. Some Canadian policy makers and advisers have such serious reservations about the political implications of substantial commercial policy initiatives that they have been searching for a policy program based primarily on domestic policies. There is no doubt that such a policy could be devised. The elements are the same as those described above. But the foregoing

\[21\] See, for example, the article "Canada-U.S. Relations: Options for the Future," in International Perspectives, Autumn 1972.
discussion itself points out repeatedly that competition policy, policies for control of foreign-owned enterprises, incentive policies, etc., would all require much more explicit definition of objectives and more interventionist policy measures than would be necessary if objectives and domestic interventions were defined as complements to a liberal trade policy.

Such measures would require more adjustment, e.g., more firms going out of particular lines of business, because of the smaller role that exports could play in the adjustment program. There would also likely be more long term intervention of the following kinds:

a) in competition policy, because the forces of international competition could not be relied upon to protect consumer interests, improve the efficiency of the economy and contribute to easing of the trade-off problem.

b) more active control of foreign investment since the tariff stimulus to such investment would not be removed.

c) more explicit policy to promote optimum rates of national resource development and research and development expenditure.

d) redistributional policies that might create more political and administrative problems, at least until domestic substitute policies had worked to achieve some of the efficiency-creating effects that trade liberalization would have brought about.

There is little doubt that the adjustment problem is in any case, difficult to face politically. There is good reason to believe that it will not be squarely faced or systematically handled without trade liberalization.
Tom Burlington opened the discussion: It was a real pleasure to read carefully this fine paper by Dr. English. He took great pains to draw together and analyse the many complicated social and economic issues that are involved in rationalizing trade and industrial policies in Canada. The thoroughness of his paper makes emphasis more relevant than criticism.

Policies that will support efficient types and timing of structural adjustments in response to lower protective barriers are the case of Dr. English's paper. An efficient rate of adjustment of a factor of production, considering the social costs and benefits of lower protection, depends on two factors:

1. The number of periods over which the costs of maintaining the remaining but declining levels of protection, and
2. The degree of mobility of the factors of production.

Dr. English has discussed the policies and times required for adjustment for types of capital and labour of varying mobilities. I do think he does not put sufficient emphasis on the actual social costs of adjustment. On page 428, he writes in regard to the losers in the adjustment process, "although it is difficult to assess the overall need for such adjustment assistance (that is the losers), it is likely on the basis of past experience that special financial aid will not need to be very great". The examples Dr. English gives to support this conclusion are not especially convincing. In the first place, the social costs of change to individuals often tend to be somewhat greater, I think, than economists estimate and tend to be of a nature that economists perhaps do not understand too well. Therefore, along with Professor Yamazawa who referred to this part yesterday, I think it is important to involve other social scientists and especially the people directly concerned in the making of policy and the estimation of social costs. The financial aid required should not be under-estimated. I wonder if Dr. English
could refer to any further past experience concerning these costs. Perhaps some useful information could be derived from Canada's experience with regional adjustment policies, although perhaps the largest social cost here is the Department of Regional Economic Expansion which is a rather notorious pyramid in Canada. Also is there any further information such as that suggested by Professor Nevile yesterday; I believe he mentioned a study in which certain types of adjustment costs, for certain industries I suppose, were about $3000 per man per year in comparison to costs of protection of about $1700 per man per year.

Professor Krause's emphasis on the problems of adjustment assistance to whole communities as a result of the impact of imports may not be as important in Canada as it is in the United States, although it is such a serious case that great care should be taken to make sure that it does not exist. Dr. English has pointed out the case of the textile industry where the community problem ought to be important. It is more likely to arise in non-manufacturing industries and away from the Central Canada region, in which case there have been attempts at developing regional development policies.

On a somewhat different topic, Dr. English mentions on page 431 that where financial aid to workers is involved, it seems likely that the major part of the costs can be borne by the adjusting industry. I will just mention that the likelihood of this policy succeeding depends upon the normal rate of worker mobility or the length of the period over which an employer can discount the benefits deriving from these adjustment activities. Perhaps the likelihood of this policy succeeding is larger than it seems looking from Japan with its very low rates of, at least, skilled worker mobility.

Thirdly, it is important to emphasize the blunt and distorting nature of fixed exchange rates. On page 437, Dr. English mentions that it is not clear that the undervaluation of exchange rates would be conducive to appropriate adjustment. Those industries dependent upon imported equipment or components would be handicapped, while resource based industries would receive an extra stimulus to export. The opposite opinion arose yesterday when Dr. Kanamori suggested a devalued rate for New Zealand and perhaps the Canadian experience is relevant to the situations of Australia and New Zealand.
Finally in the Canadian context, emphasis should be given to Dr. English's statement on foreign ownership policy that "The shortcomings of foreign subsidiary behaviour are in substantial part the consequence of the Canadian policy environment in which they have been operating". There are some exceptions to this statement concerning transfer pricing and the extra-territoriality effects of some laws of the country of the parent company. However, the only real caveat to it stems from the fact that as it is in the interests of these firms to prolong this policy environment, it is the superior political and bargaining power of multinational firms that must be counteracted by Canadian consumers and tax payers. The distinction between domestic and foreign firms in this case is one of degree, but perhaps an important degree and the question then returns to the kind of political leadership the Canadians obtain in future.

