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*Challenges for the Future*

GOVERNMENT INSTITUTE FOR ECONOMIC RESEARCH



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*Challenges for the Future*

EDITORS

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Antti Romppanen  
Seppo Leppänen

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## **Foreword**

The name "Opening Finland" was picked to convey the significance of changes in Finland's economic environment for Finland's future. In addition to traditional trade in merchandise, other international relations such as those manifested in capital flows, migration and international trade in services have also become more important for Finland.

The experiences of recent years have made forecasters increasingly wary. Economic growth over the long run indeed continues to be based on developments in the economy's factors of production and on the ability of the economy to organize the services needed to satisfy human needs. On the other hand, there have been historical changes in the world's political-economic situation. There is now greater uncertainty associated with forecasting changes in world politics as well as those taking place in Finland's near vicinity. This book examines various economic scenarios until the year 2005.

*Reino Hjerppe*  
*Director General*

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# **The time of uncertainty**

1

In the early 1990s the Finnish economy and its surrounding environment underwent profound changes in a short period of time. Finland is plagued by an exceptionally deep recession both from a historical perspective as well as internationally speaking. In the forecast drawn up by the Economic Planning Centre in 1990 domestic resources were deemed sufficient to foster growth of 2.5 per cent per annum over the long run (TASKU 1990). In the first half of 1993 output was about a fifth below this growth path and unemployment hovering around 18 per cent had not reached its peak.

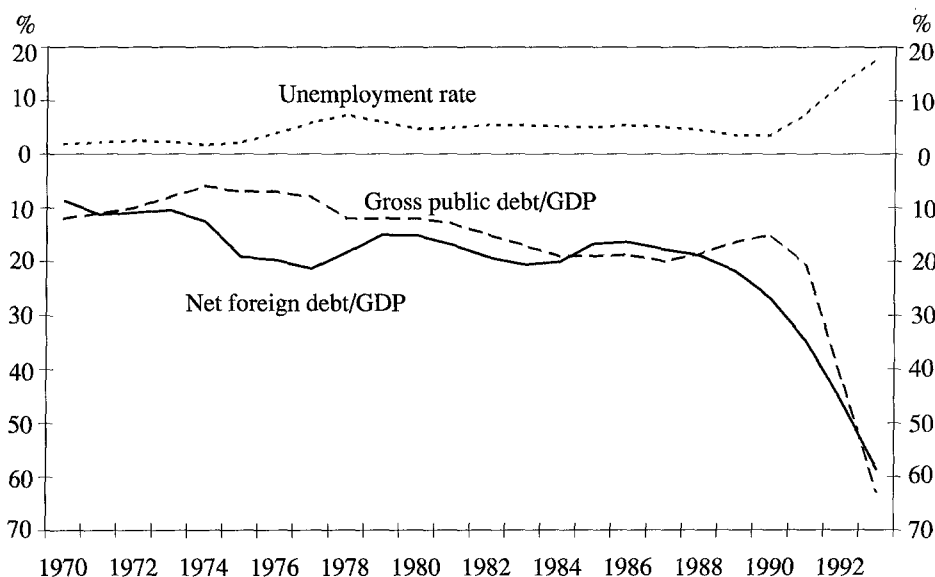
Finland's net foreign debt relative to export revenues is one of the highest of any Western industrialized country and the public debt is rising at a record pace. The triple deficits in the form of unemployment, the indebtedness of the economy and the indebtedness of the public sector are huge (Figure 1.1). The depreciation of the Markka has boosted price competitiveness higher than it has ever been, but the slump prevailing in the main export markets is making it difficult to reap the benefits. The depreciation of the Markka is putting a strain especially on the domestically oriented branches burdened by high foreign currency-denominated debts via the slump in demand and rising costs.

The European economic architecture has been completely revamped during the past three years. In Western Europe most EFTA countries including Finland have applied for membership in the European Union. The phase of the European Economic Area might be short for those EFTA countries that join the EU. The EU has set detailed and rather ambitious goals for the deepening of integration in the Maastricht Treaty of December 1991.

The reforms taking place in the former socialist countries of Europe have a profound impact on Finland owing to the close proximity of Russia. The resurfacing of old conflicts in the Balkans and in the southern parts of the former Soviet Union has created great uncertainty and apprehension since these conflicts were thought to be relegated to history. The optimism about European prospects that prevailed a few years ago has given way to uncertainty and some pessimism about the future.

There have been continuous changes in appraisals of the impacts and causes of environmental problems in recent years. There is considerable uncertainty in the world about factors affecting the environment, their impact upon welfare and about solutions aimed at improving the environment. This affects the decision-making process of private enterprises and households.

Profound changes in the operational setting and difficulties in getting a clear grip on the future have emphasised the importance of strategic analysis in both the operational planning of firms and at the level of the aggregate economy. The need to appraise alternatives and related courses of action is reflected in the nature of long-term forecasts.



*Figure 1.1. Finland's Triple Deficits: the Unemployment Rate as well as the Net Foreign Debt and Public Sector Debt Relative to Gross Domestic Product during 1970-1993, %.*

During recent years several long-term forecasts have appeared. The most recent one is the long-term forecast drawn up by the European Commission (Jacquemin - Wright (ed.), 1993). It was based on groundwork by the 12 EC countries. Another in-depth analysis has been compiled in the Netherlands on the international economy and the alternatives open to the Netherlands (CPB, 1992). The OECD has also issued a study on the long-run outlook for the global economy (OECD, 1992f).

The study at hand follows in the footsteps of previous research traditions in the compilation of long-term economic forecasts developed by the research community in Finland and abroad. As the surrounding environment has become more uncertain forecasts have become more analytic in nature, with emphasis on depiction of potential risk factors and policy alternatives instead of striving to draw up precise forecasts. This study also seeks to highlight the qualitative and structural features more than precise numeric forecasts. In order to ensure the compatibility of the assessment about the various segments of the economy, quantitative forecasts based on model calculations are also presented in the book.

The point of departure for the study is the world economy, since it has been slighted somewhat in Finland owing to the focus on integration matters. European developments nevertheless depend to a large extent on trends in the world economy and Finland is deeply affected by the situation in Russia in addition to the integration process in Western Europe. Thus it is evident that Finland's future development alternatives cannot be appraised in a fruitful manner without first rendering a thorough assessment of the changes going on in the global environment.



**International  
economy  
determines  
Finland's  
course**

I

The dollar-based world economic system crumbled already over 20 years ago as Europe and Japan gradually closed the gap with the United States. These economic powers form the world with three hubs and three main currencies: the dollar, German mark and yen.

Finland's position in the international division of labour is a central question for the economic developments of our country during the next 10-15 years. This will also have a strong bearing upon any solution to one of the greatest dilemmas at the present time, mass unemployment. Finland's position in the international division of labour cannot be discerned only on the basis of looking at the economic architecture of Europe. It is just as significant to look at global economic integration, which has a great bearing upon the position of Finland's closest market, Europe, in the world economy.

The first part of this book addresses questions related to the world economy that define the operational framework of Finland's economy. In this manner it is possible to estimate Finland's adjustments to changes in the economic environment, how Finns meet the challenges, react to threats and benefit from the possibilities presented by the international economy. The global economy defines Finland's growth policy over the long run.

Chapter 2 addresses whether the world economy is shifting toward regional differentiation or co-operation. Chapter 3 examines forecasts for growth in the international economy and specifically the question of what kind of economic development is taking place outside the OECD. Chapter 4 is based on the vision of Europe as a unified entity. Evaluating only Western Europe gives an incomplete picture of Europe's future. Chapter 5 investigates Finland's position in the international division of labour with the aid of four scenarios. It also examines what will guarantee Finland's favourable position in the international division of labour and what kind of integration alternative is realistic in the late 1990s from Finland's standpoint.

## **A world striving towards regional blocs or co-operation?**

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The removal of barriers to trade in merchandise and services as well as freedom of movement of production factors is striving to deepen the international division of labour and increase the welfare of countries participating in this process. The main emphasis in the deepening of the division of labour has sometimes been on the side of multilateral organizations striving toward international co-operation and sometimes on the side of efforts to emphasize regional groups of economies. A key question also from the standpoint of Finland's economic development is whether the world economy in the future will be segregated along regional lines or whether factors will arise that soften the tendency to form blocs and instead encourage broader co-operation.

The arrangements stressing global or regional integration are not necessarily mutually exclusive, but rather complementary. The role of regional groups has been emphasized and internal integration strengthened when the international economy has experienced disturbances: sluggish growth and rising unemployment as well as wide imbalances in foreign trade. Thus multilateral co-operation has come to a stop or new barriers have been placed in its path.

Chapter 2 examines the above questions from the standpoint of five factors:

- What will be the role of GATT (General Agreement on Tariffs and Trade) and what forms of protectionism are prevalent?
- How do the activities of multinational firms tend to promote formation of blocs or multilateral co-operation?
- Is technological development a limiting factor for the formation of blocs or is it a promoting factor?
- How do environmental problems and population movements affect the international economy?
- How do imbalances between and within different areas as well as the development of financial markets affect multilateral trends?

## **2.1 Developments in the International Trade System**

The liberalization of trade in merchandise and services has progressed rather successfully world-wide within the framework of the GATT rounds. Starting with the tariff reduction rounds of the late 1940s up until the 1970s, the average level of customs duties fell from 40 per cent in 1947 to 4-7 per cent after the Tokyo round of GATT talks (Kelly et al., 1988). The swift economic growth then offered favourable conditions for reducing international trade

barriers. The GATT negotiations made the best progress in reducing traditional import restrictions, such as customs and import quotas. The exceptions have been agriculture and services, the barriers of which have remained high.

GATT members are for the most part forbidden to use import quotas. An exception is the so-called protection clause (Article XIX) which permits the use of import quotas in a manner approved under the auspices of GATT supervision. The use of the protection clause has historically been rare. Voluntary ceilings have offered the members an easier way to restrict imports as well as to circumvent the GATT rules and principles.

As the level of duties has fallen and the use of import quotas diminished, the free trade system based on multilateral arrangements has encountered new problems. Of these the most significant have been the increased use of non-tariff barriers since the late 1970s. Industrialized countries in particular have shifted toward use of non-tariff barriers. For instance, in the United States non-tariff barriers for textiles, steel and cars alone are estimated to raise the real level of import duties to 25 percent.

The escalating use of non-tariff barriers is connected with the increased imbalances in trade between countries and groups of countries. As late as in the 1970s the OECD countries agreed in the form of a trade declaration that they would not seek to correct their trade imbalances with trade barriers. The efficiency of the declaration diminished sharply in the 1980s. The increased tensions have been evident especially between the United States and Japan and between the EC and Japan. Tensions between the developing countries and the industrialized countries have likewise grown.

The increased use of non-tariff barriers in the industrialized countries is explained by the increased protectionist pressures caused by the slowdown in growth and increased unemployment. Swift structural changes in international trade, such as the export success of the Far East countries as well as the comparative advantage of shifting certain labour-intensive activities to developing countries, have caused problems in many branches in Western industrialized economies. Countries have wanted to buy time in order to adjust to the new competitive situation so that especially the United States and the EC countries have resorted to protectionist trade policies. For example, of Japan's exports to the United States and the EC, about 2/5 are affected by import ceilings. Import ceilings have often led to postponement of structural adjustment of output and use of protective measures has been continued under pressure from sheltered industries and organized labour.

