Seminar Paper No. 26

THE NATIONAL STATE
IN AN INTERNATIONALIZED WORLD ECONOMY

by

Assar Lindbeck

Three lectures at the Candido Mendes University,

Note: Seminar Papers are preliminary material circulated to
stimulate discussion and critical comment. References in
publications to Seminar Papers should be cleared with the
author to protect the tentative character of these papers.

March, 1973

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Preface

This is the written version of three lectures which I had the privilege to give at the Candido Mendes University in Rio de Janeiro March 19-23, 1973. I wish to take this opportunity to express my sincere thanks for the chance afforded me to lecture to the students and faculty of this distinguished university.

I want to apologize for asking more questions than I am able to answer. A reason for this is simply that both theory and empirical research is in a rather preliminary stage in several of the fields dealt with in the lectures.

It has been my ambition to keep the lectures on a rather non-technical level.

I am grateful to Marianne Biljer and Eva Hamberg for research assistance.

Institute for International Economic Studies
Stockholm, Sweden
April 10, 1973

Ass r Lindbeck
Lecture 1

THE INTERNATIONALIZATION PROCESS

The nineteenth century witnessed a consolidation, or unification, of the national states in the presently highly developed countries, implying a concentration of powers to the national government at the expense of local interests such as cities, municipalities and feudal kingdoms. From the point of view of economic analysis, the consolidation of the national state may be seen as a method to achieve economic and social integration and unity within an extended area - within the borders of a whole "nation" - in the case of tariffs, laws, currencies, rules of contract, communications, etc; thus, the process may be regarded as a method for reducing the costs and troubles for the mobility of commodities, factors of production, entrepreneurship and financial capital within an extended area (within the borders of a "nation").

It is often believed that this buildup of the national states was a prerequisite for the modern economic development which started, or at least accelerated, in the middle of the nineteenth century in many parts of Western Europe and North America. We might say that the emergence and consolidation of the national state in the nineteenth century was a political adjustment to the economic forces which required larger integrated areas for production, exchange, entrepreneurship and factor mobility; the increased exploitation of returns to scale in production and marketing was followed up by increased exploitation of returns to scale in political decision-making.

During the present century, and in particular during the period after the Second World War, the mobility of commodities, entrepreneurship and financial capital tends to extend over the borders of the present national states, i.e. mobility in the economic field tends to be international in character. This means, as several authors have noticed, that the national state to a certain extent is undercut as an efficient policy-making body.
These phenomena have profound importance both for developed and less developed countries. The developed countries experience a greater need for cooperation and coordination of their policies above the level of the national state. We see today emerging tendencies in this direction in various parts of the world, as well as problems and crises caused by delays in the attempts to create more coordinated policies among countries.

The problem is much more complex for the less developed countries (LDCs). Many of them are now in the process of trying to build up their national states, i.e. to achieve political integration internally, at the same time as the world economy tends to be more and more integrated ("internationalized") in terms of markets and economic forces. Thus, whereas the political consolidation of the national states in the presently developed societies during the nineteenth century was well in harmony with the integration of local markets in the domestic economies that occurred at that time, the LDCs of today try to achieve a political consolidation on a national level in a situation when markets and firms tend to "explode" over the borders of the national state.

A special complication for many LDCs is that their frustrating experiences of foreign domination in the past have created an easily understandable suspicion of foreign connections. However, often these connections were not really an expression of an "internationalization" of their economies but rather the domination by one foreign colonial or semi-colonial power - an influence which has in fact often continued in the economic sphere even after political independence.

We can also notice that many LDCs today, in spite of their ambitions to achieve national independence, do recognize the importance of the international relations for their development efforts. Maybe we can see this most clearly in connection with the United Nations' so-called "International Development Strategy", adopted by the General Assembly when launching the programs for the First and Second United Nations Development Decade, which have been designed just to develop a cooperative effort for economic development, in particular
in four fields - trade, finance, aid, and transfer and adjustment of technology. However, I am not going to say much about the specific issues dealt with in this "International Development Strategy", as they have already been extensively discussed in the literature.

The main theme of the lectures is rather this: what are the interrelations between, and conflicts related to, the increasingly interdependent world economy and the national ambitions of the national states. The first lecture deals with the forces behind the internationalization process, the second lecture with the problems created by the process for domestic macroeconomic stabilization policy, whereas the third lecture discusses other problems for the national state, such as allocation, development and income distribution policies.

Thus, the general theme of the lectures is the autonomy of national economic policy in a more and more internationalised world economy.
WHAT IS INTERNATIONALIZATION?

When we try to penetrate and understand the process of continuing internationalization of the national economies it may be fruitful, as a starting point, to make a distinction between five types of closely related aspects of the internationalization process.

I. Larger flows ("movements") of commodities between countries;
II. Higher sensitivity ("mobility") of these flows between countries, expressed for instance as higher elasticities of the flows with respect to domestic and foreign variables and parameters;
III. Larger stocks of factors of foreign origin within a country. All these three phenomena might be called "internationalization of markets". It is also of interest to talk about two additional aspects of the internationalization process: IV. Internationalization of institutions; and V. Internationalization of externalities. (See Table 1).

Let us look for a moment at the content of the alleged internationalization of the national economies under these headings.

I - III. Internationalization of markets

(1) Markets for goods and services

A rough indicator of the degree of internationalization of the markets for commodities and services is a figure over the fraction of exports and imports to GNP. The remarkable feature of such figures is their stability over time - both for long historical periods, such as during the last century, and for the post World War II period. For Western Europe as a whole, the ratio of imports to GNP has, since the early fifties, hovered around 16-18 percent; for the U.S. it has been about 4 percent.

1) It would seem that Richard Cooper in his interesting book *The Economics of Interdependence*, New York 1968, by "increased economic interdependence" means about the same thing as what here is called "internationalization of markets".
TABLE 1

WHAT IS INTERNATIONALIZATION?

I  Larger *flows* ("movements") between countries:
    (1) commodities and services, (2) credit and capital, (3) technology and entrepreneurism, (4) labor

II Higher *sensitivity* ("mobility") of flows between countries (elasticities)

III Larger *stocks* of factors of foreign origin:
    (1) labor, (2) financial capital, (3) real capital

IV Internationalization of *institutions*:
    (1) political, (2) interest group, (3) market-oriented

V Internationalization of *externalities*
Figures of this type may be of some interest if we want to study broad macroeconomic problems, such as the immediate impact on GNP and the GNP price of changes in demand and prices abroad. Since we know that the amplitude of international macroeconomic fluctuations in prices and volumes has been much smaller in the post World War II period than earlier, it is probably difficult to avoid the conclusion that direct international macroeconomic disturbances on the commodity markets (of GNP and the GNP price) are in fact smaller now for the individual countries than they were before the Second World War, and that it is unlikely that the disturbances have increased much during the last decade.

However, a discussion on this highly aggregated level is misleading for many purposes. While total exports and imports have been a rather constant share of GNP during the last two decades in most countries, the export and import shares have increased considerably in practically all sectors, suggesting an increasingly international environment for the individual firms. In several sectors the figures have in fact increased by 50-100 percent during the last decade, as is seen in Tables 2A and 2B. A similar picture is provided by statistics (Table 3) showing the fraction of domestic absorption (A) within various sectors that are supplied from domestic production (O-X). Such figures have fallen considerably for all sectors, except agriculture where European protectionism has prevented internationalization. The increasingly international environment of the individual firm also emerges if we study the export share of individual firms, and the shares of sales by foreign competitors in the domestic markets of individual firms.

The contrast between the undramatic development of the aggregate export and import shares of GNP, i.e. for the economy as a whole, and the dramatic increase in import and export shares for individual industries and firms is no mystery. At the same time as the export (import) share has risen in almost every sector, the relative size of the sectors with a low export (import) content, as a fraction of GNP, has increased. The reason for this is, of course, simply (1) that the share of the sector for services, which has a small export (import) content, tends to rise because of a high income elasticity of demand for services; (2) that the relative price of services tends to rise because of a low rate of measured productivity increase; and (3) that the price elasticity of demand for services is usually modest, often smaller than unity.
Table 2 A

Exports as percentage of gross output by industrial branches in Western Europe

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Food processing</td>
<td>7</td>
<td>8</td>
<td>114</td>
</tr>
<tr>
<td>Beverages</td>
<td>11</td>
<td>15</td>
<td>136</td>
</tr>
<tr>
<td>Tobacco products</td>
<td>3</td>
<td>7</td>
<td>233</td>
</tr>
<tr>
<td>Textiles</td>
<td>17</td>
<td>27</td>
<td>159</td>
</tr>
<tr>
<td>Footwear and clothing</td>
<td>7</td>
<td>16</td>
<td>229</td>
</tr>
<tr>
<td>Wood and wood products</td>
<td>19</td>
<td>13</td>
<td>68</td>
</tr>
<tr>
<td>Furniture</td>
<td>3</td>
<td>8</td>
<td>267</td>
</tr>
<tr>
<td>Pulp and paper</td>
<td>23</td>
<td>28</td>
<td>122</td>
</tr>
<tr>
<td>Printing</td>
<td>4</td>
<td>8</td>
<td>200</td>
</tr>
<tr>
<td>Leather goods, excluding footwear</td>
<td>12</td>
<td>23</td>
<td>192</td>
</tr>
<tr>
<td>Rubber products</td>
<td>14</td>
<td>22</td>
<td>157</td>
</tr>
<tr>
<td>Chemicals</td>
<td>20</td>
<td>29</td>
<td>145</td>
</tr>
<tr>
<td>Petroleum and coal products</td>
<td>31</td>
<td>28</td>
<td>90</td>
</tr>
<tr>
<td>Nonmetallic mineral products</td>
<td>11</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Base metals</td>
<td>25</td>
<td>29</td>
<td>116</td>
</tr>
<tr>
<td>Metal products</td>
<td>12</td>
<td>14</td>
<td>117</td>
</tr>
<tr>
<td>Non-electric machinery</td>
<td>28</td>
<td>41</td>
<td>146</td>
</tr>
<tr>
<td>Electric machinery</td>
<td>19</td>
<td>24</td>
<td>126</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>22</td>
<td>27</td>
<td>123</td>
</tr>
<tr>
<td>Miscellaneous industries</td>
<td>24</td>
<td>26</td>
<td>108</td>
</tr>
</tbody>
</table>

Table 2 B

Imports as percentage of absorption by industrial branches in Western Europe

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Food processing</td>
<td>11</td>
<td>10</td>
<td>91</td>
</tr>
<tr>
<td>Beverages</td>
<td>10</td>
<td>9</td>
<td>90</td>
</tr>
<tr>
<td>Tobacco products</td>
<td>2</td>
<td>5</td>
<td>250</td>
</tr>
<tr>
<td>Textiles</td>
<td>12</td>
<td>24</td>
<td>200</td>
</tr>
<tr>
<td>Footwear and clothing</td>
<td>5</td>
<td>14</td>
<td>280</td>
</tr>
<tr>
<td>Wood and wood products</td>
<td>23</td>
<td>22</td>
<td>96</td>
</tr>
<tr>
<td>Furniture</td>
<td>1</td>
<td>6</td>
<td>600</td>
</tr>
<tr>
<td>Pulp and paper</td>
<td>21</td>
<td>27</td>
<td>129</td>
</tr>
<tr>
<td>Printing</td>
<td>2</td>
<td>5</td>
<td>250</td>
</tr>
<tr>
<td>Leather goods, excluding footwear</td>
<td>11</td>
<td>21</td>
<td>191</td>
</tr>
<tr>
<td>Rubber products</td>
<td>8</td>
<td>14</td>
<td>175</td>
</tr>
<tr>
<td>Chemicals</td>
<td>16</td>
<td>25</td>
<td>156</td>
</tr>
<tr>
<td>Petroleum and coal products</td>
<td>36</td>
<td>30</td>
<td>83</td>
</tr>
<tr>
<td>Nonmetallic mineral products</td>
<td>6</td>
<td>9</td>
<td>150</td>
</tr>
<tr>
<td>Base metals</td>
<td>23</td>
<td>28</td>
<td>122</td>
</tr>
<tr>
<td>Metal products</td>
<td>5</td>
<td>10</td>
<td>200</td>
</tr>
<tr>
<td>Non-electric machinery</td>
<td>19</td>
<td>34</td>
<td>179</td>
</tr>
<tr>
<td>Electric machinery</td>
<td>12</td>
<td>20</td>
<td>167</td>
</tr>
<tr>
<td>Transport equipment</td>
<td>11</td>
<td>19</td>
<td>173</td>
</tr>
<tr>
<td>Miscellaneous industries</td>
<td>21</td>
<td>24</td>
<td>114</td>
</tr>
</tbody>
</table>

Table 3  Domestic output for domestic absorption as a percent of domestic absorption.