Hunz Arndt continued the commentary: Professor English's paper is so full of sound judgement, so balanced and sensible - in other words, as some of you may think, I so generally share his prejudices - that I find very little to get my teeth into. My inclination is rather to cheer and underline many of his statements, such as that efficiency gains through trade liberalisation, far from being inimical to the new "quality of life" objectives, make "more income available for this task" (p.422); that a foreign owned firm should be judged by the same criteria as domestic firms so that, subject to minor reservations, "a special policy for foreign enterprises is not required" (p.446); or that the operation of Gresham's Law in developed countries' policies towards LDC exports lends urgency to a "joint initiative" (p.436). But something more is expected of a discussant. Let me therefore take up three specific points.

The first is really a question about a particular Canadian problem. Professor English points out that "the elimination of tariffs has always been attractive to many people in the Atlantic and western provinces". (p.422) This seems to support the notion one often hears in Canada that tariff protection has promoted the concentration of industry in Ontario and has thus tended to aggravate the problem of regional disparities in income and employment. But I am left in doubt as to where Professor English stands on this issue. On the one hand, he says that it is "not clear whether [efficiency gains from trade liberalization] would lead to further redistribution of gains to the benefit of the outlying regions". (p.422). On the other hand, towards the end of his paper, he states that
"it seems unlikely that a liberal commercial policy would accentuate inequalities of income distribution by region". (p. 452) Perhaps we should infer merely that he doubts whether the regional problem would be affected one way or the other, but this in itself would be a conclusion which he might be asked to defend explicitly.

The second point is of a more general nature and relates to adjustment assistance arrangements as discussed by Matthews. Matthews distinguishes between "firms that are clearly able to meet the challenge of trade liberalization" and "firms that appear less capable of adapting" and may need financial or other support. (p. 429) Professor English points out that provision of such support "ultimately places a heavy responsibility upon the government that must acquire information and make a judgement about the future viability of the industry". This is in the nature of all government involvement in investment planning for the private sector of a mixed economy. A distinct difficulty raised by the distinction proposed by Matthews is that, once adjustment assistance is offered by a government, all firms have an incentive to make themselves appear as incapable of meeting the challenge - rather like the English local authorities during the great depression of the 1930s which disclaimed any intentions to carry out public works as soon as the government offered financial assistance for additional public works to create employment. Unless the government is willing to shoulder the further responsibility of determining which firms belong to the one class or the other, the distinction is liable to break down.

My third comment is a relatively minor quibble. In his discussion of exchange rate policy (p. 437), Professor English does not seem to me to distinguish sufficiently clearly between a policy of using "the exchange rate as a substitute for more explicit policies of short-term adjustment" and "complementary use of the exchange rate" where tariff cuts by themselves would cause a balance of payments deficit. He rightly reserves his approval in the end for the latter approach, but he might have been more forthright in branding the former as economic nonsense - at best an instrument of neo-mercantilist beggar-my-neighbour policy.

Finally, a small query. "A high employment policy poses a threat of inflation that is not readily countered except through measures that promote more flexibility and competitiveness in the economy." I am all for more competitiveness and I am even prepared
to concede that measures to promote it may have a marginal contribution to make to the fight against inflation. But as it stands, Professor English's statement seems to me greatly to overstate that contribution and to understate the seriousness of other causes of what, in the near future, threatens to become Canada's most urgent economic problem.

Discussion turned to the regional implications of trade liberalization, the social costs of trade adjustments, the inter-relation between the Canadian and United States economies, and the importance of agricultural adjustment to Canada.

Professor English said that it was difficult to assess the regional impact of adjustments to trade liberalization. It remained a major policy issue in Canada. However, he was inclined to think that outlying regions in Canada would benefit from trade liberalization directly and through the rationalization of manufacturing activities. In any case, the major task of policy makers, where there were significant distributional effects, would be to mobilise the gains from trade liberalization to achieve whatever distributional effects were desired.

On the question of whether sufficient attention had been given to the social costs of adjustment, Professor English argues that the importance of the issue may be exaggerated, since in many cases, improved specialization involved merely intra-firms, or, at worst, intra-community re-arrangements.

The problem of the inter-dependence of political and economic relations between Canada and the United States was not considered important. Professor English judged that Canada had not been severely restricted in its political independence by its heavy economic involvement with the United States.

Agricultural adjustment problems would be very much affected by the development of Eastern grain market, and agricultural rationalization within North America as agricultural trade policy was bargained out with Europe.
PART IV

SUMMARY
SUMMARY

Hugh T. Patrick

My summary attempts to consider both the papers and the discussion and to mention some additional points only briefly touched upon in the Conference. I shall not attempt to consider papers individually, but try to extract some of the overall themes.