### **Protectionism in New Clothes**

During the last decade there have been two discernible trends in protectionism. First, increasing numbers of developing countries have adopted a more open development strategy emphasizing foreign trade. Import protections have been dismantled by lowering customs duties and by reducing non-tariff barriers. Despite this the import protections of many developing countries are still high. The shift to a development strategy emphasizing more open

exports has nevertheless meant that the significance of a trade system based on multilateral agreements and free trade has increased. In many industrialized countries the use of non-tariff barriers has increased further and the means designed to limit imports have become more diversified.

Three trends can be differentiated in the use of non-tariff barriers since the 1980s (OECD, 1992g).

1) The use of non-tariff barriers in the industrialized countries has been applied to protect increasing numbers of industrial branches. The international trade restraints were focused in the 1970s primarily upon those areas where the industrialized countries had lost or were losing their competitive advantage, such as the textile and clothing industries or in the steel industry. During recent years imports have been limited also in those industrial branches where growth is robust and growth expectations high, such as semiconductors and electronics. The EU currently limits imports of consumer electronics from third countries. Colour televisions, video tape recorders, microwave ovens, semiconductors and many types of high-tech products are subject to these trade restraints.

2) International trade has shifted toward increasing use of selective import restraints imposed on certain countries, such as voluntary restraint agreements. They are currently the most common non-tariff barriers used in the US and EU.

Also use of dumping charges and import fees has increased. Even though their use in terms of pure numbers has decreased, the value of trade subject to these restraints has increased. The use of these kinds of trade barriers has spurred trade disputes owing to differences in interpretation. Investigations of dumping and import fees have almost all been initiated by the US, EC, Canada or Australia. Japan has hardly at all resorted to these methods of limiting imports.

3) Many of the new international trade barriers are discriminative in nature so that use of these barriers stands in conflict with many of the basic tenets of GATT, such as the principle of most-favoured status. Also the expansion of regional trade systems has meant that different countries are not treated in a fair manner in international trade. The EU has numerous agreements with countries and groups of countries so that about 60 percent of EU imports are subject to these special agreements.

All in all, the information presented above indicates that distortions in international trade have increased during the last ten years. Import restraints have been used to give time to adapt to contracting branches and, on the other hand, to boost the competitiveness of those branches where the growth prospects are high. Even though a country can, in principle, apply tariff and subsidy policies to improve their own position in the economy if the other countries do not seek to retaliate, studies indicate that it is questionable how successful these tactics have been. Restraining imports has often brought considerable welfare losses to the import country both in terms of international

trade and distortionary allocation of resources. The justification presented by proponents of protectionist trade policies, safeguarding of employment, has come at a fairly high cost. Voluntary restraints have likewise been fairly inefficient in protecting jobs since they have led to a deterioration of competitiveness.

### **Regional Economic Systems Expand**

The reciprocity principle delineated in the first article of GATT, according to which all countries are to be treated equally in international trade has been the main pillar of the trade system based on free trade. Article XXIV of GATT has nevertheless permitted regional trade arrangements in the form of, for instance, customs unions or formation of a free trade zone. The economic areas of Western Europe (EU and EFTA) and North America (NAFTA) have meant that there has been a growing role for regional economic arrangements in international trade and in other economic relations. Economic co-operation in Asia is also becoming closer even though it has not led to deep integration between governments, since the driving force behind this trend has been deepening integration between enterprises.

The blocs formed by regional trade organizations are natural entities owing to geographical proximity, cultural ties and old economic relations. In Western Europe and Asia the share of internal trade out of total trade has grown since the early 1970s (Figure 2.1). In contrast, in North America the share of internal trade has fallen during the corresponding time. Internal trade within Western Europe is brisk, which depicts the growing significance of the division of labour between countries in Europe. On the other hand, the United States and Canada are dependent upon trade relations outside of the area. Against this background, it can be presumed that the US and also Japan give greater emphasis to the GATT process than the EU countries.

The strengthening of trade blocs has raised the question of what is the significance of the regional arrangements in the multilateral trade systems and GATT. The regional trade arrangements can ease the liberalization of international trade (Dunkel, 1992), but on the other hand there is a fear that trade system based upon multilateralism and free trade will crumble. If the trade groups turn inward and become increasingly protectionistic with respect to their external trade policy, this poses a serious threat to the development of the world economy. The worst scenarios have brought forth the possibility of some sort of a trade war.

It is very important from the standpoint of world trade to prevent the outbreak of regional and multilateral conflicts. Historically regionalism has not necessarily been juxtaposed against multilateralism, as developments in the 1960s have shown. Experiences from Asia and South America indicate that the commitment to liberalization of multilateral trade can be made easier by liberalization of regional trade and increased co-operation.

The strengthening of regional trade blocs can, on the other hand, make multilateral trade liberalization talks more difficult. Blocs have sought to improve their negotiating power, the use of which poses a danger to

multilateralism especially with respect to small countries remaining outside of blocs. The tensions surrounding the Uruguay Round of GATT were a clear example of these problems (Greenway - Sapir, 1992).

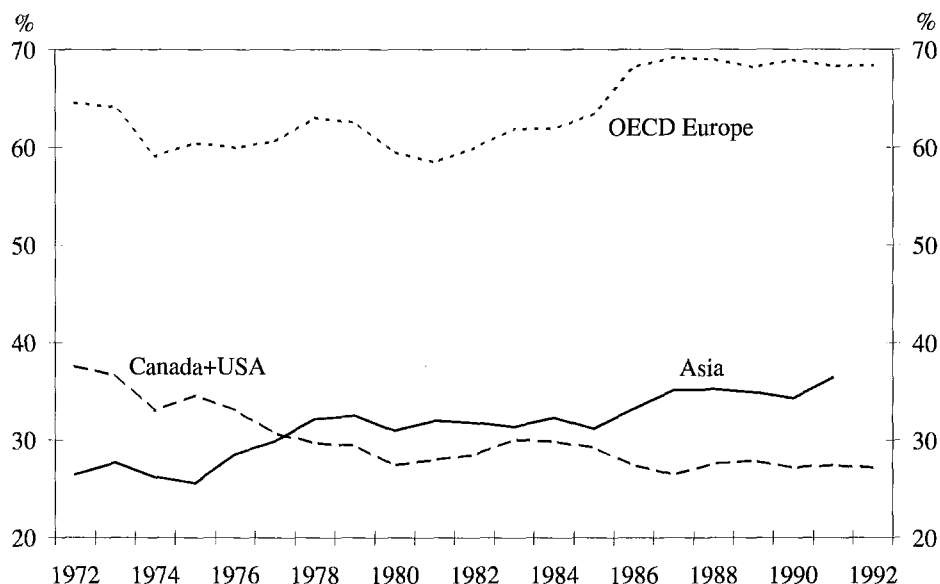


Figure 2.1. Share of Internal Trade out of Total Trade in 1972-1992, %

Sources: China, 1991; IMF, 1992; Lloyd, 1992; OECD/MFT

The credibility of GATT has suffered from the increased prevalence of non-tariff barriers during the last twenty years despite the fact that the number of GATT members has grown after the Tokyo Round by 19 members. The strengthening of GATT would thus be of extreme importance from the standpoint of implementing multilateral principles.

The difficulties of the Uruguay Round originated, among other things, from the fact that there were certain topics in the talks which had never been handled before, such as agriculture and trade in services, as well as investments and intellectual property rights.

The results of the Uruguay Round are important to control the protectionist pressures and safeguard both the credibility and functionality of the GATT system. Strengthened protectionistic developments together with structural changes in international trade, such as the growing significance of services and direct investment, add emphasis to the importance of GATT for the future of world trade.

## 2.2 Spread of Technology Changes International Division of Labour

### Driving Forces behind Economic Change

The main forces behind economic change are technological development and competition. Technological development makes change possible and

competition ensures that it takes place. These forces determine to a large part what is produced, where it is produced, the kinds of inputs are needed and the sales price of the products.

Widespread mass production was first adopted in Europe. The United States were nevertheless already after World War II clearly ahead of the rest of the world in technological development and applications. During 1950-1973 Japan and Western Europe were catching up with the United States in terms of technology. At the same time world trade and especially trade in industrial products grew swiftly. Total world output tripled during 1950-1973 and the foreign trade in industrial products increased ten-fold.

During the last decade technological change has accelerated. Information technology has spawned entirely new products, led to new production processes, spurred fundamental changes in organizing work and had an impact upon nearly all sectors of the economy. The relative prices of the basic technology and microelectronics behind the changes have fallen rapidly.

In addition to the wide-ranging impact that adopting new technology had on the economies, internationalization deepened owing to the expansion of activities of multinational firms and marketing structures rapidly changed along with the heating up of competition, especially from Japan and other East Asian countries.

The dissemination of technological knowhow has contributed to the birth of three global powers centred around North America, Western Europe and Japan. Competition between these powers has caused measures to be taken, especially in Europe, to meet the threat of keener competition. Wide-ranging technological change is not easy to adopt even in a flexible economy, since knowhow, organizational structures and management strategies adjust slowly to change.

The steering of technological developments and adjustment to them has become a difficult problem. Owing to the complexity and uncertainty of many phenomena, testing in the markets is the only realistic approach. Only via trial and error can decision makers learn to use the possibilities of new technology. On the other hand, it is deemed necessary for the public sector to ease or speed this process by disseminating information about the direction in which technology and the economy are likely to be headed.

The comparative advantages of economies, industrial branches and firms, and thus the location of production, change continuously. This process has been eased by various regional trade organizations. Also the liberalization of the financial markets in the 1980s spurred a sharp increase in direct foreign investment. Technology has increased the locational alternatives by improving the opportunities to oversee remote production activities with the assistance of real time communications and information systems as well as by lowering relative transport prices.

Labour-intensive manufacturing activities have shifted increasingly from the rich industrialized countries to low-cost labour areas. This has spurred high exports of manufactured goods from these areas to the US and Europe. An indirect consequence of this is an improvement in the products' price/

quality relationship for the consumers of rich countries. On the other hand, the unemployment of unskilled labour has risen in the OECD countries owing to the competition from low-cost countries and the situation is growing worse all the time.

New techniques are strengthening the situation of multinational firms. Technology is not so much country-specific as firm-specific. Patents, licences and other copyrights have become increasingly significant competitive factors. In line with the principle of flexible manufacturing techniques multinational firms divide their production into many suboperations, each one of which is responsible for the manufacturing of a certain component of final product. The intra-firm trade is estimated to account for about 30 percent of all foreign trade in the United States, Japan and the United Kingdom. New information technology facilitates increasingly rapid reactions to changes in demand. Production and industrial organizations are changing in the direction of fundamentally more flexible production models. The production networks and contacts between firms, subcontractors and customers are expanding.

### **Is the Technological Gap between Countries Narrowing or Widening?**

The technological gap between different countries is affected by four main factors: application of the same technology in the conditions of different countries, the scientific and knowhow-based preconditions to assimilate on new technology, the dissemination of information about the new technology as well as the ability and desire of the possessors of technology to prevent the spread of the technology.

As regards the similarity of production conditions, the preconditions for the spread of new technology have improved. The leader in mass production technology, the US, was still decisively different from Europe and the rest of the world at the beginning of this century (Nelson - Wright, 1992). When high tariff walls isolated the countries from one another, only the US offered sufficiently large markets for really extensive mass production. The US was also in an exceptionally favourable position owing to its abundant domestic natural resources and oil reserves, in particular. The shorter production runs utilized in Europe required thriftier use of raw materials but the low level of wages allowed more extensive use of labour than in the United States. This led to divergence in technology and in the organization of production. The reduction of customs duties and other trade barriers has broadened the entire world into one common market area.