<table>
<thead>
<tr>
<th>Country and economic organization</th>
<th>Percentage changes from 1961-64 average</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Food</td>
</tr>
<tr>
<td>United States</td>
<td>-0.5</td>
</tr>
<tr>
<td>Canada</td>
<td>+1.4</td>
</tr>
<tr>
<td>Japan</td>
<td>-0.1</td>
</tr>
<tr>
<td>European Economic Community</td>
<td>+0.1</td>
</tr>
<tr>
<td>BLEU</td>
<td>-3.6</td>
</tr>
<tr>
<td>France</td>
<td>+1.5</td>
</tr>
<tr>
<td>Germany</td>
<td>-0.7</td>
</tr>
<tr>
<td>Italy</td>
<td>-0.7</td>
</tr>
<tr>
<td>Netherlands</td>
<td>-3.0</td>
</tr>
<tr>
<td>European Free Trade Association</td>
<td>+4.9</td>
</tr>
<tr>
<td>Austria</td>
<td>+0.3</td>
</tr>
<tr>
<td>Denmark</td>
<td>+5.5</td>
</tr>
<tr>
<td>Norway</td>
<td>+3.0</td>
</tr>
<tr>
<td>Sweden</td>
<td>+2.0</td>
</tr>
<tr>
<td>Switzerland</td>
<td>+4.6</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>+5.8</td>
</tr>
<tr>
<td>Total</td>
<td>+0.4</td>
</tr>
</tbody>
</table>

a) \( \frac{O - X}{O - X + M} \)

b) Excluding Finland and Portugal

x) Less than 0.05 percent. No percentage change is shown if share in 1961-64 was less than 0.1 percent.

During the postwar period, the effects on the aggregate figures have happened just about to cancel for these two countervailing forces: the internationalization of each sector and the shift in the composition of GNP in favor of sectors with low import and export content.

The fact that the "movements" (flows) of commodities and services between countries are getting larger, expressed for instance as ratios between imports and production, does not necessarily mean that these flows have become more "mobile" in the sense of "sensitive" to changes in various variables and parameters. In fact, for the elasticities to rise, the marginal ratios have, of course, to rise more than the average - the elasticity being the ratio of these: for instance the elasticity of imports with respect to national income being $\frac{\Delta M}{\Delta Y} / \frac{M}{Y}$. This may very well be the case, but is certainly far from self-evident.

In the case of imports of commodities and services we would probably expect a rise in the average propensity with respect to income to be combined with a rise also in the marginal propensity as information about foreign sources and channels of supply would be expected to increase when the average level of imports goes up; but nothing tells us that the marginal propensity to import will rise more than the average. However, scanty empirical figures over income elasticities of imports do in fact suggest a rise over time (Table 4). It is even more difficult to get information about other elasticities. Much more empirical study is necessary on these issues before we dare to draw more definite conclusions.

Table 4

(2) Markets for credit and capital

It seems to be rather generally believed that the national markets for credit and capital have rapidly become internationalized during the last decade. The enormous growth of the transactions and asset holdings on the Eurodollar market is often used as a symbol for this development. And this is only the "top" of the iceberg of the international credit market. There are large foreign asset holdings besides the Eurodollar market, such as foreign trade credit and asset holdings by foreigners in the currencies of the countries where the holdings are kept.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>2.09</td>
<td>1.5</td>
<td>3.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Denmark</td>
<td>1.69</td>
<td>1.7</td>
<td>1.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Finland</td>
<td>1.63</td>
<td>1.5</td>
<td>1.8</td>
<td>1.2</td>
</tr>
<tr>
<td>Sum Nordic Countries</td>
<td>-</td>
<td>1.6</td>
<td>2.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Great Britain</td>
<td>1.67</td>
<td>1.0</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>Switzerland</td>
<td>1.96</td>
<td>1.7</td>
<td>2.8</td>
<td>1.6</td>
</tr>
<tr>
<td>Austria</td>
<td>2.17</td>
<td>2.5</td>
<td>1.9</td>
<td>0.8</td>
</tr>
<tr>
<td>Portugal</td>
<td>1.97</td>
<td>2.1</td>
<td>2.1</td>
<td>1.0</td>
</tr>
<tr>
<td>Sum EFTA</td>
<td>-</td>
<td>1.5</td>
<td>2.3</td>
<td>1.5</td>
</tr>
<tr>
<td>West Germany</td>
<td>2.08</td>
<td>2.2</td>
<td>2.2</td>
<td>1.0</td>
</tr>
<tr>
<td>The Netherlands</td>
<td>1.77</td>
<td>1.8</td>
<td>2.0</td>
<td>1.1</td>
</tr>
<tr>
<td>Belgium</td>
<td>2.13</td>
<td>2.0</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>France</td>
<td>1.92</td>
<td>1.6</td>
<td>2.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Italy</td>
<td>2.04</td>
<td>1.6</td>
<td>2.5</td>
<td>1.6</td>
</tr>
<tr>
<td>EEC</td>
<td>-</td>
<td>2.0</td>
<td>2.2</td>
<td>1.1</td>
</tr>
<tr>
<td>Rest of OECD Europe</td>
<td>-</td>
<td>2.2</td>
<td>(1.7)</td>
<td>0.8</td>
</tr>
<tr>
<td>Sum OECD Europe</td>
<td>-</td>
<td>1.7</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Japan</td>
<td>1.27</td>
<td>1.2</td>
<td>1.4</td>
<td>1.2</td>
</tr>
<tr>
<td>Canada</td>
<td>1.56</td>
<td>1.2</td>
<td>1.8</td>
<td>1.5</td>
</tr>
<tr>
<td>USA</td>
<td>1.82</td>
<td>1.4</td>
<td>2.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Sum OECD Total</td>
<td>-</td>
<td>1.7</td>
<td>2.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>

1) Excluding ships

However, even if the short-term credit markets have taken on an increasingly international character during the last decade, in the sense that the flows of short-term credit have increased, it is not obvious that the market for financial long-run capital has become considerably more international in character.¹ It is quite likely that this market was in fact more international before the First World War. Maybe it is mainly the movements of short-term credit flows that have increased.

We have also seen in recent years the enormous movements of short-term credit between countries in response to changes in the rates of return, due to exchange rate speculation and interest rate differentials. (Chart 1 for the U.S.). What is not yet established is to what extent these increased movements reflect higher mobility, i.e. sensitivity (greater coefficients, such as elasticities) and more violent fluctuations in the independent variables, respectively.

One of the few studies on elasticities has been made by Bill Branson, covering the period 1960-69, according to which 1 percentage point change in the bill rate in the U.S. induces a financial capital flow for the U.S. of about 3 billion dollars spread over about a year.²

Suppose then we have a function for short-term capital movements of the following type:

\[ F = \alpha (\Delta R^d - R^f) + R (\Delta E) \],

where \( F = \) short-term capital flow, \( R^d = \) domestic bill rate, \( R^f = \) foreign bill rate, \( R = \) "interest rate equivalence" of expected change in the exchange rate (\( E \)).

¹) In fact, empirical studies suggest that the long-term capital markets in EEC countries are still rather national in character.


Financial investments

Current account and net direct investments

Note: Vague forecast based on figures available spring 1973, mainly to indicate direction of change.

Suppose speculators expect a devaluation of 5 percent within 6 months. Ignoring uncertainty, this would correspond to a 10 percent interest rate increase on a yearly basis. According to Branson's figures, this would lead to a short-run capital flow of 30 billion dollars, uncertainty being ignored. Thus, it might be possible to explain recent capital flows without any assumption about changes in the coefficients since the average of the 1960-69 period, even if the growth of multinational firms, a learning-by-doing process, and larger stocks of financial international assets are all factors which may very well have increased the coefficients.

Chart 1

(3) Markets for technology and entrepreneurship

The increased internationalization of technology and entrepreneurship - by way of trade in patents and machines, and by the spreading of technology and managerial skills within international firms - is well known, though still not very well documented empirically. However, we know that trade both in machines and patents has risen dramatically. For instance, the receipts from sales and purchases of technology by US firms seem to have expanded by about 15 percent annually during the last decade, according to a report by the United Nations Economic Commission for Latin America.¹

The most notable channel for internationalization of technology and entrepreneurship is probably the expansion of international firms. According to the previously mentioned source, sales of patents to subsidiaries of US firms have risen by 18 percent whereas sales to independent firms have increased by 10 percent. It is also reported in the same source that sales of technology through subsidiaries have risen three times as fast as the sales of goods through the subsidiaries.

These developments in movements of capital and technology are related to a shift in the "forms" of capital movements, as compared to earlier periods. Whereas before the Second World War, or rather before the Great Depression in the thirties, private

capital movements mainly consisted of long-term financial investment, they have during the post-World-War period more and more taken the form of real investment in the context of the operations of international firms. In fact, about 3/4 of long-term international capital movements during recent years are recorded as direct investment, as compared to 1/4 immediately before the First World War.

(4) **Labor market**

Global aspects:

The internationalization of the labor market is a rather complex matter even to describe. During the nineteenth and early twentieth centuries, intercontinental ("global") movements of labor mainly took the form of movements of unskilled labor from countries with low real wages and/or excess supply of labor to countries with relatively high real wages and/or excess demand for labor. This usually implied a movement of labor from countries with much labor per unit of land to countries with little labor per unit of land. Emigration from Europe to North America, Australia and New Zealand is, of course, the most obvious example. This type of international movement of labor could probably be explained by relative factor proportions — rather than using the factor proportions as an explanation for the trade pattern, as in the textbook version of the Heckscher-Ohlin model. During the postwar period, the intercontinental (global) movements of labor have more than earlier taken place for skilled labor — the celebrated "brain drain" — at the same time as capital movements to an increasing extent, as just mentioned, have consisted of real investment rather than financial investment.

Thus, in both the case of labor and capital, we may say that it is to an increasing extent knowledge, in the form of "human capital" and "technology" respectively, that moves globally — embodied in the form of labor and capital, respectively. In the case of labor,
an obvious reason is that restrictive practices of immigration laws today make it difficult to achieve mass emigration of unskilled labor from the less developed countries to developed countries on other continents. Similar restrictions are not imposed on the movement of skilled labor.

This has consequences also for the movement of capital. When unskilled labor is no longer allowed to go to places where capital is, capital will instead tend to move to places where labor is. High tariffs in the less developed countries have certainly had a similar effect on direct investments. However, other factors, such as increased political risks for capital investment (such as the risk of nationalization) have in reality counteracted the incentives for movements of capital to the less developed countries.

European aspects:

The situation is somewhat different within Western Europe, where semi-skilled labor comes to the richer European countries from the less developed areas within Europe, particularly from the Mediterranean countries. Here a large-scale movement of labor has been allowed without much restriction. In a sense, this movement of labor is larger than the movements of long-term capital between these countries. For instance, the size of the Swedish capital stock abroad might roughly be measured by the return to Sweden on Swedish equity capital abroad; this return amounts to about 100 million dollars per year in the form of interests and dividends; a similar amount of money is probably reinvested in foreign countries. By contrast, the return in the form of wages and salaries of the 250,000 foreign employees in Sweden is about 1.2 billion dollars, i.e. an amount of a rather different order of magnitude. Similar relative magnitudes would probably be found in a number of other West-European countries. Thus, in this specific sense, the factor of production labor is more internationally mobile within Europe than the factor of production capital - in spite of the "inherent" difficulties for the mobility of labor connected with intercountry differences of a social and cultural character.¹ For instance, about 7 percent of

¹) See N. Lundgren and A. Lindbeck, Nationalekonomiska Föreningens Förhandlingar, No. 4, 1971.
the labor force in Sweden is born abroad; the corresponding figure is even higher in some other West-European countries. In Switzerland the figure is about 25 percent.

If we look at the development over time of the stocks of foreign-owned capital, as a share of total capital, we will probably find that the size has fallen secularly for long-term financial assets but increased for short-term financial assets and for equity capital. For instance, the size of the stocks on the Eurodollar market is today estimated at \$80 billion as compared to \$10 billion ten years ago. Figures of the magnitude of \$200 billion dollars of foreign financial assets are often quoted in financial articles. The stock of foreign-owned firms has also increased considerably. In manufacturing and minerals the figures presented usually look something like this: 6 percent in Europe, 15-20 percent in Latin America, 40 percent in Australia, 50 percent in Canada.

The explanation for the high movements of labor within Europe is probably that the mobility of labor, and hence human capital, does not create the same difficulties for the balance of payments, in the context of a system with fixed exchange rates, as does movement of capital proper. Emigrants become "currency-citizens" in the host country, which means that no serious balance-of-payments problems will arise for the country that exports labor and human capital (in fact the balance of payments might be positively affected by remittances from emigrants). When emigrants move, they move both their production and absorption simultaneously. Financial capital movements, by contrast, may create severe adjustment and balance-of-payments problems both when the original capital flow takes place, and when the return is paid out to the capital exporting country.