My discussion follows the broad outline of the conference:-
1) The world economic environment and the Asian Pacific relationship to it;
2) the development and trade of developing countries in the Asian Pacific region; and
3) the response, actual and desired, of the developed (I prefer the term high-income or economically advanced) countries in the Pacific to the increase in exports, which causes problems and makes them use terms like 'safeguards' or 'adjustment assistance'; these countries are, in alphabetical order, Australia, Canada, Japan, New Zealand and the United States.

I. THE PRESENT WORLD ECONOMIC ENVIRONMENT

We must not forget the basic historical point that the last twenty-five years have been an unparallelled period of world economic growth, of liberalization, of trade and payments in a multilateral framework with substantial cooperation among nations in establishing this framework, mainly among industrial countries, and, as a consequence, a period of the most rapid growth of world trade in recorded, measured history.

Within the Asian Pacific region these generalizations hold less well. Economic growth in the countries of the region has been high. Trade growth has been fairly high, especially by Japan, the United States, Canada and other countries like Hong Kong. Nonetheless, we have been in a phase of considerable protectionism in all newly in-
dependent countries, except Singapore. There is also high and arbitrary protectionism in Australia and New Zealand according to the papers by Holmes and James. It is interesting that, as someone mentioned, Australia and New Zealand are not criticized as much as Southeast Asian countries for their protectionism, the point being that it is easier for rich countries than for poor countries to be inefficient since they can better afford the relatively lower growth and levels of income.

Similarly, until very recently, there has been very high protection in Japan. The recent sharp decline of protection on manufactured goods was discussed at the Ottawa Conference last year, but nevertheless the level of protection is still substantial, particularly for agricultural products.

In his paper on Canada, English mentioned that Canada also has a considerable amount of protection, although Canada is a very large trader and her barriers are perhaps not so high relative to some of the other countries in the region. However, this is one of those matters of degree, for there are almost no free traders in the world, with the great exception of Hong Kong.

Thus, it is important to note the point made by Krause this morning that in fact the United States has not been a highly protected country. It has imported a lot of labour-intensive manufactured goods and over this past twenty-five years has been the major force for world trade liberalization. However, as was also pointed out this morning, the problem is that domestic pressures in the United States are towards increasing protectionism and away from its historical liberal trade policy, especially in labour-intensive manufactures and we can always use textiles as an example of labour-intensive manufactures, not simply because of their labour-intensive nature as because they are the area of highest protection.

The conference has taken a broader view of the Asian Pacific region and its relationship to the rest of the world than previous conferences which is a desirable progression. We have brought into the discussions the enlarged European Community which, indeed, is very important in establishing a new world order. We have brought in Latin America, not just the Pacific Latin America, but the whole area. Wionczek's paper provides a good comparative experience for considering alternative development strategies. We have brought in China. Ishikawa confirms what perhaps many of us suspected, that
the political impact of China is likely to outweigh substantially its economic impact on international economic relations, on the world generally and on the Pacific region in particular, because its trade is small and unlikely to grow all that rapidly. One point about China that we did not press is that like other developing countries, it needs imports to develop and it has to have exports to pay for those imports. This might lead China to become a serious disruptive force; it might compete with other Asian developing countries in labour-intensive manufactures to sell to each other, to Japan or to the other advanced countries of the Pacific. One of the real reasons Nixon went to China, according to some humorous people, was to negotiate a textile agreement and that is not entirely a joke. Moreover, China may compete with some of the advanced Pacific countries, particularly Japan, in selling light capital goods to the Asian less developed countries. Thus, on one hand, China might become a disruptive force, which could upset established patterns of marketing.

On the other hand, China might become a substantial primary products exporter. If we are talking about major qualitative changes, this would seem to depend mainly on new discoveries, of which the location of large deposits of oil in the China Sea would have the most substantial impact on Chinese-Japanese relations and on the world energy situation.

Next, I note a theme of dependence, with the emphasis more on geographic than on commodity dependence among the nations of the region. I think that is because commodity dependence has been well discussed in these conferences and other places. We recognized that both the world and the region are interdependent, but that some of the members of the region are more powerful than others. Thus, we find a desire for diversification versus the economic pull of a very large market as a place to sell exports and a cheap source of supply of imports. Most of these pulls relate, in a positive way, to continuing ties with the United States. Virtually all the other countries discussed have a large and important trading relation with the United States from their point of view; also declining ties with the United Kingdom, especially for New Zealand and important and rising ties with Japan, particularly for the Southeast Asian nations, but also for Australia.

One of the questions that we did not analyse in depth is when, in
terms of the degree of bilateral economic inter-relationship between a very large country such as Japan or the United States, and a smaller country, do things become difficult. Clearly, what is meant by difficulty here has non-economic components, perhaps even more so than economic components depending on specific historical relationships, cultural affinities or disaffinities, language similarities as well as the aid and investment relationships.