After World War II the US placed great emphasis on development of military technology. The end of the cold war is reducing the role played by military applications. Also the flexible nature of new technology has standardized manufacturing operations. Manufacturing with long production runs no longer generates, nor will it in the future, the same comparative advantages as it did before the new information technology.

After World War II the US was in a better position to adopt new demanding technology. As regards the adoption of such technology, it was of great

significance that the share of those persons in the US who have attended a university was twice as high as in Europe. While American students flocked in the 1800s to round off their studies in European universities, the tide has turned toward the US after World War II.

In Europe during the last few decades the importance of education as well as R&D activities has been realized. In Germany, the United Kingdom and France the share of R&D expenditures in GDP is of the same magnitude as in the US. This has served to help close the technological gap between the US and Europe.

Those former developing countries that have quickly risen to be the major adopters of high technology have stressed the importance of research, product development and especially education. The rapidly growing countries in the Far East, such as Japan, Singapore, South Korea and Taiwan have placed an extraordinary amount of emphasis on education. For example, in South Korea only a fifth of the population was literate in 1953, but the literacy rate had climbed to 99 percent already by 1987. The share of young persons receiving a higher education grew from 3 per cent to 26 per cent. The number of those receiving a higher education in natural sciences rose during the same time by almost a hundred times (Freeman, 1992).

The capabilities to adopt new knowhow based on education have nevertheless deteriorated in many developing countries and former socialist countries. There has not occurred as great an equalization in the ability to adopt new technology as has occurred in the production conditions.

The significance of basic research and science as a productive force has increased. In applications of high technology the lag between making a basic research discovery into a commercial product has shortened. The groundrules of science have for centuries included the idea that the unrestricted dissemination of information should be ensured. Knowledge that has been spawned by basic research is disseminated via rather established channels. From virtually anyplace in the world it is possible to follow the latest advances on the scientific front from the leading scientific journals.

The increasing emphasis on transforming science into commercially profitable applications has, on the other hand, meant growing pressures against the traditional principle that discoveries belong to the public domain. Nowadays many insights are patented that earlier would have been interpreted as belonging to the realm of basic research and freely attainable knowledge. For example, perhaps the most significant advance in the 1980s in the new biotechnology, the polymerase chain reaction, was patented. The firm which obtained the patent even refused at first to grant licences for its use.

The capability of manufacturers to limit the tracing of how their products are developed or manufactured hinges upon the special features of the production, the capability of competitors to adopt the technology as well as the dissemination of information. In addition it depends upon the possibilities to create and monitor legal restrictions such as patents and restraints on exports of technology. For example, an attempt was made to limit the spread

of new information technology in the early 1980s in the US with an export ban citing the importance of keeping a lead in technology during the cold war. On the other hand, the swift progress made by the Far Eastern countries as regards information technology and other areas of industrial production has been based to an extensive degree on unabashed copying (Freemantle, 1986).

### **Does Technological Development Favour Formation of Blocs or Global Co-operation?**

The three leading technological and economic powers in the world, the United States, Western Europe and Japan, will also be the motors behind economic growth over the next 10-20 years. The gap between the US and other developed industrialized countries has evidently been narrowed. On the other hand, there are increasingly important technological fields where the local conditions have a decisive impact on the choice of the best technology.

From the standpoint of future technological developments, the main choice in values can be seen by making a distinction between neo-Fordism and post-Fordism. The former champions the traditional values of an industrialized society by emphasising competition, economic growth based on specialization, a common culture and centralized control over decentralized production units. In post-Fordism, on the other hand, the emphasis is placed upon rational decision making, sustainable growth, multiculturalism and decentralization of decision making into flat organizations (Roobeek, 1992).

The propensity to adopt new technology is not based so much upon the abilities of individual persons but rather of communities of researchers, innovators and adapters. These kinds of communities may be international, but they can also be national or even regional in scope. In the innovators' community there may be certain kinds of culturally based conventions that are difficult for outsiders to adopt.

In many of the long-term forecasts, it is suggested that disputes about information ownership rights will flare into a major area of conflict in the beginning of the next millennium (i.a. Gaudin 1990, Toffler 1991). Large multinational firms, in particular, have a vested interest in monitoring these trends. They may seek subsidies from the government in their base country or form blocs among themselves.

Technological progress does not occur in a vacuum away from social policy decisions. It is affected, for instance, by the amount of public funds allocated for the erection of the infrastructure needed for information technology, communication technology, energy technology and biotech. This kind of basic structure would foster the spread of new kinds of manufacturing methods that save energy and other natural resources, as well as modes of communication and movement (Freeman, 1992).

The gaps between the world's three economic powers have narrowed. Countries riding on the new wave of development are being integrated into the international economy via the spread of technology and adoption of new

applications. These newcomers are generally tied to one of the three hubs of economic power by direct investment or the orientation of trade flows.

In the long run basic technology becomes common property, crossing all boundaries. As examples let it suffice to mention the steam engine or new information technology. The mainstream of technological development forces countries over the long run toward some degree of free trade. The success of countries hinges upon how they are able to transform technological advances into new applications and new products.

Technological competition may over a 5-10 year period lead to a certain degree of protectionism manifested in the regulation of technological applications. In the long run, however, strong innovators have always been able to break through the boundaries of blocs. Examples of technological protectionism are the common programmes of the EU, export restraints on military technology and data processing technology, etc. The EU, US and Japan are also in footraces to establish their own systems and standards. Examples include mobile phones, new generations of computers and applications related to television technology.

### **2.3 Bloc Boundaries Hinder Activities of Multinational Firms**

An important question in the future is to what extent firms operate across bloc boundaries. Large multinational companies do not respect national borders, but rather they operate globally. Since the network of a multinational firm does not correspond to the regional systems formed by governments, the traditional regulatory power of governments is weakening at the national level.

The number of multinational firms operating globally has risen sharply along with trends in information technology and direct investment. Most multinational firms have subsidiaries in all the leading economic blocs. In this way firms get inside the customs walls and obtain access to lucrative markets.

A significant trend in the operations of multinational firms has been the internal decentralization of production activities made possible by technological advances. At the same time in industrialized countries the share of intermediate products - i.e., products needed in the manufacturing of consumer or capital goods - within total imports of industrial goods has become increasingly important. This share is about 50 per cent in the United Kingdom, the United States and Germany, 60 per cent in France and 70 per cent in Japan. The share of intermediate products imported from abroad relative to that procured at home has continuously risen in all these countries (OECD, 1992i). Multinational firms have a significant impact upon the trade between economic blocs by importing intermediate products also over customs borders.

Trade in intermediate goods is a telltale sign of the close interdependence of firms, since a continuous flow of intermediate goods is needed to keep production running. This dependence is especially large when the intermediate products can be used only by the manufacturer for whom it was custom-

made. This is often the case, particularly with high-tech intermediate products. The world trade in industrial intermediate products can be divided into two distinct groups:

- intermediate products requiring large inputs of R&D, such as computer components, instruments, communications devices, aeroplane parts, special chemicals and pharmaceuticals, where the knowhow and wages of the labour force are high.
- mass produced products, such as metals, petroleum products, car parts, and textile products, where the availability of cheap labour is of decisive importance.

The large industrialized economies differ from one another with respect to the product groups in which the share of foreign intermediate products is especially high. France and the United States are relatively dependent upon imports of instruments, computer products and communications devices. The United Kingdom, Germany and Japan are dependent upon the influx of computer components as well as foreign components for aeroplanes. In Japan the share of imported components used in making computers is indeed only a fifth, but the corresponding share in Germany is over half.

Due to foreign production, the estimation of countries' success in trade is increasingly difficult to appraise. Traditional competitive measures, such as export market shares and the balance of trade do not necessarily depict the real competitiveness of a country. For example, the foreign sales of US subsidiaries in the late 1980s was four times greater than US exports. The foreign sales of Japanese subsidiaries was 2.5 times higher than exports and in Germany 1.5 times higher (UN, 1992c).

The internationalization of manufacturing operations has changed the structure of international trade, so that already a fourth of world trade consists of intra-firm trade over national boundaries (UN, 1992c). The growth in intra-firm trade is weakening the rationale for using the traditional means of conducting trade policy, such as changes in the exchange rate or tariffs. The effectiveness of using national economic policy in order to boost exports or curb imports has declined since multinational firms can neutralize political changes by decentralizing production. Also the possibilities of tax policy decrease since international firms can, at least to a certain extent, adjust the profits within the group so that the overall tax burden is minimized. Policies related to competition, environmental protection and welfare are no longer dependent upon purely domestic factors.

Multinational companies can play an important role as disseminators of technology with respect to countries still at the starting line of development. In order for the catch-up process to get started, the recipient must have sufficient level of education and knowhow. A high national saving rate, social and economic stability as well as an export-oriented development strategy support a rapid rise in the level of technology. Otherwise the benefit to the host country from the operations of multinational firms can be modest and temporary.

The growing role and activities of multinational firms can prevent the birth of a tightly entrenched economic area or prevent the deepening of internal integration. First, firms can wield their economic power over the government so as to forestall the onset of a trade war, at least to the extent that the long-term strategic positions of firms are not weakened appreciably. Second, the intra-firm trade spawned by the decentralization of activities has disarmed the efficiency of economic blocs' policy measures. Policy inefficiency leads to greater multilateralism in international trade. Third, the internal transfers of technology by multinational firms serves to eliminate the developmental differences.

The list of factors affecting multinational production are commonly broken down into firm-specific factors, country-specific locational factors and factors which create barriers to merchandise trade. One aspect multinational firms have in common is that the firm-specific advantages relative to other firms operating in the same branch enable them to grow outside national boundaries. Country-specific factors such as trade barriers, the size of the market and differences in production costs nevertheless affect the orientation of production.

## **2.4 Environmental Problems Require International Solutions**

### **Are We Always Starting Environmental Protection Too Late?**

The global nature of environmental problems as well as the links between the international economy and environmental protection have been known for a long time. The greenhouse effect and carbon dioxide emissions were mentioned already in the 1960s as potential future environmental problems (Ayres - Kneese, 1969).

In Western industrialized countries the first widespread environmental policy measures took place in the late 1960s and early 1970s, when the average income level of the OECD countries was about USD 15,000 per capita. The income level in the developing countries is now much lower. According to this measuring stick the developing countries do not have the resources for initiating extensive environmental protection measures if the countries are responsible for covering all costs themselves. At the present moment industrialized countries use 1-2 percent of their GDP for environmental protection.

There are nevertheless several reasons to assume that starting effective environmental protection in the developing countries does not necessarily require the same income level as in the industrialized countries. The environmental problems of the developing countries are, despite the low level of output, more serious than the environmental problems of the industrialized countries were at a corresponding level of development. Industrialization and raising the standard of living are impossible in many countries without environmental protection measures. Second, in many fields environmental technology is an integral part of general production

technology so that it is inseparably linked to other investment activities. These investments often improve the quality of the environment automatically. Third, the developing countries can learn from the mistakes of industrialized countries. It is true of almost all environmental problems that prevention is considerably cheaper than cleaning up the damage.

The sluggish growth in the world economy in combination with serious environmental and development problems in many areas can nevertheless exacerbate the situation further. In some areas the resources necessary for spawning development are too vast relative to their own potential for saving. The required investment costs needed for getting development off to a start are linked to high environmental costs. There are areas like this already now in Africa and in the former Soviet Union and new problem areas are being born in China, India and the Amazon. These environment issues can have a decisive impact on whether the development in these areas can get off to a favourable start.