Thus, we have an example where government regulations greatly influence the relative mobility of labor and capital. Without restrictions on immigration of unskilled labor, and with lower tariffs in the LDCs, a large intercontinental emigration from the less developed countries would presumably take place for such labor, and smaller incentives would exist for real foreign investment in the less developed countries. Similarly, without balance-of-payments problems in the developed countries, capital movements would not be
so much regulated in these countries, implying that smaller labor movements would emerge within Europe. Thus, immigration restrictions for people from less developed countries, and tariffs in the latter countries stimulate capital movements to such countries; and balance-of-payments adjustment problems in developed countries, and therewith connected restrictions on long-term capital movements, have stimulated movements of labor within Europe. In other words, government intervention has stimulated capital movements to the less developed countries and stimulated labor movements among countries within Europe.

However, as countries have been more energetic in regulating long-term than short-term capital movements, they have in fact been more successful in regulating the capital movements which are important from the point of view of allocation of resources. On the other hand, the movements that are presently causing trouble, i.e. short-term movements - without perhaps being of much importance for the allocation of resources - have not been successfully regulated, partly because the latter type of capital movements consists to a large extent of variations in leads and lags in commercial trade credits and short-term portfolio management by international firms.

IV. Internationalization of institutions

The internationalization of institutions is evident for several different kinds of institutions: (1) political intergovernment institutions, (2) interest-groups institutions, both among firms and among employee organizations, and (3) market-oriented institutions, such as international firms.

The emergence of political intergovernment institutions hardly needs any illustration. We are all well aware of them and their activities - from the international ones such as GATT and IMF to regional ones such as EEC, EFTA and LAFTA. We also see a new trend to the emergence of international organizations of interest-groups such as labor unions, partly to balance the international firms. Among the market-oriented institutions, the most spectacular phenomenon is presumably the expansion of the international firm, i.e. the expansion of foreign subsidiaries of firms.
A typical pattern today is that foreign subsidiaries tend to grow more rapidly than both firms in general in the host countries, and than firms in general in the home country — and usually also than the "mother firm" in the home country. Whereas world output has been growing by about 4 percent per year during the last two decades, and world trade has been growing by 8 percent, production of foreign subsidiaries has been growing by about 10 percent per year. This has created a psychological situation where every country feels threatened by the expansion of international firms in its own home market. People in all countries, including the managers of firms, seem to feel threatened by the more rapid expansion in their home market of the foreign-owned firms than the domestic firms.\footnote{Stephan Hymer and Robert Rawthorn have made a similar point. They argue that there is an asymmetry in the outlook of U.S. and European firms. The European firms are asserted to be worried about increased competition in their home markets, whereas U.S. firms are asserted to be worried about increased competition in the world as a whole. "Multinational Corporations and International Oligopoly: The Non-American Challenge" in The International Corporation, (ed. by Charles Kindleberger), The MIT Press, Cambridge, Mass., 1970.}

At the same time, employees in the home country often feel threatened by the fact that the firms owned by citizens of their own country expand more rapidly abroad than at home.

Today production by U.S. subsidiaries abroad is more than twice the export value of the U.S. The ratio is, of course, more modest in the small European countries with a high fraction of GNP going into exports. For instance, for Sweden production by subsidiaries abroad is presently about 50 percent of exports in manufacturing, but rising rapidly.\footnote{Expenditures on plant and equipment abroad by U.S. firms is now, according to the previously mentioned U.N. study, about 30 percent of corresponding expenditures at home; the figure was about 15 percent in 1960. (Op. cit. p. 281.) If the recent trends continue, expenditures on plant and equipment by U.S. firms will be of about the same size abroad as within the U.S. (Op. cit. pp. 280-34.)

As other examples of the growth of operations abroad it can be mentioned that about 25 percent of the growth of sales by U.S., U.K. and Swedish firms during the period 1965-70 took place from foreign subsidiaries. (Olle Fahlén, Företagstillväxt och internationalisering, Sveriges Industriförbund, Ekonomiska utredningsrapporter nr. 5.)}

In the case of Sweden about 35 percent of the sales in 1970 in the engineering sector were from foreign subsidiaries, and 75 percent of the total sales of the firms were abroad — either from production units in the home country or from foreign subsidiaries. As another example, it could be mentioned that while investment in Swedish manufacturing increased by 10 percent per year (in current prices) 1965-70, the investment by subsidiaries abroad increased by 23 percent. (Olle Fahlén, op. cit.)
The size of the U.S. economy has given the impression that international firms are usually U.S. firms. It is true that foreign investment by U.S.-based firms, relative to those of firms based in other countries, is somewhat larger than proportionate to the size of the GNP of the U.S., relative to the other developed countries. It is also true that about $3/4$ of the growth of production by foreign subsidiaries during the last decades has originated from U.S. and U.K. owned and controlled firms. However, the greatest percentage increases of foreign subsidiaries have in recent years been recorded by continental European and Japanese firms, which means that we are moving closer to a situation where U.S. foreign subsidiaries will not be larger relative to subsidiaries of other countries (measured by sales) than the size of the U.S. economy relative to the economies of other developed countries. In fact, some small European countries, Holland and Switzerland, are already bigger foreign investors than the U.S., relative to the size of the domestic economy.

The relatively more rapid expansion of non-U.S. firms abroad, at present, is even more pronounced in the LDCs. According to the previously quoted U.N. report, while U.S. direct and portfolio investment during the period 1964-65 grew by 15 percent, Japanese investment grew by 32 percent and West German investment by 50 percent. One reason might be that the U.S. lead in technology is not an obvious advantage in the LDCs. All this means that we may expect a "true" internationalization of foreign investments in the LDCs, after prior periods of one-country domination.

It is of importance for an analysis and evaluation of the international firms to notice that the less developed countries experience mainly "one-way relations" in this field: they are host countries but seldom home countries, whereas a number of developed countries have "two-way relations", in the sense that they are both host and home countries; the U.K., Switzerland, Holland and Sweden belong to the second category. The U.S. too has for a long time been characterized by a "one-way relation" - in the opposite sense to the LDCs - but the trend is now that the U.S. tends to become an important host country as well for international firms.
V. Internationalization of externalities

The internationalization of externalities is obvious not only in the field of waste disposal in the air and the sea, and more generally the disturbance of the world-wide ecological system, but also in the exploitation of the oceans, as indicated by the "fish-wars" between countries, and the competing (in fact geographically overlapping) claims of countries concerning the exploitation of oil and minerals lying under the ocean beds. One of the really interesting things about some of the most important externalities today is just that they are "external" not only to the individual firms but also to the individual countries.

DRIVING FORCES

What are the driving forces behind this internationalization process? Let us classify them under eight subheadings - some of them technological, others economic and political. (Table 5).

Table 5

(1) One conceivable explanation for the rapid internationalization process is that the technological development during the postwar period has been biased in favor of communication and transport. The costs of transport of commodities, persons and messages over large distances, have fallen considerably relative to other costs during the post-World-War-II period. Examples are provided not only by the falling costs of air and sea traffic, but also by new techniques for preserving the quality of products during long transport (such as the "cooling system" in ships). It is also interesting to see how a number of previously non-tradable goods have now become tradables: the building sector, the printing industry, consulting and advertisement firms, etc. Maybe even some public service sectors, such as hospital care, will become increasingly internationalized, to exploit differences in climate and labor costs in different parts of the world. It is also well known that the development in telecommunications and data technology has dramatically reduced the costs of marketing, communicating information, and coordinating organizations over large distances.
TABLE 5

Conceivable factors behind internationalization process

(1) Technological development biased in favor of communication and transport.

(2) Increased returns to scale.

(3) Increased role of technology as factor of production. More rapid rate of change and diffusion of technology.

(4) Increased skewness in geographical location of consumption and production of raw materials?

(5) High income elasticity for differentiation of products.

(6) Specific factors behind expansion of international firms

i  Falling costs of leading huge organizations over large distances.

ii Complementarity between managerial skill and technological inputs.

iii Speedier product cycle?

iv Regional trade blocs and import substitution policy.

(7) Factors behind internationalization of externalities

i  New technology.

ii Threshold values superseded.

iii Change in preferences in society.

(8) Decisions taken by way of intergovernmental cooperation.
It is generally recognized that this technological development reduces the costs of both trade and foreign subsidiaries, as compared to production for the home market. In what proportions it has resulted in increased trade and foreign real investment respectively, depends presumably, as suggested by Robert Baldwin, on the effects on the costs of trade in commodities as compared to the costs of international operation of enterprises.  

(2) Another technological factor behind the internationalization process might be a tendency to increasing returns to scale in some industries, which would force small and medium-size countries to specialize in a more and more narrow range of products, to get reasonable returns to scale, and hence to engage more in trade. This probably holds not only for production of commodities but also for services and finance.

(3) A third factor, leading to increased internationalization, is probably the increased role of technology in the production and management process, combined with (possibly accentuated) returns to scale in the production and use of new technology. As individual countries can develop, at "reasonable" costs, only a small fraction of the technology they use, trade in technology will be expected to increase as a result. It seems possible, as already mentioned, that this has happened to a considerable extent in recent decades in several different ways: by purchases of patents, by import of "embodied" technology by way of trade in machines, and by increased foreign investment.

It is also possible that there is an increasing rate of change of technological knowledge and of diffusion of technology among countries. A reasonable hypothesis is that international firms are an efficient organizational structure to exploit these phenomena.

1) In fact, if the cost reduction was much greater for trade than for operating foreign subsidiaries, the result could conceivably be a fall in the operations of foreign subsidiaries - and vice versa if the cost reduction was much greater for foreign subsidiaries than for trade.
(4) A fourth factor may be an *increased skewness in the geographical location* of consumption and production of raw materials, mainly minerals and fuel. This has been accentuated by the rapid growth of industrial production in raw material scarce countries, mainly Japan and Western Europe, and possibly by increased scarcity of minerals and oil in the U.S.

(5) Another important driving force behind the internationalization process is the *high income elasticity for product differentiation*. At a high income level, each individual can better afford to satisfy his particular preference. To prevent the production process from being fragmented in view of this development - i.e. to make it possible to utilize returns to scale in production in spite of a more diversified demand pattern - countries have to specialize in a more and more narrow range of product qualities: a country exports blue ladies' shoes and imports white ones. This development of *intra-industry* trade is probably further facilitated by increased similarities in the demand pattern among various countries because of a narrowing of the income gap (in relative terms) among developed countries and possibly also an internationalization of culture and preference patterns (again an effect of falling costs of communication and transportation).

It is likely that a similar process of increased demand for differentiated products has taken place for capital goods, with increased specialization and intra-industry trade also here - for instance, trade in components. Part of the process is increased international trade *within firms* of components produced in various countries; in fact, about 25 percent of world trade today seems to be *intrafirm* transactions.

It is likely that a similar tendency to increased demand for differentiated products holds also for bank, consultant, tourist services, etc.

Thus, to summarize, an explanation for the expansion of intra-sector trade is the increased differentiation of demand patterns *within* countries, combined with increased similarity of demand patterns *among* countries.

(6) The driving forces behind the expansion of *international firms* have been widely discussed in recent years. The distinctive feature
of investment by international firms is - as pointed out by economists such as Stephen Hymer, Richard Caves, Charles Kindleberger and Harry Johnson - that such investments keep under the control of a single institution the international transfer of separate but highly complementary factors - equity capital, managerial know-how (entrepreneurship), technological knowledge and sometimes also trade in goods. Some of the driving forces for the expansion are quite obvious:

(i) The previously mentioned technological development implying falling costs of leading organizations over large distances. This has also made it cheaper to defend market positions in various countries in cases of oligopolistic threats by competitors (a point stressed by Stephan Hymer and Richard Caves).

(ii) A rather similar explanation is to say that high-technology firms in industrial countries have, more than earlier, ample availability of a scarce factor - managerial skill - which they can get a higher return on by way of direct investment abroad than by selling patent rights. By making a package of technical know-how and managerial skill, the point is that firms can get a higher return on technological know-how than would otherwise be possible; there is a complementarity between management and technology inputs. Where the advantage of technology lies in a specific and well-defined process, it is probable that it is relatively easy (profitable) to sell. The situation is different when the advantage consists of a general ability to gather information, develop and apply new knowledge. It is probably in the latter case, in particular, that technology and management are highly complementary factors of production.