However, the basic purpose of our conference is to be forward-looking and in terms of the world economic environment, there are several main features. One feature has been the end of the illusion that the Bretton Woods system of international payments is adequate. Some people call it the breakdown of the international payments system, but I think that statement is too extreme. The search is for a new international monetary system which is more flexible in balance of payments adjustments, with some greater degree of flexibility of exchange rate adjustments, more equal division of responsibility for adjustment between both surplus and deficit countries and finding some new ways to create international liquidity other than relying on American balance of payments deficits to generate the dollars. Fortunately a new monetary system seems to be in the process of negotiation with a general consensus on what its overall features will be, if not the details. So I think that we can be fairly optimistic that the new world order, on the monetary side, that we are talking about here will eventuate. We cannot be one hundred percent optimistic and this causes some concern because an effective monetary system is an essential condition for further trade expansion and liberalization. If we do not get a good monetary system, we could readily retreat into a protectionist, competitive, regional bloc world environment. We regret that Harry Johnson was not here to present a paper on this topic.

More important for the purposes of this conference is what will be the future barriers to trade. Will trade be liberalized further, or will it become more protected? Krause made the important point that we seem to be in a situation such that the status quo will not persist because there are increasingly strong protectionist pressures in the major world markets of the United States and the European Community. We seemed to agree that the status quo will not persist. I might raise the point that perhaps it will persist but in a funny way such that the best the liberal traders can do is to neutralize the rising protectionist sentiments, thus maintaining an
uneasy and perhaps unstable continuation of our present situation.

In our discussions we identified two main sectors of protection in the industrial countries, both involving large-scale commitments of resources to what are increasingly inefficient uses of those resources. One is agriculture. The main stress here was placed on the highly protectionist nature of the European Community's Common Agricultural Policy and particularly on the fact that this Policy is being extended to the new members, the United Kingdom and the other EFTA members that have joined and the new associated states who will work out some arrangement with the enlarged EC.

Similarly, Japanese agriculture is highly protectionist, but fortunately in Japan, domestic supply is rising much slower than demand so that imports are rising rather rapidly. It was pointed out that this kind of trade restriction is against the interests of those who have a competitive advantage in agricultural products arising from a variety of factors such as abundant land, specialization, the effects of R & D, for example the Green Revolution. The countries affected are the United States and New Zealand and also some of the Southeast Asian countries.

The second broad area of restrictions is in the manufacture of goods produced by labour-intensive methods, with rather simple processes and a standard technology. Again textiles are a prime example. The United States, Europe, to some extent Canada, Australia-New Zealand and Japan have large commitments of resources in such declining industries. In the case of Japan, the decline is more potential than present. I think we can anticipate that labour costs are going to rise sharply in such industries in the very near future, both because with continued rapid growth, wages are going to rise rapidly, and because, as Japan finds some solution to its very large balance of payments surplus position either by inflation as seems to be the current way to get out of this position, or by revaluation, or both, we will find that labour-intensive goods produced in Japan will simply not be competitive with imports.

The question of what to do about this problem was well put by Mr. Royer in his discussion of the European Community. He said that the industrial countries were willing to accept competition when they were competing with other countries that had similar structures of production, such that the nature of competition is not too different. This theme also appeared when we discussed that countries generally find it easy to trade or compete with each other when
they are at the same industrial level, as we discussed in the case of the Andean group and ASEAN. This theme appears even more sharply in English's paper and the appendix on Canada, in which it is pointed out that firms have very high technical efficiency in textiles in Canada, output per man-hour is extremely high and it is also extremely high in the United States. They use the most modern machines, the best technology and good labour. They are highly technically efficient in everything, but economically inefficient. The problem is that they simply cannot compete with an alternative mode of production which uses low-wage, unskilled labour and labour-intensive production. It is somehow argued that that constitutes a different kind of competition which is unfair and this is implied in the discussions of Mr. Royer about the Economic Community and it is sometimes implied in American discussion. But I think that this is no rationale for restricting competition. Indeed, competition is competition, regardless of whether it comes from others who are using similar technologies and capital-labour ratio or from countries with quite different capital-labour ratios. As economists, we should stress what is economically the cheapest source of production.

We have also realized in these two general areas of production - agriculture and labour-intensive manufactures - that there are extensive costs in re-allocating resources away from these inefficient areas of production. These costs arise from the process of re-allocation or the lack of complete mobility of resources. This is why adjustment assistance or safeguards are recognized as socially desirable for the importing country and, indeed, underlies the discussion of further liberalization of trade.

Finally, in terms of the new world environment, we have mentioned new efforts to create a more liberal world trade order particularly in GATT. Two points are important, one is the basic political point that there are world leaders in terms of economic power who are expected to take the lead in determining the world economic environment. They are, first, the United States, then the European Community and, recently, Japan. This does not mean that these three have exclusive power. Other Asian Pacific nations can play a valuable role in helping to determine the economic environment and the negotiations that will be under way. They can make the 'big three' aware of their own (Asian Pacific countries) national interests and can keep the 'big three' honest, by pressing them to take a global view rather than a narrow view of their own individual or group interests. Moreover, the other Asian Pacific nations can be the sour-
ces of new creative ideas and suggestion. In fact, however, English summed it up for Canada at least when he said he expects Canada to be more of a follower than a leader in the next round of negotiations. One of the interesting things is that everybody expects to be a follower in the next round, everybody is dragging his heels, everybody is pleading special problems and special interests and everybody does have special problems and special interest.