Knowledge of the effects of many environmental problems is very incomplete. This holds especially with respect to climatic changes. How will the greenhouse gases that mankind has unleashed and is still producing affect the global climate? The uncertainty regarding the changes in the climate does not result merely from the lack of observations, or from the deficiencies of models used to simulate climatic changes. Climatic changes are such a phenomenon that reliable scientific knowledge may not be available when it would still be possible to forestall the changes in the first place (Dean - Hoeller, 1992; Kanninen, 1992).

### **Challenges of Environmental Policies In the New Millennium**

The goals of international environmental policy can be divided into three groups on the basis of regional coverage:

- a) global solution of environmental problems
- b) continental solution of environmental problems
- c) regional solution of problems.

The first group includes the protection of the ozone and the greenhouse gas problem. The second group includes, for example, the European agreement for thwarting acid rain by reductions in carbon dioxide emissions as well as the corresponding agreement between the United States and Canada. The last group comprises, for instance, various agreements to protect rivers in Europe and the Baltic Sea. The scope of solutions to international environmental problems can include all countries, certain continents as well as countries of a geographical area or the agreement can be bilateral.

Another aspect of international environmental policy is its impact on the international economy. The aim has been that national or international environmental policies would not constitute a barrier to free trade. On the other hand, in the future there may be an attempt in the negotiations on free trade to get an agreement including the basic groundrules, according to which it would be possible to set limits on environmental grounds to prevent

so-called environmental dumping. There are already agreements bordering on this problem area such as the ban on whale hunting, the unilateral actions taken by the United States on the tuna fish net problem as well as the ban on the sale of elephant tusks, which in principle are against the free-trade stipulations of GATT (OECD, 1991c; Finansdepartementet, 1992).

Also in the EC the dividing line between free trade and environmental protection has been tested. Denmark set restrictions on imports of beer and soft drinks since it wanted as perfect a bottle return system as possible. At first it was deemed as a measure to prevent trade, but later the EC bent to Denmark's demands.

International trade may constitute a hindrance to efficient environment protections measures if no agreement is worked out within the GATT framework allowing for trade restraints to be imposed on products that harm the environment. Efficient trade guidelines should take into consideration the disparity of nature conditions in different countries and allow also actions necessary to alleviate country-specific environmental problems.

The difference in nature conditions and the level of economic development also means differences in environmental norms. For the time being, a solution to global environmental problems has been prevented by the competitiveness angle. Unilateral solutions are avoided since it is feared that competitiveness will suffer compared with less stringent measures. Free capital mobility may mean that production will shift to those countries where it is not burdened by environmental norms.

The burden caused by the solution of global environmental problems is not distributed evenly between various parties because of the differences in costs, the environment or incomes. Thus there is a need in international environmental policy for transfer payments between countries or regions in order to foster politically acceptable solutions.

At the regional level there have nevertheless been instances where several countries have committed themselves to taking approximately the same steps and thus incurring a similar cost burden. Examples of this type of agreement include the European restraints on nitrogen oxide and sulphur dioxide emissions. Complying with this agreement has been promoted by reciprocal deposits. On the other hand, certain countries like the United Kingdom do not abide by the agreement precisely for the reason that they are "net exporters" of the long-distance deposits.

One limiting factor regarding international agreements is governmental sovereignty. The governments do not agree to abide by the agreements since force cannot be used in their enforcement. An agreement should be self-supporting so that it is in the self-interest of each government to comply with it. One method is to create incentives to reduce the level of emissions both at the country and firm level or impose sanctions on non-compliers or those compliers who are lax in following the agreement.

The investment needed to address the environmental problems is estimated to be huge, especially in the developing countries and East European countries. These countries have no possibilities to handle their environmental

problems during this decade on their own. Sizeable capital transfers to these countries would be needed from the industrialized countries. Owing to the nature of these problems, the risks are high and in the short run the returns are low so that it is difficult to find the private capital needed for the nature infrastructure. The financing of this will require considerable increases in environmental assistance programmes or creation of an emissions payment system.

The gap between an ordinary economic policy based on monetary aggregates and unemployment, on the one hand, and a dynamic policy to face the global environmental challenges will widen in the future. The sluggish growth in the world economy has reduced the interest of ordinary citizens and politicians in the environment. This may increase the need for environmental investments in the future.

### **International Problems Concerning Finland**

International environmental problems that will have a direct impact upon Finland in the near future or over the long run include:

- the deteriorated situation in the Baltic Sea: eutrophic and toxic conditions caused by water pollution
- acid deposits from neighbouring regions and own emissions: changes in forest, soil and waterways
- depletion of the ozone and increase in ultraviolet radiation
- climatic changes: greater prevalence of extreme climate conditions
- depletion of the fish population in the sea
- consequences of a serious nuclear accident.

Part of these problems are regional, such as the problems of the Baltic, and part are global, such as the change in the climate. What is important to recognize as regards all these problems is that Finland's own actions are insufficient to sustain the quality of the environment here. This dilemma is caused by the culmination of several factors over time and the combined impact of various factors in the same direction.

Most of the environmental problems depicted above threaten Finland's economic welfare since they affect the raw material base of the forest industry. All across Finland acid deposits exceed the level estimated to be critical. In the worst areas the prevailing levels are about 60 percent above the critical load. The risk of dying forests will grow during the next few decades. The depletion of the ozone in the upper atmosphere means a higher level of ultraviolet radiation on the planet's surface, which studies show will damage the vegetation of the forests. The rising ozone levels in the lower atmosphere will also serve to damage vegetation. The change in the atmosphere will cause excess stress to the forests, which will in turn lead to greater prevalence of disease. The warmer climate will promote the spread of pests and an increase in average wind speeds. Rapid warming will cause a loss in the amount of standing timber since the natural adjustment rate of the forests will not be fast enough.

The environmental problems will also affect the Finnish economy indirectly via international financial markets. The state of the environment and environmental protection will cause the following pressures for the functioning of the international financial system:

- developing countries will require an environmental fund and direct transfer payments
- the number of environmental refugees may grow, which will create uncertainty
- the improvement of the situation in Eastern Europe and the former Soviet Union will require huge investments
- if the greenhouse effect is allowed to continue unheeded, adjusting to it will necessitate great infrastructure investments
- adjustment to new sources of energy will require sizeable investments.

The links between Finland's environment and the economy as well as the world's environment and economy can be summarized as follows:

	Environmental Impact	Economic Impact of Taking Action	Indirect Economic Effects
Baltic Sea	Fish population, recreation	Cost of cleaning of waterways, several billion FIM	Investment subsidies to other Baltic countries, need several billion FIM
Acid deposits: sulphur dioxide and nitrogen oxides	Quality of soil, damage to standing timber stock, damage to vegetation, acidification of waterways	Cost of sulphur and nitrogen programmes, several billion FIM, also in Finland's proximity	Investment subsidies to Russia and Baltic countries, change in raw timber markets
Climatic change	Damage to vegetation, catastrophic climatic extremes, some impacts positive in short run	Costs of reducing use of fossil fuels high, costs of developing new forms of energy	Rapid ageing of capital stock and need for new infrastructure will lead to great investment needs and high interest rates, migration

*Table 2.1. Links between the Environment and the Economy*

The indirect impact of other countries' environmental protection programmes via the world economy can prove over the long run to be substantial. The price of many products and raw materials, especially energy will rise owing to the environmental protection measures and tighter environmental protection norms. Relative price changes may weaken the prospects for Finland's energy-intensive industries if the growth in the demand for the products of these branches slackens.

Environmental protection offers, on the other hand, significant opportunities in many industries. Environmental technology is one of the fastest growing sectors in the economy. Increased investment in environmental protection and the shift toward cleaner production technology mean a considerable impetus to growth in the economies and firms that can offer the advanced technology of these fields.

## **2.5 Disequilibria in the Global Economy**

The easing of the problems in the former socialist countries and developing countries would require widespread direct investment and assistance directed toward these countries. It is therefore worthwhile to take a global look at the balance between saving and investment. Which areas have the potential for significant saving activity? Will there be a balance between saving and investment?

### **Saving Surpluses Unlikely to Come from the OECD Countries**

The OECD countries generate most of the world's gross domestic product. It has indeed been assumed that the necessary financing for the support given to the developing countries and for the reconstruction of Eastern Europe will come mainly from the OECD countries. Support for Eastern Europe would primarily be the responsibility of Western Europe. The point of departure for assistance is nevertheless not very advantageous. In 1992, for instance, the current account deficits of the seven largest OECD countries totalled almost 35 billion USD and those for the entire OECD area were almost 42 billion USD. In 1993 the external balance of the OECD area improved. Germany, previously the greatest saver in Western Europe, has started to run a deficit due to the sizeable adjustment costs of German reunification. Only Japan has been running a high surplus.

The developments in the 1990s are shaped by the imbalances between the main economic powers, which have grown worse during the last five years. The trade deficits of the EC countries with respect to the United States, Japan and other Asian countries have widened in the last few years. The trade deficit of the US in relation to Japan and the rest of Asia has grown since the latter half of the 1970s. The US was running a widening trade deficit with the EC countries in the early 1980s but by the middle of the decade it had turned into a surplus. Japan's trade balance was slightly in surplus up until 1980. Thereafter Japan's trade balance surplus has widened appreciably with respect to the US, EC and other Asian countries.

The bilateral exchange rates of the world's main currencies have fluctuated widely. The exchange rate of the dollar against the German mark and Japanese yen in 1992 was only half what it was in the mid-1980s. Despite the weakness of the dollar, the US has been unable to eliminate its trade balance deficit. Only in 1986-1990 when the dollar declined sharply did the trade balance with the EC countries show a surplus. In contrast the trade deficit

with Japan shrank only slightly. The traditional exchange-rate correction mechanism seems to work in the trade of the US and EU countries, but Japan's dynamic economy can continue to run a surplus in the trade balance despite the strengthening of the yen.

The deficits in the trade balances and also the current accounts, especially in the EU countries and the US limit the leeway of these economies to ease the difficult unemployment problem. During the early 1990s there have likewise been few possibilities to alleviate employment by expansionary policies of cutting taxes or boosting public expenditures. In the EC countries and the US the public sector deficit and unemployment have grown simultaneously from the late 1980s. Rising unemployment has, on the other hand, meant a decline in the tax revenues and growing public expenditures. The room for active use of expansionary fiscal measures will be rather limited in near future except for Japan.

The anticipated shrinking of Japan's current account surplus means that the current account of the overall OECD area may run a deficit also in the future. It seems that the rich countries cannot totally finance their own investment, but rather will have to tap the world's saving for assistance. The surplus saving will perhaps be born in Asia's newly industrialized countries.

Over the long run the saving and investment rates of the OECD countries have declined. Public saving has previously been substantial in many countries. During the 1980s, however, many of the public sectors in the OECD countries were continuously running deficits.

The high real interest rates prevailing in the world economy, especially in Europe, during the early 1990s reflected how households valued present consumption to future consumption. This was reflected in both the low saving rate of households and sizeable public sector deficits. High interest rates thus reflect the *ex ante* insufficiency of saving. Furthermore, the collapse in asset values in various countries has kept interest rates high.

The amount of saving reacts to real interest rates. It can be assumed that higher interest rates increase saving. This effect is nevertheless likely to be small. A considerable hike in interest rates would be needed in order for there to be a significant increase in saving. In that case the equilibrium will perhaps occur mainly as a result of the reduction in investment. Real interest rates will remain high during the 1990s, which will keep investment and growth in output low. The new equilibrium will be achieved at a lower level of investment.