Assume a production function of the form \( O = f(L, K, T, M) \), where \( L \) = labor, \( K \) = capital, \( T \) = technology and \( M \) = management, each one being a vector. The point is now that certain \( T \)-vectors, to give a high return, presuppose certain \( M \)-vectors, and that the second is not very mobile internationally. Analytically, we might say that this fact leads to a partial "non-marketable" of technology, as the partial cross derivatives of the production function between the \( T \)- and \( M \)-variables are positive rather than zero (the production function being "non-separable" with respect to \( T \) and \( M \)), and the factor \( M \) is not very mobile internationally.
An increased complementarity of technology and management methods can then be a driving force for the recent expansion of international firms, possibly due to ever increased complexity of the production technology.

Thus, the rapid expansion of firms' subsidiaries abroad may reflect a new optimum position for the location of firms in the world, implying a larger role for subsidiaries abroad. If so, a "disequilibrium" situation in location patterns and industrial structure has emerged and on the way towards this new optimum position, foreign subsidiaries will expand much more rapidly than the operations units in the home country. This holds, as pointed out above, for a great number of countries, not just the U.S., as seems often to be believed.

(iii) It is possible that the increase in the rate of obsolescence of new products, and in the imitation of technology, has resulted in a more rapid product cycle, à la Vernon. One possible additional hypothesis is that firms have reacted to this more rapid product cycle by expanding their production and marketing organization over the globe in order to exploit the world market more efficiently (rapidly). It then remains, of course, to explain why they did not instead expand their sales of patent rights. One conceivable explanation is just the earlier discussed possibility that the advantages of exploiting knowledge within organizations have increased as compared to selling knowledge, creating an increased "capital-evaluation gap" of technological knowledge between the innovating and potential patent-buying firms, possibly due to more complicated production and management systems. Maybe we can talk about an increase in the optimum size of non-market solutions in such cases.

(iv) It is also quite generally believed that the increased importance of regional common markets, and import protection in a number of less developed countries, have stimulated foreign firms to choose foreign investments instead of exports, to avoid tariff discrimination by the regional trading blocs and the import substitution countries. Thus, the host countries themselves are probably responsible for much of the expansion of multinational firms. I think the empirical literature lends support to this hypothesis, though the results are
somewhat difficult to interpret. In Latin America, for instance, where protectionism is particularly pronounced, production for exports by foreign firms in manufacturing constitutes only about 5 percent of the total production of the subsidiaries in these countries; this suggests presumably that foreign investments have largely been attracted by the shielded home market.

A specific factor behind the increase in foreign investment during the 1950s and early sixties might have been the slow growth rate of the U.S. economy. In order to sustain a rapid growth, U.S. firms had to seek their expansion, to quite a large degree, on foreign markets. For the reasons earlier mentioned, such as protectionism and common markets, this expansion took the form of production by foreign subsidiaries rather than by exports from the U.S. A closely related explanation is that the dollar became "overvalued" during the course of the sixties, which also made production abroad more profitable than production at home. It is quite possible that this situation has changed due to the two devaluations by the U.S. in the early seventies.

All these factors can probably, if we like, be grouped under two main headings: (a) increased profitability of firms operating in other countries as compared to those located at home, and (b) increased ambition of firms to protect monopolistic and oligopolistic market positions. It would seem that the previous analysis gives more substance to the first idea than to the second.

(7) The factors behind the increased importance of externalities scarcely need elaboration here: new technologies, the continuous accumulation over time of ecological disturbances resulting in the threshold values being superseded, and increased awareness of and possibly deeper concern for environmental problems (changes in preferences).

(8) An eighth factor, finally, behind the economic internationalization process is to be found in the earlier discussed political intergovernment decisions, and therewith connected institutional changes, symbolized by the activities of organizations such as GATT, IMF, UNCTAD, EEC, EFTA, etc. The agreements on trade liberalization within such organizations are generally believed to have
been an important prerequisite for much of the process of internationalization of markets and firms, an argument supported by the observation that the internationalization process has been prevented in the sector where trade liberalization has been resisted: agriculture.

Political factors have been important not only in the commodity markets but also in the credit and capital markets. An obvious example is the decision to start a partial return to convertibility at the end of the nineteen-fifties (accelerating in 1958). Another political factor is the balance-of-payments policy in the U.S. which has contributed to the increase in the supply of international assets, which has formed the "material" for much of the international mobility of funds - a mobility possibly facilitated also by increased skill in portfolio management of international firms.

One reason why this liberalization process has been politically feasible is probably the previously mentioned feature that the expansion of trade to a large extent has been intrasectorial rather than intersectorial. This means that the process has been possible without much closing down of large parts of branches of industry. The reallocations have largely taken place within industries and often in fact even within individual firms by changes in the range of products. This means that serious social problems, and therewith connected political setbacks linked to the reallocations, have to a considerable extent been avoided. It is interesting to note that protectionism has been most difficult to remove in the fields where free international competition would tend to lead to intersectorial rather than intrasectorial reallocation of resources, such as in agriculture and to some extent in textiles.

When politicians by their own decisions have contributed to a process of internationalization, they have in fact released forces which they do not yet master very well. To use an oft-repeated expression, we may say that the "operation domain" of markets and market-oriented organizations, such as firms, exceeds to a growing degree the "jurisdiction domain" of the
national governments. This has resulted, as we know, in the national state in field after field becoming a less and less efficient unit of policy-making. Thus, national governments have, like "the Wizard's Apprentice" helped to release forces which are beyond their powers to control.

The following lectures will to a large extent deal with exactly these forces, and the attempts of the national states to tame them.
Lecture 2

STABILIZATION POLICY IN AN INTERNATIONALIZED WORLD ECONOMY

The postwar principles of stabilization policy, based on Keynesian macro theory, have been strongly colored by the historical circumstances during the periods when the principles emerged and were generally accepted among economists — i.e. the 1930s and 40s. As these were periods with strong autarkic tendencies, due to the Great Depression and the Second World War, stabilization policy problems were analyzed largely in a national perspective with a minimum of consideration for the international environment. However, the practical experiences of national stabilization policies during the 1950s, 60s and early 70s have shown that the international environment, and international interrelations, have in fact profound implications for domestic stabilization policy. This has only recently resulted in a reorientation of macro theory and stabilization policy.

A few simple examples illustrate the point. The U.S. tried to fight unemployment in the early 60s by low interest rates. However, this resulted in an outflow of financial capital, with a subsequent deterioration of the balance of payments, leading to the celebrated conflicts between internal and external balance. Similarly, West Germany has tried for a long time to fight inflation by high interest rates. However, this has drawn into West Germany international financial capital, resulting in an increased supply of credit in this country, which tends to offset the attempts by the authorities to pursue a restrictive monetary policy. A third example is the disturbances created for various countries by the refusal of individual countries to adjust their exchange rates to the requirements for international equilibrium in the balance of payments. The Japanese exchange rate policy in the early 70s is maybe the most obvious example. Another example is provided by the tendency for many countries to experience inflationary periods simultaneously. To analyze and fight inflation on a purely national basis might
not be appropriate any longer; inflation is largely a "world market phenomenon" that requires international and not only national macro analyses and policies.

All these experiences illustrate the necessity for an "internationalization" of macro analysis, and for increased consideration in actual stabilization policy for international relations.

It is well known that stabilization policy performs quite differently depending on the exchange rate regime. Let us therefore, in the conventional way, make a distinction between two extreme cases - one with fixed exchange rates (adjustable pegs) and one with floating exchange rates. As both systems are connected with considerable disadvantages, it is also interesting to discuss various types of combinations and compromises between them. Let us start with the system of fixed exchange rates.

*Fixed Exchange Rates*

Fixed exchange rates are of course nothing but price control in the market for foreign exchange, implying that the price is removed as an equilibrating variable in this market. We do not automatically get equilibrium in the foreign exchange market, i.e. in the balance of payments. From this point of view, contemporary problems in the markets for foreign exchange and hence in the balance of payments of various countries, are not different in principle from problems created for instance in the housing market by the rent control or in the market for agricultural products by agricultural price regulations. Rigid price controls give in general either excess supply or excess demand; a fixed price is consistent with equilibrium in a market only by chance.

When the price in this way is removed as an automatically equilibrating mechanism, adjustments in the balance of payments have to take place in some other ways than by market-induced
changes in the price of foreign exchange. The question is then what are these adjustment mechanisms. A general background to the study of this problem is provided by an analysis of stabilization policy in a regime of fixed exchange rates. The analysis will be pursued in the context of Chart 2.¹

The chart distinguishes between four different "positions" for the domestic economy and the balance of payments. Concerning the domestic economy there is either unemployment or inflation - or a situation in between which we call internal balance. Regarding the balance of payments we may either have a surplus or a deficit - or a situation in between which we call external balance. Total equilibrium for the economy exists in the point in the middle of the diagram where the two balance lines intersect. (External balance is simply interpreted as a target value for the balance of payments; the analysis does not change if the target value is non-zero, and if it changes period by period.)

Let us now analyze the problems that emerge in the four different cases - or "zones" - described in the chart. In zone I there is simultaneously unemployment and a surplus in the balance of payments. The situation can in principle be improved upon by an increase in domestic demand, which reduces both unemployment and the surplus in the balance of payments. Ideally we would move in the direction of the balance point, as indicated by the solid arrow in zone I. Thus, the stabilization policy problem in zone I is in principle fairly simple in the sense that it is easy to move in the right direction for both target variables. This holds also in zone II where we have a combination of inflation and a deficit in the balance of payments. Inflation can in principle be counteracted by contractive economic policy, at the same time as the deficit in the balance of payments then goes down as imports fall when domestic demand is reduced. Ideally we move in the direction of the balancing point, as indicated by the solid arrow in zone II. We may say that zones I and II are "simple zones" - or so called "non-dilemma" cases - from the point of view of stabilization policy in the context of a regime of fixed exchange rates.

¹ The chart is a simple pedagogical device to express rather well-known ideas.
However, problems will emerge in zones III and IV: the "dilemma cases" in regimes of fixed exchange rates. In zone III there is a combination of unemployment and a deficit in the balance of payments. To remove unemployment we would in principle have to expand domestic demand, but such an expansion would increase the deficit in the balance of payments. A standard recommendation here is to devalue the currency, which contributes to the removal of the deficit in the balance of payments; thereby we also get the possibility to increase domestic demand (which is partly "automatically" achieved by the devaluation).

Chart 2

Also zone IV, with at the same time inflation and a surplus in the balance of payments, is complicated. The wish to restore domestic balance would require demand-reducing policies within the country. But this would reduce imports (and possibly stimulate exports) and hence increase the surplus in the balance of payments. A standard recommendation to solve this dilemma is to revalue the currency, which would tend to reduce the surplus in the balance of payments and at the same time dampen the inflationary tendencies by way of lower import and export prices (in domestic currency) and reduced incentives to exports. If this is not enough to fight inflation there is the possibility to reduce demand additionally by a contractive economic policy.

All this illustrates the well-known proposition that in a system of fixed exchange rates, the problems in zones I and II are in principle simple to deal with (in the sense of moving in the right direction), while zones III and IV are difficult to handle without changing the exchange rate. It should be noted, however, that when measures are taken in zones I and II it would be a coincidence if we moved directly to the balancing point in the diagram; we may, as indicated by the broken arrows, instead wind up in zones III or IV, whereby the earlier discussed problems connected with these "dilemma" zones will arise. Thus, two measures (such as demand management and exchange rate policy) are in general necessary to achieve both internal and external balance.

It is important to realize the quantitative magnitude of the economic and social problems emerging if the authorities refuse to change the exchange rate in zones III and IV. Let us first
look at a big country, with a low fraction of import and export to GNP, such as the United States. In such a country, we would expect the marginal propensity to import to be rather low, say 0.1. Suppose that in such an economy there is a deficit in the balance of payments of 1 percent of GNP. Obviously, to reduce the deficit in the balance of payments by 1 percent of GNP by demand-reducing policies requires, in this case, a reduction in domestic demand by 10 percent of GNP, resulting in a large loss in output and much unemployment; a very high "price" has to be paid in terms of welfare to achieve equilibrium in the balance of payments in such a country in the context of fixed exchange rates. Considerations towards the "tiny" balance of payments direct the entire economy; "the tail wags the dog". An additional well-known complication is that a restrictive (deflationary) policy of this magnitude might under-cut investment incentives to the extent that even the capacity-growth-rate of the economy may fall significantly, with permanent problems for growth and possibly also for foreign trade - a typical situation for the UK.

In a small country, with a large fraction of foreign trade to GNP, the economic and social costs of demand-reducing policy would be expected to be smaller, as the marginal propensity to import here is usually quite large. For instance, if the propensity is 0.5 - not an unusual figure for a small European economy - it is necessary to reduce aggregate demand with only 2 percent of GNP to improve the balance of payments by 1 percent of GNP.