Then one of the first questions is - 'who is going to take the initiative?' From what Royer says, the European Community is not prepared to do so, at least not on agricultural products. Krause suggests that the United States will and certainly everyone else is expecting that the United States will. This was brought out forcibly in commentary during our first session. Interestingly, there was no discussion in the conference of Japan taking any leadership, although there is considerable talk in Japan of a Japan Round. I think the Japanese would love to take the leadership but are much too cautious to do so at this time.

In these forthcoming negotiations, clearly everyone is so sensitive that if they get negative responses from the other major partners then there is a likelihood that they will become negative themselves. Drysdale and Krause stressed very strongly that if the EC and Japan respond negatively to the United States initiatives to liberalize then there is a real possibility that the negotiations might end in failure. Royer made again the important point that in negotiations you have to be ready to pay prices, hard political prices, or to sacrifice something in order to gain something. Fortunately we have had a sufficient history of negotiations that people are prepared to see if they can find ways to do this. But the success of a new round of negotiations is by no means assured.

At the worst, we can think of a very pessimistic new world order in which both the EC and the United States become inward-looking and protectionist. Then what Japan and the other Asian Pacific nations would do becomes very conjectural. I could write such a scenario, or horror story, but I would prefer not to do so in the short time that I have.

II TRADE AND DEVELOPMENT STRATEGY

The second main theme of the conference was the development and foreign trade of the developing nations in the Asia-Pacific region in their relationships with the economically advanced Pacific
nations.

A basic assumption in this conference, an assumption that is true generally in the development literature, is that in the long run the most effective way under-developed countries can develop is to industrialize. This assumes that in the long run the productivity, the rates of technological change for capital and labour, for most countries will be higher in manufacturing than in primary production and that the income elasticities of demand will be higher in these areas. It is recognized that in the short run this is likely to be costly since domestic manufacturing is likely to be less efficient for a considerable period of time. Therefore one of the important questions is how long does it take industries in less developed countries to become efficient? What kinds of industries can do it most quickly?

Before considering alternative strategies of industrialization, three general points are worth noting. First, the term import-substitution is used rather loosely but we know more or less what it means. The point was well made that virtually all industrialization in developing countries in the mid-twentieth century is import-substituting in the sense that it is producing for domestic markets where previously those markets were serviced by manufactures produced abroad, rather than by handicraft production. If we look at the last 100 or 200 years, handicraft production was replaced by manufactured production, not necessarily in the same country, in fact not typically in the same country. The main exceptions to this are China and India where relatively more handicraft production continued. Thus in discussing the import-substituting strategy, we want to keep this in mind.

Secondly, because of the industrialization that is occurring in the less-developed countries, the world supply of manufactures is rising and this affects comparative advantage among nations in the world and in the Asian Pacific. It also fundamentally affects trade flows.

Thirdly, even in the process of developing domestic industries for domestic markets as is occurring in the less developed countries of Asia the demand for imports does not decline absolutely and in fact frequently does not decline relative to GNP. Thus we find that imports, mainly intermediate and capital goods, become increasingly important for growth. Still, the developing country finds that it
has to increase exports, or to borrow or to receive aid in order to finance the imports it needs to finance its growth strategy.

I thought we had an extensive and informative discussion of alternative development strategies, embodied in the papers on China, Southeast Asia, Korea, Hong Kong and Taiwan and on Latin America. We discussed three strategies:

1) the import-substituting strategy and I suggested that the important question is the degree to which the country imports, going from consumer to intermediate to capital goods. The extreme form is the autarky that China has adopted in her development. Not only is it a question of degree there, it is a question of the degree of domestic versus international orientation. To what extent does the country think in terms of trying to make the industries really competitive in terms of world market prices? In part this may be a question of timing sequence. How far a country can push its import-substituting strategy depends on the size of the domestic market and the natural resource base. One of the questions is that since all countries since England went through this phase, why does it not seem to work as well now as it did in the nineteenth century? Part of the answer is a matter of our own misperceptions. We have a much shorter time horizon when we are talking about what is going on now than when we talk about 'nineteenth century' development. Moreover we have much more rapid growth objectives. If we look at the pattern of economic growth in Japan, Sweden, Germany or Russia in the nineteenth-early twentieth centuries, the growth rate was much too low by the norms of underdeveloped countries today.