### **Freed Capital Mobility Will Spur Convergence of Capital Returns**

The change in information techniques has had a profound impact upon the functioning of the financial markets during the last twenty years both on the international and national level. This has made possible the liberalization of financial markets, which has forced central banks and governments to lift restrictions on capital movements. Firms engaged in foreign trade and banks have been the moving forces behind the lifting of restrictions on capital movements.

Before the changes in technology the operations in the international financial markets were mainly concerned with invoice payments, direct investment in different countries as well as transfer payments related to long-term credits. These activities have been supplemented by the rapidly growing field of short-term financial transactions. The ratio of financial reserves to imports has increased manifold since the early 1970s. The liberalization of capital movements has created a direct link between capital movements, interest rates and exchange rates.

The liberalization of financial markets has had a profound impact on the world economy. "Good" or "bad" economic performance is quickly punished or rewarded. If a country's labour or goods markets contribute to higher inflation than prevails in the competitor countries, capital will flow out of the country, so that the punishment comes rather quickly either via high interest rates under a fixed exchange rate regime or a depreciating exchange rate and/or high interest rates under floating exchange rates. As a result of the high interest rates the rate of growth will decelerate and unemployment climb. The reward for discipline is manifested in lower interest rates and a better employment situation. The market mechanism nevertheless works according to the overshooting principle, i.e. the punishment is intermittently more severe than the economic fundamentals would warrant. Capital movements react sensitively to differentials in yields on capital between countries.

On the other hand, the yields on capital will tend to converge under free mobility of capital. Under conditions of free trade and freedom of capital mobility, where labour is mobile to a lesser degree, the prices of goods and real wages will tend over the long run to converge globally. If rigidities in the labour market and wage formation slow the adjustment process, the imbalance will be unleashed in some other way, such as high unemployment. The liberalization of the financial markets has brought harmonization pressures to bear against both global and national activities and led to decisive changes in the groundrules. The changes in the goods and labour markets spurred by the transformation of the financial markets are still poorly understood in different countries, and this pertains also to Finland. It will take time before the behaviour of the government and the labour market will be changed in accordance with the alterations in the environment.

Since goods and factor markets display rigidities in all countries, liberalization has simultaneously brought instability to the international and national economies. This may reflect upon the ability of the international financial system to function. Wide swings in the values of the collateral backing loans and credit losses may spawn continuous bank crises and financial difficulties for those countries whose country risk is deemed high. The central task of economic policy will be the fostering of stability and credibility in order to calm market operations.

Since goods and capital will be increasingly mobile in the future, exploiting the expected benefits from belonging to economic blocs will be hindered. At the same time capital mobility will prevent the formation of blocs. The

world-wide liberalization of capital movements will be expanded in the future to still more currencies and economies, which will tighten competition concerning the location of production. The international financial system will continue to integrate the economies further with one another.

## 2.6 From Regional Integration to Multilateral Co-operation

To summarize the trends of the 1990s, it can be noted that the main economic blocs may become more inward-oriented as they seek to solve their current problems. Similar pressures may become apparent as in Western Europe and perhaps in North America the political focus will be upon making progress in the integration processes already under way. Technological competition can also bolster regional co-operation.

It is nevertheless likely that global factors will receive increasingly greater weight in international economic relations (Table 2.2). The GATT negotiations reached a solution that will likely keep the GATT process alive. Environmental problems are daunting and require global solutions. The international financial system will integrate the economies more closely with one another. The significance of multinational firms will grow steadily and reduce the efficiency of national or regional economic policy. Nor can the spread of technology be restrained with various kinds of barriers, but rather technology will be disseminated around the world. Freedom of capital movements will lead also to harmonization of activities. In the competition the most efficient adapters will be the winners.

For	Against
EU/US/Japan	GATT Uruguay Round brought to a close
- Trade deficits	⇒ Multilateral system strengthens
⇒ Protectionism	
Rising unemployment	Further globalization of capital movements
⇒ Closing of borders	
Political orientation geared toward regional integration issues	Environmental problems require also global solutions
Technological competition	Multinational firms operate in all blocs
Neighbouring regions want to join blocs	Serious crises cannot be restricted geographically

Table 2.2. *Will the World Economy Divide into Blocs?*

- Regional integration will be bolstered in the 1990s by current problems and "old momentum"
- Global factors will gain increasingly more weight and come to the forefront in the beginning of the next millennium.

The world economy would require co-ordination and leadership in economic policy during both the medium and long term. This is required by growing globalization of economic activity, fostering of regional economic unions, difficulties in the open and multilateral trade system, a weakening of economic policy efficiency at the national level, widening the international scope of national policy, higher tensions between regions and global environmental and population challenges.

The international economy will be based on the leadership of the three main centres of economic power, the US, EU and Japan, during the next 10-15 years, even though this kind of a system is unstable (Michalski, 1992). A bilateral agreement in the triad might force the third power to adopt a more protectionist stance. Furthermore, the countries outside of this triad, especially the former socialist countries and developing countries, may feel that they are subject to discrimination and seclusion. On the other hand, there is perhaps no alternative to the triad for the next 10-15 years. The system can be balanced if it functions in accordance with clear international rules and agreements. For this reason, the bringing of the GATT Uruguay Round to a fruitful conclusion was of pivotal importance from the standpoint of the functioning of the world economy.

## **International economic growth prospects**

3

### **3.1 Three-Way Global Power Struggle Continues .....30**

Are Any New Global Powerhouses Emerging?

East Asia: Growth Centre of World Economy

Will China's Growth Continue to be Swift?

Islamic World Expanding?

Africa's Difficulties Continue

Will Latin America Recover?

### **3.2 World Economic Growth Outlook .....38**

### **3.1 Three-Way Global Power Struggle Continues**

To three centres of world economic power, the US, EU and Japan, are linked to a greater or lesser degree countries that are geared to the markets of these leading countries and that function as a site for direct investment and provide labour resources for companies based in the US, EU countries and Japan. The regions surrounding these hubs are very divergent in nature and in the closeness of the ties. European integration aims at close political and economic co-operation. In North America the prime issue is the liberalization of trade. In East Asia the role of the state is less pronounced and integration is taking place largely in the form of direct investment and joint ventures by firms.

There are countries such as Russia, China and India that are large in terms of population and that tow an independent line with respect to the power centres of the wealthy nations. In the future the political and economic significance of these countries will expand. With respect to technical progress these countries are nevertheless dependent upon the technology of the wealthy nations.

#### **Are Any New Global Powerhouses Emerging?**

From the perspective of world economy, an important issue is whether the present triad will continue to dominate the world economy or will new countries or regions spark any appreciable shift in the balance of power. The prerequisites for would-be powers include a high standard of education and continuous investment in the labour knowhow, a high work moral, policies geared toward promotion of exports, social and political stability, applied R&D activities, a high level of saving, an efficient food supply, and long-range strategic approach in economic activities (e.g. Emmerij, 1992; Jägerhorn, 1989).

The above-mentioned conditions are demanding. It thus seems unlikely that new countries will arise to upset the balance between the three hubs of power. On the other hand, rising stars may strengthen one or more of these centres of power. Perhaps the most important reason why there will be no new power centres in the next 15 year horizon is the dependence on knowhow and technology required for success. The attainment of this stage of development will last a long time. The potential powerhouses in terms of

population, such as India, have such low income levels that it will not be easy to generate the necessary amount of domestic saving. The direct investment from other countries is perhaps not likely to be sufficient for a sustainable impetus to close the knowhow gap.

One country that could have a considerable impact upon the global economy is Brazil, the economic rise of which would mainly serve to strengthen the significance of the NAFTA region on the American continent. Brazil does not fulfil the above-mentioned criteria for success very well either. The main barriers are the educational standards, social instability and a low level of saving. On the other hand, Indonesia with its population of 180 million could bolster the position of South-East Asia as an economic power. In Europe Russia is in a similar situation. Nevertheless, none of these countries will be able to make the transition into becoming a fourth global power within the next 10-15 years.

In some instances it has been mentioned that the formation of a unified Islamic zone would change the internal division of labour in the global economy. These countries possess large reserves of oil and other raw materials, but this does not necessarily guarantee the onset of progress. In these countries shortcomings in knowhow and economic dynamics may prevent the same kind of progress that has taken place in the East Asian countries. Islamic countries are nevertheless in a very key position because of their geographical location, wealth of raw materials and possible religious identity. The same region may be a destabilizing factor if disputes between the major oil producers and the industrialized countries arise.

China constitutes a potential emerging power because of its sheer population and recent economic growth that could change the picture of a world dominated by three hubs of power. Certain areas in China have industrialized and modernized swiftly. Wide regional discrepancies may nevertheless hinder economic development in the future.

### **East Asia: Growth Centre of World Economy**

The rise of the United States into an important economic player in the twentieth century and into a superpower at the latest after World War I made the Atlantic into one of the most important oceans from the standpoint of the world economy. The growth of Japan and other countries in the East Asia along with the growth in North America has strengthened the Pacific Ocean region. North American trade with Asian countries has been greater in value terms than that with Europe since the early 1980s. Political and economic ties between the countries in the Pacific area have grown tighter as a counterweight to integrating Europe. The tightening of co-operation in this region is a more intricate matter than European integration since the area of the Pacific Ocean is much larger and considerably more heterogeneous than Europe.

The growth in trade between the Far Eastern countries has been swift especially in the late 1980s. Trade flows between Japan, the NIE region, ASEAN countries and China have doubled or tripled during 1986-1991, after having grown in the early 1980s by only a few dozen per cent.

Export Country	Period	Import Country				Total
		Japan	NIE area <sup>1</sup>	ASEAN countries <sup>2</sup>	China	
Japan	1980/86	-	67	-8	94	42
	1986/91	-	112	211	-13	111
NIE area <sup>1</sup>	1980/86	89	95	18	503	101
	1986/91	136	270	284	258	220
ASEAN countries <sup>2</sup>	1980/86	-29	23	-6	81	-13
	1986/91	88	196	146	158	130
China	1980/86	30	138	42	-	78
	1986/91	82	228	69	-	162
Total	1980/86	2	74	0	166	33
	1986/91	104	168	189	108	149

<sup>1</sup> Excl. Singapore

<sup>2</sup> Incl. Singapore

*Table 3.1. Growth in Internal Trade of East Asia during 1980 - 1986 and 1986-1991, %*

Sources: China, 1991; IMF, 1992; Moriguchi, 1992; OECD/MFT.

The East Asian countries belong predominantly to the Japan-centred sphere of power. Many of these countries also have close ties to the American economic region in the context of the so-called Pacific Rim. East Asia has assumed a significant role in the world economy. The economic growth in the original NIE region - Taiwan, South Korea, Hong Kong and Singapore - averaged 8 per cent per annum in the 1980s, i.e. one of the fastest in the world. The so-called ASEAN four, i.e. Thailand, Malaysia, Indonesia and the Philippines, grew faster in the late 1980s than did the traditional NIE area. The growth of countries starting from a low level of development is ordinarily faster than in richer countries. China, India and Pakistan have set their sights on spurring a clear advancement of the economies.

The engine behind growth in the NIE area has been active participation in international trade. The point of departure has been a strategy designed to foster exports, which in connection with import restrictions has led to replacement of imports with domestic output. Exports directed toward the US, in particular, have been significant. Exports to Western countries by the NIE countries may run into difficulties, since the United States stripped them of their most favoured nation status in 1989.