Even countries with a combination of a surplus on the balance of payments and inflation, i.e. countries in zone IV, will experience considerable welfare losses if they stick to a fixed exchange rate. If they accept a demand-expanding policy, to adjust the balance of payments, they are forced to accept domestic inflation, which also has welfare aspects - by way of rather arbitrary redistribution of income and wealth, by a general deformation of the information content of the price system, and possibly also social and political unrest.
An often suggested possibility to solve the problems in the "dilemma cases" (zones III and IV), without changes in the exchange rate, is an appropriate "policy-mix" between monetary and fiscal policy, as put forward for instance by Robert Mundell. In zone III unemployment is fought by expansionary fiscal policy, whereas the deficit in the balance of payments is cured by a tight monetary policy - and vice versa in zone IV.

However, several well-known weaknesses of this policy might be mentioned: (1) the short-term character of this method of solving the balance-of-payments problem, i.e. by foreign borrowing rather than by adjustment in the current balance, is obvious because of the need to adjust the current balance sooner or later; (2) there may be conflicts between high interest rates and domestic income distribution or growth considerations.

However, from the point of view of the problems analyzed in this lecture, the most interesting weakness of the Mundellian policy is probably (3) that it may create serious inconsistencies between policies in various countries, for instance if several countries simultaneously try to improve their balance of payments by competing interest rate increases. The above point illustrates the usefulness of a coordination of balance-of-payments and exchange rate policies among national states. This conclusion follows from the property of balance-of-payments policies to be approximately a "zero-sum game" among nations.

**Fixed Versus Floating Rates**

Are there conflicts between the requirement of external and internal balance also in systems with floating exchange rates?

The important point I want to stress when comparing exchange rate systems is that it is meaningless to isolate the analysis to only the development of the exchange rate. It is necessary to consider a number of important circumstances that are logically tied to the exchange rate system. Fixed and floating rates are included, each of them, in a "package" of policy
measures, and it is necessary to look at all important ingredients of those packages. I would like to stress seven circumstances that are characteristic for systems with fixed rates (table 7):

Table 7>

(1) It is true that fixed rates imply considerable certainty about the market development of the exchange rate, as the rate is allowed to move only within a small band around the par value; this is presumably by itself an advantage for world trade. Price control in the exchange market eliminates exchange risks connected with market-induced changes in exchange rates (outside the permissible "band"), and this is probably favorable for world trade, in about the same way as a subsidy is on international trade. (It then remains, of course, to explain why international trade, rather than domestic trade, should be subsidized.) On the other hand, as the rate is not fixed for eternity, but only for certain discrete periods of time, a system of "fixed exchange rates" presupposes that the rate from time to time does change by discretionary political decisions. According to available experience, these changes in the rates are much larger than the changes that usually occur in free markets within a few months' time. It is at least conceivable that the risks of such discretionary changes — which might be as high as 10-30 percent — imply considerably severer disturbances both for the national economy and for individual firms than small continuous changes in the exchange rate, and the risks connected with such changes. Anyway, it is quite relevant at least to ask which one of the two risks is a severer problem for firms and more of an obstacle to international trade.

It is also possible that the small exchange risks that are connected with fluctuations in floating rates are easier (cheaper) to hedge against by way of forward markets, than the risks connected with large politically determined discretionary changes in exchange rates in systems with fixed rates.
TABLE 7

DISADVANTAGES OF FIXED RATES

1. Safety of market development - risk regarding policy.

2. Internal demand management and unemployment.

3. Tariffs, restrictions.

4. Regulations of capital movements.


7. Interest rate policy difficult for domestic purposes.
(2) The most widely used adjustment mechanism for the balance of payments during the postwar period has probably been variations in aggregate demand by the authorities: demand-reducing policies and therewith connected unemployment in deficit situations, and demand-increasing policies and therewith connected inflation in surplus situations. This creates the previously discussed serious conflicts between internal and external balance.

(3) Another ingredient in systems of fixed exchange rates is that tariffs and other restrictions on trade from time to time tend to be introduced, to protect the balance of payments; thus variations in the degree of protectionism become an adjustment mechanism for the balance of payments.

(4) A third feature of fixed exchange rate schemes is that capital movements tend to be regulated from time to time in such systems, to solve balance-of-payments problems.

(5) As governments have, to a considerable extent, been inhibited by international agreements from using regulations of trade and capital movements, there has instead emerged a tendency to use selective subsidies for the purpose of influencing the balance of payments. Thus the contemporary neo-mercantilistic tendencies - with subsidies of exports and import-competing sectors - can then partly be seen as a result of the lack of an efficient adjustment mechanism in the balance of payments in systems of fixed exchange rates.

(6) We also know that international price changes are directly transmitted into the domestic price structure in systems with fixed exchange rates - without the sluice provided by floating exchange rates.

(7) It is also well known that interest rate policy for domestic policy purposes is complicated in systems of fixed rates, as interest rate differentials among countries will induce movements of financial capital between countries - movements not disturbed by short-term fluctuations in exchange
rates and therewith connected market risks. By contrast, interest rate policies become quite efficient for domestic purposes in systems with floating rates. For instance, suppose that the authorities in a system with floating rates reduce interest rates to fight unemployment. As the interest rate reduction pushes out financial capital, the balance of payments tends to deteriorate, causing the exchange rate to depreciate. This depreciation, in turn, stimulates the economy, thus accentuating the desired effects on the employment level.

Also systems with floating rates are, however, connected with severe problems. (Table 8.)

(1) A first problem has already been mentioned: the uncertainty about the market development of the exchange rate. However, the charge that speculation would be expected to be destabilizing in systems with floating rates is not well founded. As a rule, speculation would in such a system be expected to be stabilizing, as a price above the expected long-term trend creates incentives to sell the currency, whereas a price below the expected long-term trend would create incentives to buy the currency. By contrast, in systems with fixed rates, speculation would as a rule (maybe always) be expected to be destabilizing, as every speculator will know in which direction a currency will change, which means that every speculator tends to rush in the same direction.

(2) Another often discussed problem with floating rates is that they might in certain situations accentuate inflationary tendencies. If we go back to Chart 2, it is easy to see that floating rates generally simplify stabilization policy in zones III and IV, which were the "dilemma cases" in systems with fixed rates. In zone III we get an automatic depreciation of the exchange rate due to market forces, and in zone IV an automatic revaluation which, as we have seen, is exactly what we need to help the situation. However, now we instead get problems in zones I and II which were "easy" zones in systems with fixed exchange rates. In zone I, characterized by unemployment and a surplus in the balance of payments, floating rates
**TABLE 8**

DISADVANTAGES OF FLOATING RATES

1. Uncertainty about market.


3. Dirty floats.

4. Demands for exchange rates guarantees.
result in a market determined appreciation of the exchange rate, which further tends to increase unemployment, as the export industry is hurt and imports stimulated. This might not be a very serious problem, however, as it is possible in principle to take further expansionary measures to solve the unemployment problem. Hence, the "only" problem is that the contractive effect of the revaluation has to be considered when the size of the dose of expansionary policy is determined.

The problem is more severe in zone II, where we have simultaneously inflation and a deficit in the balance of payments. For in this case freely floating rates, resulting in a depreciation, may easily accentuate the inflation problems, as import prices and prices for export commodities (in domestic currency) will rise. Such cost-push inflationary impulses are difficult to handle: it would be necessary to take some fiscal policy actions (such as reduced indirect taxation) to reduce production costs. Thus the zones which were simple in a system with fixed rates now become more difficult - while the difficult zones in systems with fixed rates become simple zones with floating rates.

The magnitude of the problems connected with floating rates in zone IV should not be exaggerated, however. Speculation in the foreign exchange market would be expected to even out the fluctuations in the rate; it might also be possible to dampen fluctuations in the exchange rate by a deliberate monetary policy.

A more challenging problem in systems with floating rates is that governments might be more inclined in such systems to accept domestic inflation, for the reason that balance-of-payments problems will no longer force governments to pursue anti-inflationary policies. If it cannot be argued that a government is quite as concerned about the value of the exchange rate, in a system with floating rates, as with the balance-of-payments problems and the unemployment level in a system with fixed rates, we would expect a faster rate of inflation in
systems with floating rates for countries where the inflationary impulses tend to come from the domestic rather than from the international economy. This problem is probably the main reason why both central bankers and private bankers in many countries are highly critical towards floating exchange rates: they do not believe in the ability of politicians to control inflation if the balance-of-payments restriction is removed by floating exchange rates. From the point of view of economic welfare, the argument is probably that unemployment tomorrow can be limited by reducing inflation today, as accelerating inflation may sooner or later force politicians to take restrictive policy actions.

(3) A further problem is that it may not be very likely that central banks in various countries, in systems with floating rates, will in fact abstain from intervention in the exchange rate market. With a popular terminology we will get a "dirty float" rather than a "clean float". If so, obvious problems will emerge. First of all, there will be complicated problems of speculation. Firms and households making foreign transactions must now speculate not only about the "pure" market development of the exchange rate but also about the policy of the central bank, day by day. Moreover, there may be situations where several countries simultaneously try to achieve competitive devaluations by dirty floats, i.e. by open market operations in the foreign exchange market. Alternatively we might wind up in a situation where many countries try simultaneously to revalue, to save their economies from world inflation. Thus we could get competitive depreciations or revaluations, respectively, which could have rather unpredictable effects on exchange rates and on the competitive situation among countries. In fact, the experiences of such competitive devaluations during the thirties was probably one of the basic factors behind the construction of the Bretton-Woods-system after the Second World War. Such risks, however, are probably much smaller today.

(4) A fourth complication, finally, with floating rates might be that firms experiencing the market risks connected with
floating rates will demand exchange rate guarantees from the
governments, and that these guarantees will not be constructed
as general insurance systems but rather as selective subsidies
to firms who speculate wrongly. If so, the government might
remove the incentives for firms to make careful forecasts about
exchange rates and we might also get "neo-mercantilistic"
subsidies of a similar type to those emerging in the present
system of fixed exchange rates. It is difficult to judge the
size of the risks of such neo-mercantilistic tendencies,
relative to similar risks in systems with fixed exchange
rates.

Our discussion may be seen as a simple illustration of the
introductory statement that it is necessary, in analyses of
fixed and floating exchange rates, to compare the whole packages
in which the fixed and floating rates, respectively, are only
a part.

Some broad generalizations, based on the previous comparisons
of fixed and floating rates, might be possible about the
character of these packages, and hence about the consequences
of the choice of exchange rate system.

A first generalization would be: the more we dislike unemployment
the more we should be in favor of floating rates, and the more
we are afraid of domestically induced inflation the more we
should be in favor of fixed rates.

A second generalization is: the more we are for national autonomy
in stabilization policy, the more we should be in favor of
floating rates, and the more international coordination of
stabilization policy we want to have the more we should be in
favor of fixed rates.
The Choice Open to Us

We have seen how the internationalization process in systems of fixed exchange rates reduces the national autonomy of stabilization policy both in the choice of targets and in the choice of instruments. For instance, it becomes difficult to resist international price trends; and interest rate policy and exchange rate policy become difficult to pursue independently on a national level.

Moreover, it is hardly any surprise that we have experienced balance-of-payments crises from time to time; in the "disequilibrium system" that is the inevitable outcome of fixed exchange rates, balance-of-payments problems would be expected to be the rule rather than the exception. The challenging question is in fact not why there is disequilibrium but rather how the system of fixed rates has been able to function so reasonably well for about fifteen years after the Second World War, in the sense that world trade has expanded rapidly and that countries have not been forced to pay even higher domestic costs for keeping exchange rates fixed. Moreover, why were the problems of the international monetary system smaller earlier than they seem to have been during recent years?

One basic explanation would seem to be that it was a very special type of disequilibrium that dominated the situation for many years: the largest deficit in the balance of payments happened to occur for the country, the U.S., that served as a reserve currency country, in a situation where the rest of the world wanted to accumulate larger reserves of dollar assets. In this situation, i.e. when there was a disequilibrium position in the stock of asset holdings in the world outside the U.S., what was required was exactly a disequilibrium also in the flows of dollars, i.e. a deficit in the U.S. balance of payments. However, the problem became acute when the rest of the world had achieved something approaching a stock equilibrium position for dollar holdings. This probably occurred in the middle of the sixties. Then international equilibrium would have required the flow of dollars, i.e. the U.S. balance of payments, to go down. When this did not happen,
A crisis situation was bound to occur, with excess supply of dollars as a consequence. This is presumably the basic explanation for the monetary crises: that fixed exchange rates automatically imply disequilibrium, which becomes acute as soon as the rest of the world is not willing to accumulate all the assets supplied by the deficit country.