Thirdly, less developed countries today have learned better how to insulate themselves from world markets than was true in our historical experience. I think we are well aware of the limits of this import-substituting strategy and most of the papers stressed the likelihood of moving outward toward more attempts to specialize and trade in larger markets whether they were regional or world markets. The regional emphasis was discussed in most detail in the paper on Latin America and, to judge from that historical experience, it is very disappointing. The only hope is that the Andean Group will provide us with a better model, that is, provide mainly the ASEAN group with a better model. It was pointed out that this kind of regional grouping works only under very special circumstances. There has to be a strong community of interests which is cultural,
linguistic and historical. There must be similar levels of development. There has to be a very strong political commitment, and according to some in our discussion, there must be a willingness to harmonize the allocation of investment for new industries among the constituent members. The discussion suggests that, in terms of the Asian Pacific region, this model has limited validity, although no one brought up the question that was raised at the first conference, that is, "How about a Pacific Free Trade Area among those notable Pacific countries such as Canada, Australia, New Zealand, United States and Japan. At the first conference the idea of PAFTA was shot down as a second-best solution; it did not arise here because we are, hopefully, looking for more global and better solutions, but I would remind you that if difficulties arise in a global definition of the world economic environment, we may be seriously discussing this theme within the next few years.

Nevertheless, most of our emphasis on a development strategy was on export-oriented growth, growth not just in primary products but also in manufacturing, as discussed especially in the paper by Chough. Implicitly there is a concept of dynamic comparative advantage in which infant industries, based on domestic markets, are able to grow and achieve competitiveness in export markets relatively soon. One danger in export-oriented growth is that governments may develop arbitrary and blind policies for export promotion without trying to encourage comparative advantage. We may have the same arbitrary pattern on the export side and the same inefficiencies that we had on the import-competing side. If we find that specific subsidies are given to export industries, or licences require that to sell to domestic markets a certain proportion of output must be sold as exports, regardless of the industry, or if dislocations in the domestic economy give wrong signals, then, as the Naya Udom paper suggested, the industrialization strategy tends to penalize many kinds of exports rather than encourage them and it is important that countries not go overboard in adopting an export orientation which also turns out to be inefficient.

It was also suggested that this strategy is sequenced, a question of timing, rather than alternatives; nevertheless, I suggest it is also an issue of degree - how far does one go in import substitution? How quickly does one try to become export oriented? Most of us would agree that countries should shift toward a rational export orientation as soon as possible. All of this discussion of strategy
ignores Hong Kong, because Hong Kong is always that special case that the Chicago School loves, perfect free trade, specialization based on comparative advantage and export orientation from the very beginning. One of the interesting points when we looked at the rapid growth of exports of Korea and Taiwan was the question of whether they were not using the Hong Kong model, carved out of a few square miles of their economy where they set up a free trade processing zones in which essentially local labour is used to process imported intermediate goods for export. It is also based mainly on foreign investment to which I will return.

Helen Hughes suggested that, in industrialization strategy, that we live in an imperfect world. She had many sensible things to say. I think one thing she said was not sensible. She was suggesting that world markets give the wrong signals because there is marginal cost pricing in international trade. The position that international prices are not the relevant criteria for developing export industries is misplaced. The first question is "Is it true that by and large for manufacturing that we have a sustained period of marginal cost pricing in all world markets. If we get rid of trade barriers, this would imply that you would also have to engage in marginal cost pricing at home. I think we need evidence to back up her assertions of this. I would also like to point out that if there is marginal cost pricing and it is persistent, then that is the world trading environment that developing countries have to respond to; it is a particularly beneficial environment in terms of their imports because in effect the consumers in the country of the industry which is engaging in marginal cost pricing are subsidizing these low priced goods to foreigners.

In our discussion of the trade of the developing countries of the Asian Pacific, we discussed not only strategy but also the actual data which are well presented in the papers, so I will only make several points. One point is the increasing diversification of export commodities, which shows up in Southeast Asia in the relatively slow growth of primary products, but relatively fast growth of manufactures, although from a very low base. It is interesting that Australia and New Zealand seem much like developing countries in terms of their industrial structure, their exports and their protectionism, except that they are rich. One wonders in fact, how much exports are being subsidized in these countries, either by overvalued exchange rates or by other distortion.
Secondly, there have been different degrees of success among the developing countries in the Asian Pacific region in increasing exports. The manufactured exports of Korea and Taiwan have grown very rapidly; there has been substantial growth of the ASEAN nations, around 13 percent; and there has been slow growth due to domestic conditions in South Vietnam, Laos, Cambodia and Burma. Latin America is more complex and less homogenous.

Thirdly, the geographic distribution of exports was also stressed, particularly manufactures. Not surprisingly, from the viewpoint of the Asian Pacific developing countries, most of this goes to the large United States and Japanese markets. Some goes to Canada which may be important from Canada's point of view, but is not very large from the viewpoint of the Asian Pacific countries. In the discussion on Australia and New Zealand there was almost no discussion of the exports of manufactures from the Asian Pacific developing nations. I was somewhat surprised to learn that the share of manufactured exports of Taiwan and Korea to the United States has been going up and has been going down to Japan, because I would have thought that this would not be the case if the United States is as restrictive as she is supposed to be and if Japan is liberalizing as much as she is supposed to be. For all of the other countries it is indeed their share of manufactured exports to Japan that is rising, since Japan is such a rapidly growing import market, mainly due to the overall rapid growth in Japan that will continue for some time and, in future, due to the increase in import liberalization. It is unfortunate that there is no study of the Japanese market's import potential which will be very great in future. This does suggest that we need more micro-studies of manufactured exports.