The threat of a contraction of the export markets has encouraged the "old" NIE countries to invest heavily in the neighbouring regions such as the four ASEAN countries. Hong Kong and Singapore have also invested in the provinces of Guangdong and Fujia in southern China. The growth expectations in these "new" NIE countries are high and they continue to enjoy most favoured nation status in trade with the United States.

The rise of the original NIE area and the ASEAN countries, the growth orientation of China, India and Pakistan as well as the growing emphasis of Japan on this area has spawned a new powerful market area. It will be more independent from the United States and Europe in the future since an

increasing portion of the trade will be conducted within the region. Internal trade between the Asian countries rose clearly within the total foreign trade of the region in the late 1980s. The countries in the East Asia are the first developing countries whose dependence upon Western countries has decreased. The internal trade of the region is still rather modest, however, compared to that, for instance, in Europe. Thus continued growth in this region will require freedom in world trade.

Japan, the NIE countries as well as the Asean countries benefited the most from the trade deficit that the United States ran with the Pacific Rim countries in the 1980s. India, Pakistan and China have the potential to succede this decade. Even though the United States will have to follow a very disciplined economic policy in the 1990s owing to the country's large twin deficits, the economic policy of President Clinton can give a new impetus to growth in the Pacific Rim area. The trade surpluses that the South-East Asian countries are running with the United States will nevertheless have to be reined in.

Japan, the NIE countries and the ASEAN four are seeking to spur private consumption. The internal demand of these countries could possibly offset some of the declining export demand of the United States. This would be of crucial importance for growth in China, Pakistan and India. Japan in particular will shift toward being a more consumption-oriented society, so that the trade surpluses will shrink. The same may occur in some of the NIE countries considering the prevailing social dissatisfaction.

### **Will China's Growth Continue to be Swift?**

The exceptionally swift growth in China during the 1980s was based on the reforms implemented in the 1970s. China's economic success during the last fifteen years has been one of the best in the world. The volume of economic growth grew by almost 9 per cent annually. If China sustains a growth differential of over 5 per cent compared to the Western countries, it will become the largest economy in the world in a few decades. Forecasts on the Chinese economy nevertheless vary widely from one another. They vary from very optimistic growth estimates (The Economist, 1992) to more cautious projections of the World Bank and the OECD (Jones et al. 1992).

The main question is how long can China's economic growth remain as fast as it has been during the previous 15 years. What are the main opportunities and threats?

Swift economic growth in the eastern and southern coastal regions of China where the most far-reaching economic reforms have been carried have spurred increasing imbalances between the provinces in China. Poverty threatens to be concentrated to an increasing degree in isolated regions in the north and south-west which are lacking in natural resources. The widening gaps are increasing the tensions between the regions. Also social unrest and demonstrations against the restrictions on migration from poorer areas are possible. Freedom of movement could, however, lead to chaos as the large cities are not capable of taking on all the migrants. A major problem may be the insufficient emphasis on basic structures and services in the

development programme and the consequent backwardness prevalent in these areas.

One factor spawning instability is also the gap between the nationalized sector and the private sector. Already now there are signs that brain drain from the state-owned enterprises to private firms is hindering the development of state-owned enterprises. Migration is prompted by widening income gaps and most of all the better income expectations in the private sector.

If China is able to sustain rapid growth during one generation, as the newly industrialized Asian economies were recently able to do, this would have profound consequences for the world economy and trade. According to a scenario drawn up by the OECD (Jones et al. 1992) China, Taiwan and Hong Kong will account for 20 per cent of world trade by 2030. The corresponding share in 1990 was 4 per cent. The exports of this region will surpass that of Japan already at the end of the 1990s (APEC, 1992).

A significant risk related to the economic development of China is environmental problems, most of all carbon dioxide emissions. China's emissions in the early 1990s constituted 10 per cent of total world carbon dioxide emissions, but the emissions are estimated to rise to 30 per cent of global emissions by 2050. Environmental problems at the present moment also include polluted waterways and unrestrained use of energy (e.g. the great dam on the Yangtse river) as well as devastation of the soil. China cannot sustain the same kind of growth in the future. China must direct a greater amount of resources toward environmental protection. This may entail, for instance, rapidly expanding the use of nuclear power and putting a check on the growth of automobiles by developing mass transportation.

### **Islamic World Expanding?**

After the break-up of the Soviet Union, Central Asia is turning into a new region of Islamic states, which may be of significance in the international economy and politics in the future. Turkey, Iran, Pakistan, Afghanistan as well as six CIS countries, Kazakhstan, Tajikistan, Turkmenistan, Azerbaijan, Uzbekistan and Kyrgyzstan, constitute a rather united geographical area. The area is situated in a pivotal location between the east and west, next to the Arab world. Over 300 million people live in these countries. The level of income is still low, but the raw material base is very strong.

The GDP per capita in this Islamic region in 1991 ranged from USD 200 in Afghanistan to about USD 2500 in Turkey and Kazakhstan. For example, in 1989 some 30-50 per cent of the residents in the CIS countries of Central Asia were living below the poverty level (Bassani, 1993). During recent years the output in the CIS countries has declined swiftly, inflation accelerated and unemployment climbed. The most pressing problem is nevertheless the lack of food. Except for Kazakhstan, these countries import over three quarters of their foodstuffs.

These Islamic countries possess vast reserves of minerals and metals upon which they can base their economies. Iran has oil and Kazakhstan is the CIS region's largest producer of copper ore. Kazakhstan also has significant

deposits of gold, manganese and other metals. Uzbekistan and Turkmenistan accounted for about half of the gold production in the former Soviet Union. These countries also possess rich deposits of lead and zinc. Kyrgyzstan was the Soviet Union's largest producer of antimony and mercury (Dorian-Borisovich, 1992).

Kazakhstan and Turkmenistan are, after Russia, the greatest oil producers in the CIS. Owing to the drop in oil exports from Russia, the Islamic states are shifting their oil imports from Russia to other countries. The countries have begun oil talks with some of the Middle East countries, especially Iran. Their relations are expected to grow stronger, especially if the relations between the CIS countries deteriorate.

Clear goals have been unveiled for closer co-operation between the economies of the region. Iran, Turkey and Pakistan have been active in forming ties with the CIS countries. Iran has offered its Persian Gulf harbours as export routes for the oil of Kazakhstan and Uzbekistan. A possible export route for the oil of Turkmenistan and Azerbaijan is Turkey.

Nationalistic aspirations have awoken and internal conflicts broken out between different peoples in the CIS states of Central Asia. Unrest is also caused by the fact that the Russian minority has not shared power sufficiently with the Islamic population. No government can sustain a balance under such circumstances.

The Islamification of the CIS countries in Central Asia comes in two forms: radicalism is strongest in Tajikistan, which is seeking to form an Islamic state. The other countries are controlled by more moderate political movements. Kazakhstan has opted for a Turkish-styled policy oriented toward the west. Fundamentalism is nevertheless growing more prevalent in the poorer parts of Central Asia.

	Popu- lation mill. 1991	Popu- lation growth %/annum 1980-91	GDP, mill. US\$ 1991	GDP growth, %/annum 1980-91	GDP/ capita, US\$ 1991	Life expec- tancy, years	Fertil- ity, %	Liter- acy rate, %
Turkey	57,2	2,3	103 888	5,4	1 820	67	3,4	19
Iran	57,7	3,6	127 366	2,5	2 320	63	6,2	46
Pakistan	115,6	3,1	46 725	6,5	400	56	5,7	65
Afganistan	16,1	0,0	3 100	..	200	42	..	71
Kazakhstan	16,9	1,2	41 691	2,1	2 470	69	2,7	*
Tajikistan	5,4	2,9	5 669	2,9	1 050	69	4,9	*
Turkmenistan	3,7	2,5	6 387	3,2	1 700	66	3,9	*
Azerbaijan	7,2	1,5	12 065	1,9	1 670	71	2,6	*
Uzbekistan	20,9	2,6	28 255	3,4	1 350	69	3,9	*
Kyrgyzstan	4,4	1,9	6 900	4,1	1 550	69	3,6	*
Total	305	2,8	382 046	3,8	1 253	61	4,9	..

*Table 3.2 Central Asian Islamic Region*

Sources: Bassani, 1993; Mining 1992; World Bank, 1992 a.

It is nevertheless likely that the region will not form a significant united economic bloc. The interests of the strongest countries, Iran, Pakistan and Turkey, are not necessarily even in the same direction and their relations with western countries are very different. The CIS countries have a large Russian minority that Russia wishes to safeguard. It is also noteworthy that this region is only a part of the belt extending from Northern Africa to Indonesia, which has at least until now proven to be quite heterogeneous. If the entire belt developed into a united political and economic power, this would have a significant effect on the world economy.

### **Africa's Difficulties Continue**

The decline in the prices of basic commodities and the consequent drop in income levels as well as political unrest are some of the main reasons for the present economic dilemma in Africa (Figure 3.1). Basic commodities still account for 85-90 per cent of the export revenues of this continent. The prices of basic commodities on world markets sets the tone for economic developments in Africa.

Another factor exacerbating the economic stagnation in Africa is a lack of foreign investment. Even though the necessary reforms have partly been carried out, there are several African countries where the political and economic situation is too unstable and chaotic to spawn sufficient confidence for foreign investment.

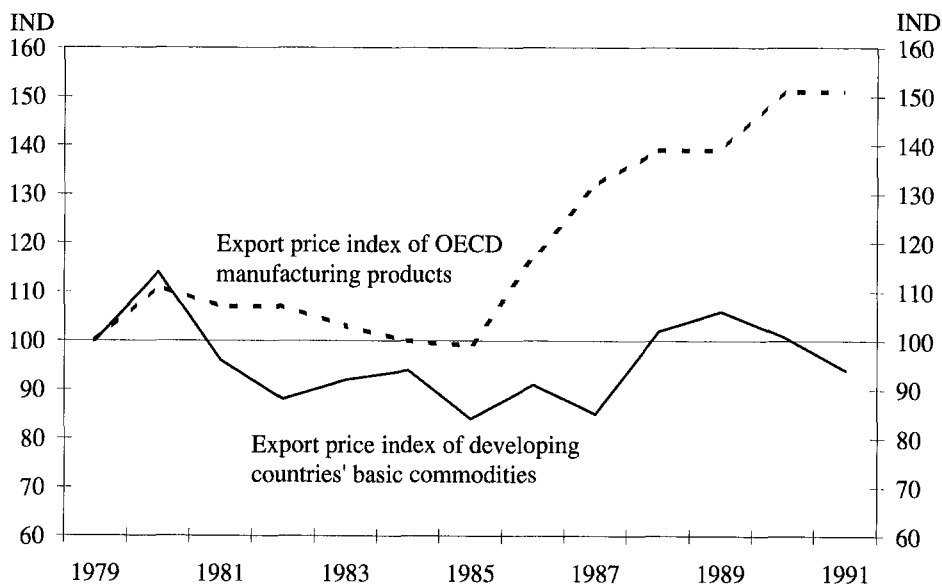


Figure 3.1. *Export Price Indices of Developing Countries' Basic Commodities and OECD Manufacturing Products, Ind (1979) = 100.*

Sources: OECD/EO; UN, 1993.

In countries dependent upon basic commodities the rest of the enterprise sector is very weak. In order to alleviate their problems in a lasting manner, the African countries should emphasize the basic economic structures considerably more than before. Upgrading of literacy as well as the basic infrastructure of the society would first create the prerequisites for generating a sufficient supply of food and thereafter enable diversification of the economy's production structure. Raising the efficiency of administration, reducing the direct interference of the public sector in production activities as well as weeding out corruption are important preconditions for progress.