A number of specific factors have accentuated the problem. First of all, the current balance of payments of the U.S. has deteriorated continuously from the mid 1960s (solid curve in Chart 1). It is reasonable to argue that this rapid deterioration of the U.S. current balance destroyed earlier prevailing expectations about the stability of the dollar in terms of gold and the bulk of other currencies. Many people must have started to expect that the U.S. would sooner or later be forced to adjust its balance of payments by the help of devaluation. And when confidence in a stable dollar was shaken, the crisis was there.

A third factor causing the crisis is the lack of coordination of interest rate policies between Europe and the United States. Much of the short-term flows of capital between Europe and the U.S., as illustrated in Chart 1, has been caused by fluctuations in the interest rate differential between Europe and the United States - highlighting the problems caused by the lack of international coordination of interest rate policy in systems with fixed exchange rates.

A fourth explanation for the acute crisis is the unwillingness of some countries to adjust the par values for their currencies to what is required for international equilibrium (in the balance of payments). The delayed revaluations by Germany and Japan in recent years are probably the most obvious cases in point. A fifth factor, finally, might be the enormous increase in the size of the volume of international financial assets; it is possible that this development has contributed to the increase in the size of the speculative waves which have hit individual countries.
What then are the alternatives to the Bretton-Woods system? There would seem to be four main choices (Table 9).

1. One possibility is to stick to the system of fixed exchange rates, with rather infrequent exchange rate changes. Obviously such a system requires a rather closely coordinated economic policy. More specifically, it would be necessary with fairly similar rates of inflation, requiring analogous monetary and fiscal policies, as well as a coordination of interest rate policies. It would also be necessary to build up common exchange funds; the main purpose would be to make it possible for countries to counteract, on a cooperative basis, exchange rate speculation. A common regional policy would also help to remove pockets of unemployment within the area where exchange rates are fixed.

2. The second alternative is frequent changes in exchange rates. One problem with this policy is, of course, that governments have proved to hesitate, for various reasons, in altering exchange rates - partly because of the political prestige that is connected with the exchange rate in systems of fixed rates. Another problem is that destabilizing speculation would be expected to emerge immediately before every alteration in exchange rates. The smaller the size of the exchange rate alterations, the smaller will these problems about speculation presumably be. In systems of "crawling pegs", with automatic or quasiautomatic discretionary changes in the rates, these problems might be modest.

3. A third solution is, of course, floating rates which, contrary to what seems to be believed by many "practical men", is a quite viable system.

4. A fourth possibility, finally, is to make a retreat in the internationalization process; the internationalization process has made the world economy too integrated for fixed exchange rates to function very well - as long as economic policies are not coordinated among countries. A possible solution to the
WHAT ARE THE ALTERNATIVES?

1. Fixed rates and closely coordinated policy.

2. Frequent changes in exchange rates; special case: "crawling peg".

3. Floating rates.

4. Retreat in the internationalization process.
problem would then be a drastic retreat from the internationalization process by a return to protectionism and stiff regulation of short-term and long-term capital movements. It is possible that most countries are not willing to pay this price.

Which one of these four alternatives is most likely to occur? Personally, I do not believe that countries are willing to coordinate their economic policies enough to make fixed rates among all the developed countries a sustainable system. Secondly, I think a dramatic retreat in the internationalization process is unlikely; it would go too much against the principles and values of leading decision-makers in the Western world; moreover, the economic cost is believed to be too high for many countries.

The most likely outcome then is probably alternatives 2 and 3, or some combination of them.

The (temporary) solution of the monetary crisis in 1973 implied that the world became divided into a number of blocs, with floating rates between each bloc and fixed rates within the blocs. We might say that the world tried to find a system closer than the previous one to "optimum currency areas". An interesting feature of this new development is that three EEC-countries - UK, Ireland and Italy - chose to float by themselves, whereas two non-EEC-countries - Norway and Sweden - joined the EEC exchange system and the therewith connected monetary cooperation. This is interesting because the latter countries based their decision to stay "outside" EEC partly on their unwillingness to engage in monetary cooperation with EEC. In the present situation, we might ask who is "in" and who is "out" of EEC? Is it UK, Ireland and Italy, who float by themselves, that are "inside" or is it the "non-members", Norway and Sweden, which have joined the cooperation concerning exchange rates and monetary issues? Political treaties do not always reveal "economic realities".
Lecture 3

ALLOCATION AND DISTRIBUTION POLICIES

The first lecture dealt with the driving forces behind the internationalization process. The second was devoted to the consequences for stabilization policy. This lecture deals with some implications for allocation and distribution policies.

Problems caused by the internationalization process

What problems would we expect to arise for domestic allocation and distribution policies as a consequence of the internationalization process? First of all, we would expect stiffer international competition, as many firms will have to face a greater number of competitors than before. And this stiffer competition, in turn, would be expected to have a number of important effects. I would suggest seven different hypotheses in this connection: (1) a fall in profit margins; (2) a more rapid rate of change in comparative advantages among countries; (3) a more rapid rate of structural change; (4) increased structural unemployment; (5) increased regional dispersion of unemployment within countries; (6) an increased tendency to mergers between firms; and (7) a tendency to reduced investment incentives.

A careful empirical study of these hypotheses would require systematic statistical testing for a great number of countries. While awaiting such studies to be performed, the present discussion will be confined to some preliminary findings, based on scattered empirical evidence. Maybe the evidence presented should be interpreted as suggestions for further research rather than (even tentative) conclusions.
A serious problem for all such tests is that we would in principle need figures that reflect the tendencies created for the economy by the internationalization process, before changes in policies induced by these tendencies. Factual figures, by contrast, reflect the consequences for the economy after such induced changes in policies.

(1) It would seem that there has in fact been a tendency for profitability and profit margins to fall in several Western countries during the last ten or fifteen years. This is pronounced for the Scandinavian countries—Sweden, Denmark, Norway and Finland—but a similar trend can be found in some other countries as well, such as West Germany and probably also the U.S. It is more doubtful whether there is any such trend in the U.K., France and Italy. (See Charts 3 A–C; profit rates are defined here as gross profits divided by a total equity capital within firms).

(2) There do not seem to be any reliable studies about the rate of change in comparative advantage among countries. How to define a measure of shifts in comparative advantage is even a problem, as practically every sector, even after far-reaching disaggregations, has both imports and exports. One possibility would be to look at the development of the ratio exports/imports \((X/M)\) for various sectors; a rise in the ratio would indicate an increased comparative advantage for a sector, whereas a fall in the ratio would indicate a reduced comparative advantage. The hypothesis about a more rapid rate of change in comparative advantages would then be interpreted as a statement that the ratio \(X/M\) has tended to change more rapidly than earlier for various sectors. Conclusions on this matter have to await comprehensive empirical studies, still to be made.

(3) The hypothesis about a more rapid rate of structural change might be tested by looking either at the development of the composition of output or at the composition of employment. It would seem that the proportions between the sectors, in both respects, have changed quite rapidly during the last ten or fifteen years in many West European countries, but more systematic empirical studies are no doubt necessary before we dare to draw any conclusions about an acceleration in the rate of structural change. A
General trends in profit rates 1950-70

Index, 1961 = 100

Source: National Accounts of OECD Countries.

* Profit rates for Denmark are defined as corporate savings +
corporate grants to households, etc. + interest, rent and divi-
dends to households etc. + income of independent traders, as
percentage of GNP,

for Finland as corporate savings + dividends as percentage of GNP,

for Norway as corporate savings + corporate grants to households,
etc. as percentage of GNP.
CHART 3B

General trends in profit rates 1950-70 *

Index, 1961 = 100

Source: National Accounts of OECD Countries.

* Profit rates for U.S.A. are defined as corporate savings + dividends as percentage of GNP,

for West Germany as corporate savings + income of independent traders + interest, rent and dividends to households, etc. as percentage of GNP,

for United Kingdom as corporate savings + corporate grants to households etc. + interest, rent and dividends to households, etc. as percentage of GNP.
General trends in profit rates 1950-70

Index, 1961 = 100

Source: National Accounts of OECD Countries
* Profit rates are defined as corporate savings + dividends as percentage of GNP.
reason why the shifts in the proportions between sectors have not been even more dramatic, in view of the internationalization process, is probably the previously mentioned tendency for the expansion of trade to be intrasectorial rather than intersectorial.

(4) It is not obvious how a hypothesis about increased structural unemployment should be tested. In principle, we would expect structural unemployment to show up as an increase in both the number of vacancies (V) and the number of unemployed (U) - for a given business cycle situation; we may therefore compare, for instance, the ratio \( \frac{V + U}{L} \) (L being the labor force) for similar business cycle situations.

This ratio has indeed risen during the last ten or fifteen years (Chart 4), suggesting increased structural unemployment, in five of the six countries for which I have found statistics - U.K., Sweden, France, Finland and West Germany (though for the latter country there was a falling trend during the fifties). For Norway no trend can be seen. Thus, this very incomplete study does at least not contradict the hypothesis about rising structural unemployment in recent years.

(5) I have not seen any reliable studies on the development of regional labor market differences, i.e. regional differences in the excess demand (supply) situation in the labor market.

(6) However, there is rather strong empirical support for the hypothesis that the number of mergers has increased (as a result of keener competition). Within EEC the increase in mergers during the last decade has been of the order of 50 percent, within U.K. 100 percent and within Sweden, where profit margins have fallen particularly rapidly, about 150 percent.

(7) Finally, OECD statistics suggest a fall in the growth rate of private investment, also a predictable consequence of falling profit margins.

To the extent that the just presented hypotheses are at least partly true, individual countries are confronted with a number of severe problems for their allocation and industrial policies.
CHART 4

$\frac{V + U}{L}$ for Finland, France, West Germany, Sweden and United Kingdom

$V =$ Jobs vacant, unfilled vacancies
$U =$ Unemployment, registered unemployment (for France unfilled applications)
$L =$ Total labour force

Sources: OECD, Labour Force Statistics and Main Economic Indicators.
Note 1): For Sweden the population from 15 to 74 years is substituted for total labour force.
Moreover, simultaneously with the emergence of these new problems, governments have in many countries heightened their ambitions. For instance, many governments seem to have sharpened their ambitions concerning employment opportunities and relative incomes of various underprivileged subgroups in society. For instance, governments are no longer satisfied with a "generally" high level of employment, but are concerned about the unemployment situation for various subgroups of the population, such as elderly people, young people, handicapped, and other minority groups.

In the same way it would seem that many governments have "disaggregated" their targets concerning the income distribution among subgroups of the population.

Moreover, simultaneously with the increased problems discussed above, and the heightened ambitions regarding policies, it is now more difficult to use certain instruments independently of the outside world. This does not only hold, as earlier pointed out, for interest rate and exchange rate policy, but also for a number of other instruments: indirect taxes, profit taxation - and possibly also progressive income taxation for the increasingly mobile class of highly educated employees and managers. All this means that the national state tends to become a less and less efficient unit for decision-making, at the same time as governments tend to formulate more and more ambitious policy targets and at the same time as a number of new problems arise. This is bound to cause severe problems for the national state.

Problems related to international firms

Some of the most spectacular problems confronting the national state are connected with the previously discussed expansion of international firms. As in the old British Empire, several of the international firms of today may say that in their empire "the sun never sets". As these firms represent a global organizational structure, implying an organization along functional lines, rather than along geographical lines, we tend to a world with two dominating, quite differently built organizations: (1) political units, in the form of national states, cut as "geographical strips
on the world map" (quotation from Svennilson), overlaid by a pattern of (2) economic institutions, international firms. Together these two structures create a complex political and economic network or matrix. It is unavoidable that we get considerable overlapping of claims of powers, and as a consequence inconsistent claims on sovereignty, in this complex political economic matrix. (The situation is further complicated by the existence of purely national firms in each of the countries).

Several "problems" related to this development are well known and hardly need elaboration here. Some simple reminders of a number of "problems" will suffice: (1) Economic decisions by the central offices of international firms, outside the country, can have effects on the host country quite as important as decisions by the national government itself in the country. The problem here is presumably (a) that international firms are often large relative to the host country, and (b) that the top decision-makers are foreigners, living abroad (outside the "reach" in some respects of the host government). (2) There may be attempts by international firms to intervene in the policy formation of governments in host countries (in excess of "normally accepted lobbying"). The most dramatic recent example is probably the activities of the ITT in Chile. (3) We often see ambitions of the government in the home country to exert jurisdiction over the operations of subsidiaries in other countries - for instance concerning tax payments, trade policy and anti-cartel policy - which creates conflicts between governments. The most celebrated example is probably the attempts by the U.S. government, until recently, to require foreign subsidiaries to adhere to U.S. national rules in fields such as anti-trust and trade with communist countries.