Is government export policy distorting? To what extent is exporting carried out by foreign firms? In Korea and Taiwan, I have mentioned the free trade processing zones; I have the impression that that is mainly foreign investment. I understand that in Latin America also a very large share of exports is done by foreign companies, part of it being intra-Latin America trade, shipping components from Brazil to Argentina for further assembly and then going to third markets, for example.

III ADJUSTMENT ASSISTANCE POLICIES FOR DEVELOPED COUNTRIES

The necessity for adjustment assistance programs has been emphasized most strongly in a political sense. If you expect to negoti-
ate any trade liberalization with the E.E.C. and the United States, you had better have some safeguards in it. The danger here of course is that safeguards and escape clauses may simply perpetuate protection unless they are coupled with some kind of positive assistance programs. Why are these positive assistance programs necessary? One reason is the difference in distribution between benefits and costs. The benefits of trade liberalization go to consumers and to factors of production in export industries whereas the costs are borne by labour and capital and local communities in import-compet ing industries. Moreover, these costs are high because resources are not fully mobile, geographically or between types of uses of labour or capital. I think in particular the emphasis on the community and the region as suffering from the disruption of trade is a very valuable contribution and should be stressed. One of the other important issues is why should we have special adjustment assistance programs relating to disruptions caused by imports when there are many other forms of disruption that affect a firms' domestic performance - changes in tastes, the business cycle, perhaps managerial skills and so forth. In our arguments, we should develop answers to these questions. One answer might be that resource mobility should be enhanced regardless of the source of difficulty. The danger here is that you end up subsidizing lots of businessmen; moreover, it seems to be a political question of whether countries are prepared to engage in such extensive adjustment assistance activities.

The second answer is that trade is really different somehow from domestic distortions in that the developed countries have a very strong political as well as an economic stake in maintaining a liberal, harmonious, essentially cooperative international economic environment. Therefore, they need to take special measures to reduce the tensions which sometimes arise in the operation of the international economy. In this sense the political importance is even greater than the economic importance. We have already mentioned the economic importance in terms of static and dynamic gains, and particularly for the LDC's, the dynamic gains of being able to import.

A further justification which was not explored much yesterday but which is important to know more about is that although the benefits of liberalization may be moderate, the costs of increased protection may be very high and rising sharply, requiring a continued emphasis on ensuring protectionism does not get worse.
We did not deal in concrete terms with alternative methods of adjustment assistance. The important point was made that macro-policy to guarantee full employment and business cycle stability is perhaps the most important single adjustment policy that can be taken. The Japanese case of rapid growth and the fantastic degree of change that is underway in the behaviour of individual establishments, as presented in Namiki's paper indicates just how dynamic a response you can get if you are in a rapid growth environment. There are additional, specific forms of adjustment assistance. They were outlined in a general way in Namiki's paper, regarding safeguards, temporary measures, the limits on the timing of programs such as 5-8 years for us and 3-5 years for them according to English's paper. This is clearly a negotiable area. Another important area for negotiation is how this is to be financed. I doubt that many countries can follow the peculiar practice of the Japanese sulphur industry. However, there are serious questions about the incidence of taxation for these purposes. Also there are dangers of excess adjustment assistance. One danger is that sufficient assistance might be provided to subsidize the firm to inefficiently stay in the same industry. A second danger is that it may cost a lot more money than is socially desirable to encourage firms to get out of the industry.

The case studies on the whole were somewhat general and it was a little disappointing that we did not go into details of cases where there have been explicit adjustment assistance programs. It was pointed out that in the United States there have not been many programs, but the value of that discussion was its emphasis on regional adjustment assistance. In Japan two interesting cases are in coal mines and textiles. There is a lot to be learned from those cases ultimately, but I have the impression that the basic research has not been done on the costs and benefits of government assistance programs.

CONCLUSION

In conclusion, what we have done here is not exactly what is implied in the title of the conference. The title was "A Re-appraisal of Asian-Pacific Integration in a New World Economic Order". We did not predict clearly what the new world economic order will be, although we have implicitly, and frequently explicitly, suggested what we regard as desirable, namely, freer trade in agricultural and manufactured commodities, greater economic opportunities for the
less developed countries so that they may grow, and the recognition of interdependence without dependence so that there is not a feeling of being overwhelmed by a large trading partner.

A re-appraisal of Asian-Pacific Integration was also more implicit than explicit. Essentially we have been thinking in a global framework of multilateral free trade. We have recognized the potential usefulness of regional sub-groups where the community of interests is high, in ASEAN and the Australia-New Zealand cases, yet so far, concrete experience in both of these has been limited and not very exciting or rewarding. We recognize that countries within this global world also have important bilateral interests. For the Asian Pacific region almost all the countries have a major relationship with one of the major economies of the Pacific, especially the United States and Japan and also the United States and Japan with each other. This provides a combination of opportunities in an economic sense, but also has disturbing political and psychological implications for some.