The possibilities of countries dependent upon basic commodities to differentiate their production structure are poor. The relinquishment of the progressive tariff system whereby the processed products of developing countries are subject to higher tariffs might encourage foreign firms to shift some of their manufacturing activities to developing countries. Under the present system the tariffs of the industrialized countries climb very high, in practice obstructing imports and hindering the realization of the international division of labour.

From the standpoint of Europe the bleak outlook for Africa means that the pressures for migration from there to Europe will remain high. Much of the migration will happen illegally as the European countries tighten their immigrant and refugee policies.

### **Will Latin America Recover?**

The countries in Latin America were on the edge of an economic collapse in the late 1980s. The favourable economic performance came to an end in the late 1970s and early 1980s as the countries were driven into a severe debt crisis. The situation began to improve in the late 1980s and the recent developments in some of these countries can even be labelled an economic miracle. The outlook for this decade as appraised by the World Bank is positive.

The improvement in the prospects for the economies of the Latin American countries has been promoted by the commitment of these countries to following the stringent economic policies recommended by the World Bank. For instance, the foreign debt of the three largest countries in the area - Brazil, Mexico and Argentina - has fallen from a level of some 70 per cent of GDP ten years ago to the current 35 per cent. The fall in Mexico's foreign debt relative to GDP has been the steepest, from 76 per cent in 1982 to the current 31 per cent. Brazil and Argentina have also worked out arrangements to restructure their debt (Financial Times, 1992; IBD, 1991). Renewed confidence in the economic development of the Latin American countries has also fostered a significant increase in foreign investment.

Almost all of the Latin American countries have a democratically elected government. The large gaps in income between different population groups have not, however, narrowed. Many of the actions called for by the World Bank, such as privatization of state-owned firms and the consequent rise in unemployment as well as cuts in social benefits have been directed toward the poorer segment of the population.

The pressures to improve the standard of living of the vast part of the population has gradually started to put a strain on the democratically elected governments of these countries. Brazil, Venezuela and Peru have all shown signs of political unrest. Future developments in Latin America depend much upon how well the wealth brought by economic growth can also be redistributed to the poorer segments of the population.

The economic reforms in Latin America have made the countries dependent upon foreign capital. Most of the governments in the region have based their economic policy upon free markets. Progress hinges upon how the expansion of co-operation such as that incorporated in the NAFTA agreement is viewed by the main trading partner of Latin America, the US.

### **3.2 World Economic Growth Outlook**

The outlook for the world economy is very uncertain, which is reflected also in the numerous scenarios drawn up by the international organizations and research institutions. In the optimistic forecasts the world economy is seen to be on the verge of a new long-term period of prosperity (e.g. Reati, 1991). The technological innovations that have occurred in the recent decades are deemed to lead to widespread breakthroughs not only in data processing and transmission technology but also biotechnology, material technology and energy technology. The rapid diffusion of these applications would facilitate the strengthening of the situation in market economies not only in formerly planned economies but also in developing economies and industrialized countries where the public sector is loosening its grip over the economy. Economic growth can be accelerated with the help of technical innovation without pushing the tolerance of the environment to the limit.

The more pessimistic forecasts call into question the ability of the economies to exploit the possibilities spawned by rapid technical advances. Even the countries with flexible commodities and input markets cannot adopt and benefit sufficiently from the opportunities offered by new technology. In Western countries greater use of labour-saving technical advances is spurring difficulties with unemployment, which are exacerbated by the competition rapidly spreading to new areas from low cost countries. The competition for the market shares in the industrialized countries adds tension to trade relations, which may lead to open trade wars. The possibilities and willingness of the industrialized countries to support the developing countries and former socialist countries in the catch-up process is curbed by both the depth of their domestic problems as well as doubts about misdirected use of the support. Slow growth in the world economy is linked to a slowdown in the expansion of world trade and a widening of income gaps, which perpetuates migration pressures and political uncertainty. Poverty in the developing countries and slow growth in the industrialized countries hinder the swift adoption of new technology and lead to escalation of environmental problems.

Figure 3.2 depicts trends in total world output and international trade since 1965 with forecasts up to the year 2015 based on the Scanning the Future report's scenarios of balanced growth and a global crisis. As is apparent from the graphs, the crisis scenario would mean only an intermittent slowdown in the growth of the global economy. These scenarios give an indication of the possible trends in the international economy that can be used when considering the prospects for the Finnish economy in part II.

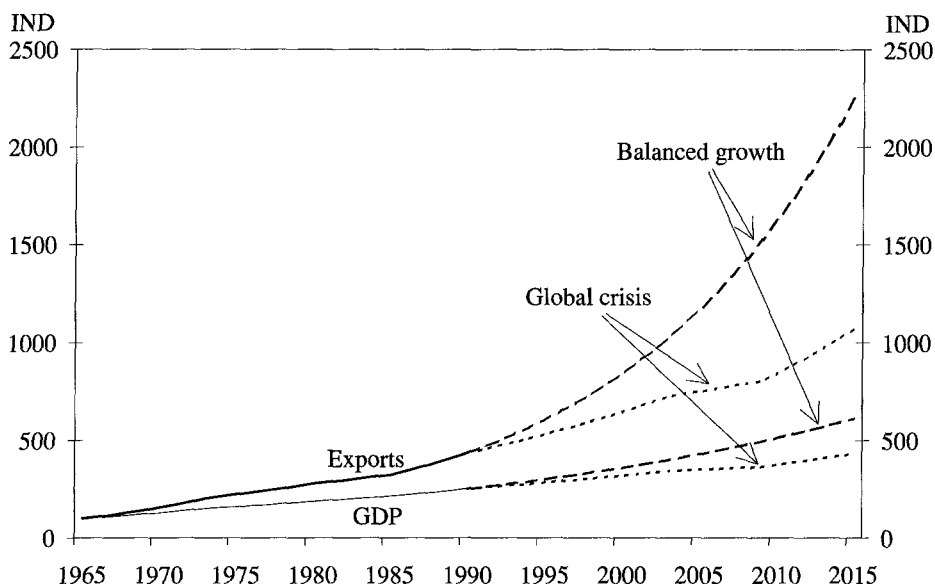


Figure 3.2. World Economy (GDP) and World Trade (Exports) during 1965-2015, Ind (1965) = 100.

Sources: CPB, 1992; ECE, 1988; GATT, 1992.

Actual developments may not hit between even such wide confines as envisioned here or it may contain elements of both scenarios. A common feature of global forecasts is that the economic growth in Japan and the other East Asian countries continues to be relatively swift, especially if the progress made in the reform policies carried out in China does not come to a premature end owing to internal imbalances. The strength of these countries is seen as flexibility to adjust to changes in the world economy and willingness to swiftly adopt technological advances. On the other hand, the acceleration of progress is deemed to be possible in Eastern Europe and Africa only under conditions of relatively rapid world growth. Growth in both areas will require support from foreign capital and liberalization of export markets.

From Finland's standpoint it is important that many of the scenarios for the world economy see the prospects for European developments as rather bleak. One of the reasons for this is the need to rein in the public sector

deficits and high unemployment which have prevailed for a long time. This together with the rigidities in the factor and product markets may mean sluggish growth for a long time. The extensive common market achieved via the deepening of integration is regarded as a necessity so that Europe can meet the technological challenge presented by Japan and the United States. This is not, however, sufficient. Fortress Europe faces strong migration pressures both from Eastern Europe as well as Africa. Constraining these pressures would require the opening of markets to products coming from these low-cost countries. The benefits from deeper integration could best be reaped under conditions of an open world economy.

## **Europe is a whole**

4

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Finland's economic development is closely linked to Europe, which is the target for over three-fourths of our exports. It is of key importance to map out Europe's alternatives in any investigation of Finland's potential lines of development. The end of the political and economic division of Europe means, on the one hand, that Western European developments can no longer be examined without also considering the situation in the former socialist countries. The success of economic reforms in these countries hinges upon their economic relations with the EC. The expansion of trade between these Eastern European countries is no solution to their economic problems. The countries need Western Europe's vast markets for their products and sufficient direct foreign investment as well as technical and economic assistance since domestic saving will not suffice to finance their huge investment needs.

From the standpoint of Western Europe, it is important that an uncontrollable mass exodus from the east to the west does not take place. Under conditions of high unemployment this kind of migration would easily lead to social conflict. The opening of western markets to the east would thus be of great importance. Considering the wide differences in production costs and incomes as well as the trade deficits prevailing in Western Europe and the United States, western countries will be cautious in opening their markets and in extending economic assistance.

#### **4.1 European Integration Alternatives**

European integration developments until the year 2005 can be depicted via four basic scenarios, where the alternatives can be analysed according to the nature of integration and regional coverage. First, will integration deepen according to the goals set out at the summit meetings at Maastricht in December 1991 and in Edinburgh in December 1992? The realization of these goals would bring a common market area, with a common currency and central bank. The second dimension considered is the breadth of regional integration. In this way we obtain four main scenarios:

1. Integration will both deepen and broaden: The EU will include several of the current EFTA countries and EMU will be in effect either across the entire region or at least in the core countries. The greater EU will have at least free trade agreements with the small transitional economies, i.e. the eastern Central European countries and possibly with some of the CIS countries.
2. Integration will deepen but not broaden: The current EU countries and Austria or most of them will form a common currency area to which the EFTA

countries are linked via the European Economic Area (EEA) agreement. The eastern European countries are connected to the EU and EEA within the present types of arrangements in the form of free trade agreements.

3. Integration will not deepen but it will broaden: Most of the EFTA countries will belong to the EU. As regards the deepening of integration, the situation will be much as it is today, except that a core of countries may form a common currency area around Germany. The EU will have free trade agreements with the transitional economies.

4. Integration will not deepen nor will it broaden: In this scenario it is assumed that European developments are marked by disintegration. This scenario is perhaps sparked by geographical proximity, disparity in levels of development and a tendency to form loose alliances based on historical ties where national decision making is emphasized. For example, Germany, the Benelux countries and Austria could nevertheless form a common currency area. Looser regional alliances could be formed by the Mediterranean countries, by the Nordic countries, and by the United Kingdom and Ireland. These groups are not necessarily similar with respect to their solidity or potential areas of co-operation. Of the transitional economies at least Hungary, the Czech Republic and Poland will strive to join the German currency area. The rest of Eastern Europe will be in a chaotic situation.

One of the presumptions when drawing up these scenarios has been that the Eastern European countries will not be full members of the EU in its present form by the year 2005. This is based primarily on economic factors, which are examined in section 4.4. It is nevertheless possible that integration solutions will stress political factors, so that there can be considerably more alternatives.

## **4.2 Is Europe an Optimum Currency Area?**

One of the major bones of contention regarding the goals of European integration has been whether Western Europe can be considered an optimal currency area over a 10-20 year horizon. If Western Europe does not form a currency area like the one in the United States, what is an alternative currency system? Related to this question is also the matter of tying the former planned economies in with European integration.

There are still considerable development and structural differences between the European countries. Country-specific disturbances have had to be defused via changes in exchange rates, for example in the latter half of 1992 and 1993. The language and cultural differences as well as the ageing of the European labour force mean that the labour force does not very easily shift from one country to the next. The nominal wage flexibility of the EC countries has been less than in the United States. Several researchers have come to the conclusion that country-specific disturbances in Europe cannot be sufficiently dampened via mobility and flexible pricing of inputs without fundamental

changes in behaviour (Frenkel - Goldstein, 1988; Eichengreen, 1991; Sala-i-Martin - Sachs, 1991; Minford et al., 1992).