Thus, a main problem with international firms is perhaps that they are international only in terms of production and market operations, but not in terms of ownership, citizenship and location of top management. From this point of view, firms will not be "truly international" (or multinational) until they have divested part of the national ties in these respects.
(4) Another problem may be the ability of international firms to avoid monetary and fiscal policy in both the home and host countries, for instance tax policy and credit market regulations. Thus, a main problem is that whereas the "activity domain" of international firms is geographically very mobile, the "jurisdiction domain" of national governments is geographically very immobile. (5) International firms, more than national firms, might contribute to short-term instability in the balance of payments, as indicated by recent speculations in foreign exchange, as well as in the distribution of physical investment among countries. (6) There is also the possibility that trade policy will have different effects in a world of international firms than in a world of national firms. However, neither available theory nor empirical studies seem to indicate exactly what these differences would be. (7) There has also been much speculation that international firms would behave differently in terms of labor relations and general social responsibility than national firms. However, again, theories and empirical studies do not yet give much information about what these differences would be.

(8) Another possible conflict between national governments and international firms is based on the hypothesis that international firms are (mainly) interest in that part of "value added" that is transferable to other countries, whereas the government (and citizens) in the host country is presumably mainly interested in the local "value added", i.e. local wages, profits and taxes. The basis of a conflict, then, is simply that part of profits is a component of national income in some other country than the host country. This conflict concerning the distribution of income is presumably a basic foundation for conflicts both between international firms and governments in host countries and between governments in the host and the home country.

(9) It is obvious that the technology developed by international firms, transferred to LDCs, is not always the "best" one for them, as it has usually been developed for countries with much higher capital/labor proportions than exist in the LDCs. However,
this does not necessarily mean that LDCs would be better off by not getting this "non-optimum" technology. Better suited technology might not be available at all at reasonable costs and within a reasonable time.

(10) To all these "economic factors" should probably be added political-psychological factors, such as a general dislike of foreign ownership, particularly in sectors such as natural resources and infrastructure, i.e. sectors where a large fraction or recorded "profit" is in fact rent, and where external economies, in a wide sense, are significant. It is even possible that all or most complaints about international firms are in fact based on this political-psychological factor.

It is also quite clear that the attitudes in less developed countries towards international firms have much to do with historical experiences of the establishment and operations of foreign firms both in the distant and near past – including experiences of bribery, cheating and 'abnormally high' profits made on the basis of unequal information among sellers and buyers, as well as by open or concealed use of political and military force by foreign firms and governments. A statement of the U.S. Marine General, Smedley D. Butler, from 1931 highlights the point: "I helped make Mexico safe for American oil interest in 1914. I helped make Haiti and Cuba a decent place for the National City Bank boys to collect revenues in. I helped purify Nicaragua for the international banking house of Brown Brothers... I helped make Honduras 'right' for American fruit companies. Looking back on it, I might have given Al Capone a few hints."

As a matter of fact, empirical studies in these fields have often failed to show much systematic difference in the behaviour of national and international firms. Thus, all the ten "problems" just mentioned about international firms are really "asserted problems" rather than factually observed problems. We simply do not know much about the differences in behavior of international and national firms, or about the differences in the possibilities to influence them by national policies.

All these problems, related to the operations of international firms, mean if they exist, that national policy and planning are considerably complicated by the internationalization process of enterprises, even though it is not always clear whether the clash between governments and international enterprises is caused by the fact that (a) the firm is foreign, (b) it is large, (c) it is private, (d) it is Western, or that (e) it represents modern technology.

The picture of the international firms would be extremely one-sided if we did not also at least mention some of their important advantages for host countries: their ability (1) to raise capital and technological knowledge in countries where these are abundant and to transmit them to areas where they are scarce; (2) to locate production according to relative factor proportions (factor prices) such as labor intensive production to areas with low wages; and (3) to make the joint output from capital, technological know-how and entrepreneurial skill, higher by combining them in a package, rather than transferring each component separately. It is, in fact, possible that international firms will be more efficient in achieving what international trade, according to traditional doctrines, should have done but in reality never quite achieved: to even out factor prices all over the world. It is possible that the mobility of entrepreneurship and technology in the world, facilitated by the expansion of international firms, will be more successful than international trade to even out factor prices - and hence to some extent perhaps also per-capita incomes.

The squeeze of the national state

Thus the national state seems to have been squeezed simultaneously from several directions in recent years. Firstly, important economic decisions about production and prices were during the fifties moved away from the national government and "back" to individual firms as the war regulations were removed. Secondly, foreign transactions have been liberalized - both in the case of trade and financial flows. Thirdly, the domestic economy has, partly as a result of this, been more and more "internationalized", with a reduction in the national autonomy of economic policy - both for a number of
targets and a number of instruments. And *fourthly*, there is presently, partly due to this "internationalization", a tendency to "move away" some policy tools from the discretion of national governments to intergovernmental cooperations or even to supernational bodies. Maybe we can also say that there is a contemporary tendency in some countries to request more regional decentralization within countries - from specific regions and ethnic minorities - implying in fact a demand for a regionalization, or federalization, within the national states.

Moreover, small national states might also face another problem to an increasing extent: the rising need for specialists as administrators and advisers for governments and firms may be more and more difficult to satisfy on a national level. In principle, there are probably returns to scale in consulting and advising governments. There is therefore an obvious possibility that small countries cannot supply all types of important specialists needed for a professionally run government policy; this becomes a problem if governments are not able or willing to use foreign specialists as domestic policy advisers.

All these developments have - in interaction with increased *ambitions* of many governments - made several national governments experience a need to develop new instruments - to prevent undesirable domestic developments and to restore some of the autonomy for the national state which threatens to be diluted. It is, no doubt, too much to talk about a "death struggle" of the national state. But we can probably say that a number of *defense mechanisms* of the national states have been released, when a number of problems have proved to be increasingly difficult to handle on the level of the individual national state. These defense mechanisms show up in the form of a number of new policy tools - selective taxes, subsidies, and regulations; maybe they can be justly baptized "neo-mercantilistic policies".

Thus, an interesting aspect of recent developments in national economic policies is that the national states *simultaneously* introduce both a liberalization of foreign trade and increased intervention in their domestic economies. Many interesting problems are created exactly by these divergent trends in domestic and trade policies.
Methods in the new mercantilism

Not only the driving forces behind the new interventions are rather similar among countries. Also the methods, i.e. the instruments used, show considerable similarities. Table 10 provides a schematic classification of some of the methods. (Table 10). See appendix for a more detailed breakdown.

Table 10

(1) Subsidies of production, investment, employment, and research and development usually refer to capital costs rather than labor costs. The motives have often been related to political targets in regional policy or possibly long-term "industrial policy"; sometimes the reasons have been short-term employment considerations in certain sectors or regions. However, regardless of the motives, the policies have often been given a very selective character, with strongly varying subsidy rates among sectors, in fact with a strongly protectionist bias.

Some of the measures have facilitated reallocations of factors of production, for instance policies that concentrate on income compensations and measures that increase mobility of factors of production, or measures that increase the international competitiveness of an expanding sector ("offensive measures"). Other measures have rather "resisted" reallocations - sometimes by simply protecting a declining sector ("defensive measures").

The "offensive measures" are mainly implemented in research-intensive areas often with new technology, such as space, atomic energy, data, electronics and petrochemical industries. The "defensive measures", on the other hand, are usually applied to traditional, contracting sectors, such as agriculture, coal, garment industries etc. As these industries are often labor-intensive, they are often sectors where some LDCs have, or are developing, comparative advantages. Thus, this form of protection is largely hitting industries in a number of LDCs - such as South Korea, Taiwan, Hong Kong, India, Portugal, Latin America, etc. - in particular for agricultural products (such as sugar and edible oils) and textiles. An obvious example is the so-called "Long-term Arrangement Regarding International
<table>
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<th>Method in the new mercantilism</th>
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<td>(1) Subsidies of production,</td>
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<td>investment, employment</td>
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<td>and R and D expenditures</td>
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<td>I  Reallocating activities</td>
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<td>a) income compensations</td>
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<td>(2) Public capital grants and</td>
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<td>(3) Selective import fees and</td>
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<td>export subsidies</td>
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<td>(4) Tying of foreign aid</td>
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<td>environmental protection</td>
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Trade in Cotton Textiles", which was forced upon a number of LDCs in 1963, and has later been renewed.

Regardless of the motives for the subsidies, we would expect them to have considerable effects on the relative competitiveness of sectors in various countries, due to the selective and discriminatory nature of many of these subsidies and regulations.

(2) Public capital grants and credit priorities typically provide credit guarantees and cheap loans to certain sectors exposed to heavy foreign competition, for instance in the form of export credits, non-prepayable government loans or government equity capital without normal requirements of return. Thus, in this case, too, it is in reality a question of subsidization of investment and production.

(3) Selective import fees and export subsidies seem to have been used mainly as part of balance-of-payments policies, rather than as an ingredient of domestic long-term industrial policies or location policies. Thus, it may be reasonable to regard these measures mainly as substitutes for changes in exchange rates, or other types of adjustment mechanisms in the balance of payments, though with protectionist implications because of their selective character.

(4) A fourth type of protectionism that has been used extensively during recent years is tying of foreign aid. At the present time, it would seem that the bulk of foreign aid is tied.

(5) Protectionism seems to have increased also by way of protectionism in government purchases. It has been estimated by Baldwin that "protectionism" implicit in public purchases corresponds to a tariff of 42 percent in the U.S. and of 43 percent in France. In fact, even if the protectionist elements in public purchases would be constant over time, the degree of protectionism in various countries would "automatically" increase simply by the expansion of the public sector as a share of GNP - as protectionism always seems to be more pronounced within the public sector than within the private sector.

(6) It would also seem that new demands and regulations for product standards and environmental protection have in fact been exploited for protectionist purposes. Sectors where such rules have been particularly developed in recent years are food, beverages, tobacco, cotton and textile industries, chemical and pharmaceutical products, electrical and electronic equipment, garments and cars. An often quoted example in the literature is the statement that Volkswagen nowadays (around 1970) is forced to make nine different variants of its cheapest model, because of different laws in various countries, as compared to one model twenty years ago.¹ In the case of non-tariff barriers against LDCs, there seems to be a rather unanimous opinion that the importance of such barriers has increased substantially in recent years, as compared to trade barriers towards other countries.

(7) Maybe we should also include among the neo-mercantilist policies, attempts by national governments to deal with international firms. Several different strategies have been tried by various countries: (1) to reject international firms (the Japanese solution); (2) to create competitive firms within the country (the French solution); (3) to nationalize international firms (the solution tried by some LDCs); (4) to strengthen the national bargaining position vis-à-vis international firms (the strategy of some oil countries); (5) to create intergovernmental rules of conduct and common policies among several countries (a suggestion made by several economists); (6) to create international organizations supplying expert assistance in dealings with international firms, or possibly to incorporate internationally operating firms under international laws and taxation (a proposal made by for instance Edith P. Penrose²).

Problems connected with the new policies

What are the main problems connected with the new types of "neo-mercantilistic" policies?

¹) R. Baldwin, op. cit., p. 145.
²) Edith P. Penrose, Large International Firms in Developing Countries, London 1968, p. 263.
As the policies mainly rely on methods that influence price relations, and these price relations determine the allocation resources in market economies, it is natural to focus the analysis on the effects on relative prices, or more generally on the information and incentive content of the price system.

In certain cases, the selective measures undertaken may of course improve the information and incentive content of the price system, from the point of view of economic efficiency and optimality. Examples are taxes on environmental disturbances, general subsidies on the use of labor in unemployment areas, taxes on employment in "overheated" areas, wage subsidies to elderly and handicapped people who otherwise, at prevailing wage rates, would be unemployed etc.

However, a large part of the new mercantilistic policy cannot easily be defended on these grounds. For instance, the strongly selective character of investment subsidies for location purposes cannot easily be motivated on these grounds. And environmental policies have usually relied on selective subsidization of purification rather than on fees on production with external diseconomies. It may be of interest to illustrate briefly some problems for allocation of resources and international trade of selective subsidies and taxes.

Let us, as an example, look at taxes and subsidies for dealing with environmental problems. The analysis would in principle not be very different if we instead discussed selective subsidies to deal with regional problems or various types of problems of "industrial policy". The issue is illustrated in a textbooklike diagram (Chart 5). Suppose that the (aggregate) private marginal cost curve (aggregate supply curve) is SS, the demand curve DD, and the international price p₁ - the country under consideration assumed to be a price-taker on the international market. Thus, assuming profit-maximizing firms under pure competition, consumption will be q₃, production q₂ and imports m₂. However, let us assume that production of the commodity is connected with negative external effects. If the marginal economic costs for society as a whole (social marginal costs) are as described by the curve S'S',
the optimum production will then be \( q_1 \) and optimum import \( m_1 \). Thus, in the absence of environmental policy, a nonoptimum situation will arise, causing an "excess production cost" to the economy, as indicated by the shaded area in the diagram.