Let me finally mention another area which we have not discussed to any great degree although it has been implicit in much of our discussion. Trade does not occur in a vacuum. It is closely interrelated with investment opportunities and industrialization involves not only trade but investment and technological change and transfer. I have suggested that much of the increase in manufactures exports from the developing region may have come from foreign firms though this was not explicit. There are many areas left to discuss in future consideration of Asian-Pacific economic integration.

*************

Discussion turned to the relationship between the trade and aid policy, the success of the new international monetary order; and the importance of resource trade problems.

Some participants drew attention to the fact that, like trade policy, aid policy was presently facing a kind of hiatus. As in trade policy, everyone was prepared to adopt follower status, but no one seemed
anxious to assume leader status. For example, Japan had indicated that she would contribute one third of the needs of the Asian Development Bank's Special Fund (for soft loans) so long as the other two thirds was made up by other countries. But two thirds is a large proportion for other contributors. Japan seems to have been very cautious in its actual approach to the aid question despite its admirable statement of intention. Perhaps there was an important role for the small risk countries like New Zealand and Australia to play here in accepting a more positive role in encouraging aid efforts.

Discussion of the character of Japan's aid performance was related to earlier discussion of the problems of dependence on Japan by smaller Southeast Asian economies. One participant suggested that Professor Ichimura's proposal for a 'peril point' approach to trade dependence had missed the real point. There were significant differences in the response of small countries to economic dependence on large countries which deserved closer analysis. But if any generalization could be made, perhaps it was that the structure of the dependence had an important effect on the character of the response. In the interest of Japanese aid policy, it was felt that perhaps more attention should be given in Japan to the relationship between the structure of its development assistance programs and the aid climate. This might suggest a more rapid approach to softer aid terms to everybody's advantage.

Other participants were doubtful about Professor Patrick's optimism about the new international monetary order. The Smithsonian agreement and the move to SDRs were not a final solution and some felt a more cautious and eclectic approach to international monetary problems was in order. The monetary adjustment mechanism was certainly seen to be working imperfectly in Japan.

Another participant drew attention to the lack of discussion of the resources trade problem which was likely to emerge as a major issue in the world economy in the years ahead. The combination of the rightly motivated but wrongly applied Club of Rome mentality and genuine bottlenecks could prove a source of serious trade friction which required serious consideration.
PROGRAM OF THE CONFERENCE

January 11, Thursday

(Morning)

Session I: Problems in the World Economy
(Chairman: Kiyoshi Kojima)

1. Jean Royer, "Greater European Economic Integration"
   (Discussants: Peter Drysdale and Lawrence B. Krause)

2. Shigeru Ishikawa, "The Impact of the Emergence of China on Asian-Pacific Trade"
   (Discussants: Ronald Hsia and Arthur Paul)

(Afternoon)

Session II: Industrialization and Trade Growth in Developing Countries
(Chairman: John Nevile)

3. Helen Hughes, "Trade and Industrialization Policies: The Political Economy of the Second Best"
   (Discussants: Susumu Watanabe and Perry Chang)

4. Soon Chough, "The Growth of Exports and Economic Development in Labor Surplus Economies with Particular Reference to Korea, Taiwan and Hong Kong"
   (Discussants: Sin-ichi Ichimura and Amado A. Castro)

5. Seiji Naya and Udom Kerdpibule, "Trade Policy and Problems of Export Expansion - The Case of Southeast Asia"
   (Discussants: Yoichi Itagaki and Chong Ki Choi)

January 12, Friday

(Morning)
Session II (continued)
(Chairman: J. Nevile)

6. Miguel S. Wionczek, "Latin American Growth and Trade Strategies in the Post-War Period"
(Discussants: H. Edward English and Hiroshi Kitamura)

Session III: Structural Adjustment in Advanced Countries
(Chairman: H. English)

7. Kenzo Hemmi, "Structural Adjustment of Japanese Agriculture"
(Discussants: James A. Kokoris and Udom Kerdpibule)

(Afternoon)

8. Nobuyoshi Namiki, "The Japanese Economy - An Introduction to its Industrial Adjustment Problems"
(Discussants: H.W. Arndt and Sueo Sekiguchi)

9. David E. James, "The Assessment of Adjustment Problems in Australian Trade"
(Discussants: Makoto Ikema and Ippei Yamasawa)

10. F.W. Holmes, "The Direction of New Zealand's Industry, Trade and External Economic Policies"
(Discussants: Hisao Kanamori and P. Drysdale)

January 13, Saturday

(Morning)

Session III (continued)
(Chairman: F. Holmes)

11. Lawrence B. Krause, "The U.S. Economy and International Trade"
(Discussants: Jean Royer and Moto-o Kaji)

12. H. Edward English, "Trade Liberalization and National Adjustment Policy - The Canadian Case"
(Discussants: H.W. Arndt and Thomas Burlington)
(Afternoon)

Session IV: General Discussion
(Chairman: Saburo Okita)

Summary Remarks: Hugh T. Patrick

Discussion