Let us now assume that the country's government wants to deal actively with the external effects; we may assume that the externalities consist of direct effects on other production processes or on the environment. One type of policy would then be to introduce a tax, \( t \), on the production of the commodity, corresponding to the difference between social and private costs. Output would fall to the optimum quantity, \( q_1 \), and import would rise to \( m_1 \).

If instead the government requires, by way of direct regulations, that certain purification devices should be installed, and the government pays the cost for these, the output volume will again be higher than the optimal one. For illustrative purposes, let us assume that the subsidy is high enough to leave the private marginal costs unchanged at \( SS \) in spite of the regulations concerning purification devices; hence the government is assumed to pay all purification costs. Then the production and import volumes would stay at the nonoptimum levels \( q_2 \) and \( m_2 \), respectively, and an excess cost for consuming \( q_2 \) would still prevail, though now in the form of taxes that reduce consumption of other commodities rather than in the form of external effects (such as a deterioration in the quality of the environment).

If other countries do nothing about their external effects, or if they subsidize purification devices, output in the world as a whole will, of course, be nonoptimally large. There may also be some distortions of international trade, if the evaluations of externalities (such as environment) relative to consumption differ among countries, or if the social costs of reducing externalities differ among countries.
An efficient policy, for the world as a whole, would require that all countries apply taxes, or similar devices, to reduce output to points corresponding, in principle, to point A in the diagram. However, if some countries use subsidization of purification as a device (winding up in production points such as A) whereas other countries use taxes (and hence wind up in production points such as B), then international division of labor and international trade will, of course, be distorted as compared to what would be required from the point of view of comparative advantage. Output and net export will be excessive (or net import suboptimal) for countries using subsidies (point B) as compared to countries using taxes or similar devices (point A).

Thus, we get the same type of distortions of the allocation of resources, nationally and internationally, as in the case of high tariffs in some sectors in combination with free trade in other sectors - and different tariff structures in different countries.

All this illustrates, of course, the simple fact that subsidies can always be implemented in such a way that they have identical effects on production as do tariffs. A production subsidy of x percent has the same effect, in principle, on the output volume as a tariff by x percent - in a partial equilibrium model. (The effects on consumption and import will differ of course).

However, in reality, production subsidies are very often tied to investment spending rather than to "current" costs of production. Let us therefore analyze the problem of selective subsidies also on the basis of a diagram where subsidies of capital costs are emphasized. It is assumed in Chart 6 that new investment can be arranged along a falling rate of return, or a marginal efficiency of investment curve. Let us also assume that the curve depicting the relation between the investment volume and the rate of return is originally II, and that the capital cost is r_1. The investment volume, i_1, occurring is assumed to be the desired one (for instance the full employment investment volume). Let us also assume that the rate of return curve falls to I'I', for instance due to
stiffer international competition, resulting in an investment volume \( i_t \). In order to restore the investment volume to the initial level (i.e. to what is required for full employment), \( i_t \), several alternative policies are possible, in principle.

One possibility would be to use a rather general type of policy, by reducing capital costs to \( r_2 \), achieved for instance by a reduction in interest rates or by subsidization of investment expenditures (a "negative investment tax"). Several countries have, however, in recent years chosen a different strategy: selective stimulation of investment expenditures. One reason could be the existence of political targets concerning the allocation of investment expenditures; another reason could be a desire to stimulate investment only in fields with available factors of production (unemployed labor in certain regions or sectors); a third reason could be an unwillingness to allow a general increase in profits, which would easily follow in the case of a general reduction in capital costs; this increase in profits is illustrated by the shaded area in the chart.

On the basis of some of these reasons, several alternative policies might be implemented. One possibility would be to reduce capital costs in a selective way; this would give a discontinuous capital cost curve, as illustrated by the broken (step)-curve in the chart. As a consequence, investments with quite different rates of return (before the subsidy) will be brought about - some investment that would have come about anyway (illustrated by the horizontal segment of the bar denoted \( A \)); some which are among the "marginal" investment that would have been brought about by a general reduction in capital costs (illustrated by the horizontal segment of the bar denoted \( B \)); and some with a very low, possibly even negative, rate of return (illustrated by the horizontal segment of the bar denoted \( C \)).

A rather similar result could be brought about if the authorities, as an alternative, subsidized outputs, or other factors of production than capital, in a selective way; this is illustrated by the discontinuous dotted curve. The horizontal segments of the bars \( A^x \), \( B^x \), and \( C^x \) then denote the investments which will come about due to such subsidies.
Instead of a general increase in profits, there will in both cases be selective increases in profits (due to the selective subsidies of capital costs or "current" production costs), which may be smaller or greater than the general increase in profits in the case of a general reduction in capital costs, depending on the exact design of the policy. It is likely, however, that the authorities would at least try to make the total increase in profit smaller in the case of selective subsidies, as the policy often is motivated exactly by a desire to limit income redistributions in favor of profits.

Theoretically, if the authorities want to stimulate exactly the same kind of investments by selective subsidies as would be stimulated by a general policy, a subsidy of the amount indicated by the triangle abc would be required. However, there are in practice no possibilities for the authorities to identify these investments (i.e. the investment projects in the interval bc). For that reason, we would expect that the selective policy in reality always will subsidize investments at very different branches of the I'I' curve, and hence result in selective increases in profits as illustrated by the "bars" A, B, C, and $A^*$, $B^*$, $C^*$, respectively.

Looking at actual policies in various countries, it is interesting to note that many countries obviously try to promote rather similar industries - such as shipbuilding, electronics, textiles and computers. If these sectors do not happen to have much stronger (positive) external effects than other sectors, the result will of course be a larger than optimum size for the world as a whole (from the point of view of conventional efficiency considerations). However, the effects on the international trade pattern might be very small, with the various countries' policies cancelling out.

Selective subsidies might in fact result in much stronger protectionist effects than those resulting from the tariffs which have now largely been removed in developed countries. From this point of view, it could reasonably be argued that future conferences on international trade should concentrate on selective subsidies and other non-tariff barriers rather than, as nowadays, rather low tariffs. Again, this illustrates of course the potential benefits of more international cooperation in the field of economic policy.
This need might also be illustrated by contemporary policy responses of various countries to falling profit margins. If this fall is a common problem for all (most) countries, depreciations and protectionist policies will certainly not solve the problem (except possibly for countries that push competitive depreciations and protectionism harder than other countries). A cooperative solution, by contrast, could solve the problem—such as intergovernmental agreements to lower capital costs, for instance by way of interest rate reductions or fiscal incentives for investment.

However, suppose that such cooperative solutions are impossible. What then can an individual country do? It is obviously difficult for an individual country to stimulate investment by a reduction of the interest rates, as this could create problems for the balance of payments. However, the country can no doubt reduce capital costs (generally or selectively) by fiscal actions, thereby preventing profits and hence also private investment from falling. If instead several countries try to increase their profit margins by devaluation, we may run into a situation as in the thirties with competitive devaluation resembling that of the 1930s.

Concluding remarks

I have in these lectures tried to analyze and explain the forces behind the internationalization process, as well as its consequences for stabilization, allocation and to some extent also the distribution policies of national governments. We have seen how the internationalization process complicates national policies in several fields—both by creating new problems and by making several traditional instruments less efficient than previously. We have also seen how, in many fields, an efficient solution may be achieved only by way of cooperative measures. We have also seen how the deterioration in the effectiveness of many policy instruments has created a need to develop new tools, that may help countries to reach their national targets, but which may also create new problems both for the country itself and for the international community. Thus, the more and more closely integrated world economy offers better reasons for countries to cooperate, at the same time as it creates new sources of conflict among governments as well as between firms and governments.
Appendix: Examples of direct and indirect subsidies in different OECD countries. Compiled by Gabriel Urwitz.

1. SECTORIAL MEASURES

Defensive:

West Germany: Shipbuilding, interest-rate subsidies; designed to create a possibility for loans amounting to 80 per cent of the contract value of firms. Grants for scrapping of ships. Paper and pulp, direct subsidies and low-interest loans. Coal, transportation subsidies, taxes on other fuels. Oil, loans (maximum 75 per cent) for prospecting activities.

Belgium: Shipbuilding, direct subsidies. Coal, subsidies to the continuation of production. Small industries, interest-rate subsidies and supply of favorable credits.

France: Shipbuilding, direct subsidies (10 per cent of contract value). Support according to the principle of "correction coefficient", designed to compensate for cost increases between the time of contract signing and delivery. Altogether these subsidies might exceed 10 per cent. Textile, parafiscal fee on textiles (0.35 per cent), the revenues of which are used for research and measures for structural change. The tax is imposed on both domestic and imported products. Iron and steel, low-interest loans. Paper and pulp, parafiscal fee (1.6 per cent), the revenues from which are used for direct subsidies. The subsidies consist on average 5.4 per cent of the production costs.

Italy: Textiles, financial and fiscal supporting measures. Paper and pulp, parafiscal fee, the revenues from which are used for research, afforestation and support to press.

England: Shipbuilding, investment subsidies to new ships; immediate depreciation allowance. Textile, grants for scrapping of old machinery. Iron and steel, 5 per cent to domestic customers.
who are not buying imported steel (a loyalty discount). This grant is paid by the government.


The U.S.: Shipbuilding, subsidies to cover high production and construction costs (maximum 55 per cent). Shipping, requirement that at least 50 per cent of freights financed by government should be made on ships under US flag. Oil, depletion allowance (27.5 per cent on gross production value).

Offensive:

West Germany: Aeroplanes and space, subsidies (maximum 90 per cent) government purchases. Data, subsidies (maximum 25-30 per cent); government purchases.

France: Electronics and data, low interest rate credits, which have to be repaid only if the project succeeds.

England: Aeroplanes, space, data and electronics, subsidies (50 per cent), which have to be repaid only if the project succeeds.

2. REGIONAL SUPPORT

West Germany: Investment subsidies (15 per cent) on new establishment of firms or expansion plans; low interest rate loans; tax-free investment subsidies (10 per cent); subsidies and grants for tourist projects; investment deductions for tax purposes in areas with one-sided structure if investments take place in other than the dominant industry in the area.

Belgium: Loans; interest rate subsidies; interest rate free and non-repayable grants; investment allowance in taxation (50 per cent).
England: Wage subsidies in development areas, called REP (regional employment premium). Employers fee (selective employment tax, SET) differentiated among areas. Investment subsidies to capital expenditures in building and equipment (40 per cent) and on new buildings (25 per cent).

Denmark: Grants for investment (maximum 25 per cent); loans (maximum 75 per cent); credit guarantees (maximum 90 per cent); financial help for retraining and reinstruction of labor; special depreciation rules for tax purposes.

Norway: Loans and guarantees; compensation for movements to new locations; grants for training of labor (including a wage subsidy); tax exemption on funds invested within the underdeveloped region; tax deductions (maximum 50 per cent of taxable income) for investments; special depreciation rules.

Finland: Selective interest rate subsidies (the interest rate subsidy being largest the first year and later on falling); tax reductions; free depreciation allowances; investment grants for new establishment of firms (3 per cent).

3. MISCELLANEOUS SELECTIVE SUBSIDIES

(Support of R and D, mergers, general investment subsidy, support to sectors with foreign competition).

West Germany: R and D, special depreciation rules for tax purposes; subsidies (10 per cent). Mergers, tax release.

Belgium: R and D, interest rate free loans; the state takes care of certain R and D costs (atomic energy).

Canada: R and D, immediate depreciations; grants; credits; state shares on certain R and D costs (maximum 50 per cent).
France: \textit{R and D}, selective measures such as direct grants; credits, to be repaid only if project succeeds. \textit{Mergers}, tax release. Tax reverse for export industries. Tax deductions on capital investments either on the direct tax (10 per cent) or indirect (TVA) tax (5 per cent).

Italy: \textit{R and D}, tax release; grants. \textit{Mergers}, tax release. \textit{Investment support}, interest as subsidies on credits of average length.

Japan: \textit{R and D}, subsidies; loans; tax release. Import control, import fees and restrictions on capital import.

The U.S.: \textit{R and D}, grants; loans; tax release. \textit{Investment support}, individual deduction rules for firms; accelerated depreciations; depletion allowance for extractive industries; tax release in local and state taxation; tax-free emissions of bonds emitted by the individual states for firms. Import fees (temporary in 1971).

Most OECD countries have also some form of export credit or export credit guarantee systems, where there are often more or less hidden elements of subsidies.