Another central prerequisite for realization of an optimal currency area is that fiscal policy can be used to curb disturbances in certain regions. If the disturbances are permanent, such as a shift in the wood processing industry to greater use of recycled fibres, a sharp decline in trade in a certain area, the collapse of the fish population or a drop in productivity, then the use of real income in the economy will have to adjust to these disturbances.

Even though the efficiency of the disturbance stabilizing arrangements can be improved, there will have to be fundamental changes in the way the European economies function before it is likely that the entire EU and the possible new members from EFTA can form a common currency area. The alleviation of asymmetric economic disturbances would require most of all increased labour mobility and reductions in wage rigidities and other price rigidities.

The establishment of the monetary union is perhaps seen as politically important, even though the EU does not fulfil the requirements for an optimal currency area. An alternative to the monetary union could also be the formation of a common currency area in a smaller area, around Germany, France, the Benelux countries and Austria. The remaining EU countries would participate with floating rates or quasi-fixed rates, which would permit any necessary changes in exchange rates.

The basic question in exchange rate policy boils down to whether the EU and EFTA countries are exposed to different kinds of shocks and how various regimes even out the disturbances. If there is high wage rigidity and low labour mobility, the disturbances can in principle be dampened with flexible exchange rates. This is nevertheless against the basic tenets of Western European integration and there is a considerable danger of competitive devaluations. Real adjustment will not take place, so that price differentials across countries will continue to widen.

### **Two-Speed Europe?**

In the context of the integration of Western Europe, it has become increasingly common to speak of a "two-speed Europe". Also the Maastricht Treaty provides for the possibility that countries more easily fulfilling the convergence criteria can first form the monetary union, while the other countries can join later or remain outside.

According to Bayoumi and Eichengreen (1992) the supply and demand shocks that occur in Germany and its nearby neighbours have been smaller than in the rest of the EU countries. The correlation between the shocks in Germany and its neighbouring countries is also stronger than between Germany and peripheral countries. The differences in the sensitivity to shocks between the core and peripheral countries have not narrowed during recent decades. The same kind of disparity between the core and peripheral areas has been noted also in the US, but disturbances there are more uniform

than in Europe. The US areas also adjust faster to both demand and supply shocks than the European countries, which reflects the greater factor mobility.

The difference between the core and peripheral areas in the EU is deemed to support the two-speed EMU. Germany and its immediate neighbours can form a functioning monetary union along the lines of the United States. Increasing flexibility will be required of the countries not participating in EMU, which will in turn mean fundamental behavioural changes in price and wage formation. This will perhaps occur to some extent.

Austria, Sweden and Switzerland have also experienced supply and demand shocks that have been relatively small and clearly correlated with those of Germany (Bayoumi - Eichengreen, 1992). Finland and especially Norway have been the objects of greater disturbances, but they have been weakly correlated with shocks in Germany. Of the countries that have applied for membership Austria and Sweden could perhaps be founding members of a monetary union, but Finland and Norway would belong to the group of laggards together with, among others, the United Kingdom. Similar conclusions have been reached by von Hagen and Neuman (1992). If the formation of EMU is continually postponed, there may easily come a rather extended period where exchange rate policy is marked by uncertainty, so that the investment directed toward a country might be low and skilled labour might emigrate.

The maintenance of fixed exchange rates in a situation where a country is exposed to a major shock would make investors wary about the permanency of the exchange rate. One proposal that has been put forward would be for the countries to adjust to large shocks under floating rates, but return to fixed rates after the adjustment phase (Giovannini, 1992).

If the EU moves toward EMU at two speeds or the union remains small, one problem will be what kind of exchange rate those countries outside the union adopt during the transition phase. The credibility of an exchange rate depends decisively upon the economic fundamentals, such as the equilibria in the economy and public sector, wage and price formation and the division of labour and mutual credibility between the actors of economic policy.

The floating exchange rate regime in principle offers leeway to adjust to internal and external shocks. In practice, however, the floating rate system is sensitive to disturbances and overshooting as well as creating unfavourable fluctuations in asset prices. The disturbances can easily trigger a price-wage-devaluation cycle if wage flexibility is not sufficient or if the low inflation target is not internalized.

In theory the floating rate regime should add to the transparency of economic policy decisions. Since the labour markets and firms know the consequences of their behaviour ahead of time, the floating rate regime can add to the discipline of economic policy decisions. Wage increases that exceed the rise in productivity are quickly seen in the depreciation of the currency or high interest rates. The end result would merely be the acceleration of inflation and rising unemployment. Thus in the floating rate

regime everyone has to save themselves if they run into difficulties. Floating thus, in principle, encourages taking responsibility for ones own actions.

The recent changes in the exchange rates of countries belonging to the European Monetary System (EMS) indicate that the fixed rate regime is very vulnerable. Even if the EU members remaining on the periphery of the two-speed Europe are supported in their efforts to keep the value of their currencies stable, this is not enough unless the fundamentals of the economy are in good shape.

All in all, the future of European integration increasingly appears linked to the exchange rate mechanism of the EMS. The instability of the system can crush the belief in the implementation of the union in line with the goals of Maastricht if the instability is judged as an indicator of differences in the level of development or in the goals of economic policy.

### **4.3 Uncertain Future of Russia and Eastern Europe**

The developments in Eastern European countries, especially in Russia, are of special importance for the future of Finland and Europe as a whole. The Western European countries have to carry most of the burden for the assistance to Eastern Europe, regardless of whether it occurs in the form of the opening of markets to products from the east or loans and aid directed toward the Eastern European economies. The consequences of the crises in the Eastern areas, such as emigration, are also focused mainly on Europe. Russia and Eastern Europe will, on the other hand, provide new possibilities for Western Europe when Eastern Europe begins to recover.

#### **Wide Spectrum of Eastern European Countries**

The countries in Eastern Europe can be divided into two groups. Eastern Central Europe (Hungary, Poland, the Czech Republic and with reservations Slovakia) follow a consistent transition policy, have signed an associative agreement with the EU and aim at NATO membership. Some of the short-term risks in this area are related to the partitioning of Czechoslovakia. The Czech Republic is considerably more developed than Slovakia and enjoys better growth possibilities. A rapid divergence in the developments between these countries could lead to tensions in their relations.

Eastern South-eastern Europe (Bulgaria, Romania, the former Yugoslavia and Albania) is in certain respects sinking into political instability, economic decline and open conflicts between peoples. Even though parts of this area (Slovenia, Albania, Romania and Bulgaria) can be saved from this spiral, the area is Europe's most important sources of instability owing to the national links with Ukraine, Russia, Hungary, Greece, and Turkey.

It is easy to discern two alternative outcomes for the unresolved problems still facing the Baltic countries. In the positive scenario, solutions to the problems regarding the Russian troops, economic relations, transport routes and national minorities are found in time, which makes it possible to develop

an independent economy. The Baltic countries' strength and weakness lies in their smallness. If favourable political and economic conditions prevail, the growth potential of these countries can be efficiently increased with relatively small amounts of external aid and direct investment.

The weakness of the Baltic area is its meagre resources, shortage of international experience, dependence of its production structure on the former Soviet Union for raw materials and markets, and the uncompetitiveness of its output. The difficulty of these problems and the instability of the political system hinder long-term democratic decision making. The Baltic countries are willing to take considerable risks in their monetary economies. The Baltic countries will hardly become local growth centres, even though the area will be able to reap some of the benefits from the developments taking place in countries encompassing the Baltic Sea and in Europe. The Baltic countries should, however, be of considerable economic significance for Finland foremost as a transit route but also as a site for manufacturing based initially on low-wage and later knowledge-intensive operations. On the other hand, the area will compete with Finland as a gateway between Western Europe and Russia.

If the relations between the Baltic countries and Russia cannot be worked out, this will spur a period of sustained uncertainty and tension that would discourage foreign investment in the area. Emigration could turn into a mass exodus. This kind of a development could originate from the oppression of the Russian minority and their becoming second class citizens, which could have fateful consequences for the relations between the Baltic countries and Russia.

It is impossible to predict the political developments in the CIS area. The key questions are: (1) What will happen as regards Russia's regional unity and the Russian concept of statehood? (2) Will Ukraine and Moldova be able to solve their differences of opinion with Russia peacefully? (3) Will Turkey be pulled into the conflict in Caucasia? (4) Will the republics in Central Asia remain within Russia's sphere of influence or will they seek to establish a new identity with the assistance of Islamic countries (Turkey, Iran, Pakistan)? What will then happen in the historically artificial state of Kazakhstan, where the Russian north is clearly more developed than the south inhabited by ethnic Kazakhs.

On the basis of these questions it is possible to draw up the following scenarios:

Russia remains regionally united but so that the sovereignty of the regional units strengthens. Owing to the especially large variation across these regions in the distribution of factors of production, culture, the political situation, and internal cohesion, it can be difficult to reach a common understanding at the state level. On the other hand, Russia's decentralization may facilitate co-operation between it and other CIS countries.

In addition to developments in Russia, the future of the CIS area will hinge closely upon the course adopted by Ukraine. It can seek to boost rapidly its

position as an eastern Central European country. The country has many resources for this and it can count on the assistance of France and Germany. On the other hand, Ukraine may fail in its westernization and transition policy. Between the EU countries and Russia a belt may form comprising agrarian and politically authoritarian states, extending from Lithuania and Poland to the Balkans. The belt would be seen as a factor of uncertainty to be restrained with combined efforts, not as fertile soil for competition between the EU countries and Russia.

Another question mark for the future of the CIS countries is Central Asia and Kazakhstan. The developments during this century would indicate that this area would remain in close ties to Russia. Their division of labour in the co-operation under the CIS would be similar to that during the time of the Soviet Union. Another alternative would be that the border between Europe and Asia (Islam) be drawn down the middle of the present Kazakhstan. This would perhaps strengthen Russia economically in the short run and ease the problems generated by national tensions, but it would also create new problems with immigrants.

### **Impact of Russia's Reforms on Global Mineral and Metal Markets**

There have been profound changes in the international mineral and mining sectors as a result of the political and economic collapse of the Soviet Union. In the metal markets these changes have been reflected in the high export volumes coming from Russia and record low level of metal prices.

Russia's aluminium exports to the west had more than doubled by 1991 from the nearly 400 thousand tonnes of 1987. At the same time exports of nickel rose 1.7 times higher. Exports of copper, lead, steel alloys and other metals have also grown, although the margins have not been as wide as for aluminium and nickel.

There is no certain information on the source of the new supply. It is estimated that at least some of the metal supply coming to the market is from the stockpiles of mines that have exceeded their production targets. These exports are also coming from the stockpiles of the military. A third source are the complicated and sometime illegal channels of the other former republics in the Soviet Union. The most important reason for the export potential is nevertheless perhaps the slackening of demand in Russia and elsewhere in Eastern Europe as well as the necessity to earn foreign currency. Raw materials are almost the only commodity groups that Russia can export to the west. Russia has a vast ore mining sector and considerable untapped mineral potential.

The Soviet Union boosted its share of metal output in the world after World War II. In 1990 the Soviet Union was the world's largest or second largest producer in almost all major types of metal. The same holds for rarer types of metals such as platinum, palladium, chrome, vanadium, manganese, magnesium, titanium, and mercury.

	Production Mill. tn	Share of world output, %	Rank in world output
Aluminum	2,6	15	2
Copper	1,3	13	2
Lead	0,7	11	2
Nickel	0,2	26	1
Zinc	1,0	13	1
Tin	0,0	7	4
Gold (tonnes)	270	15	3
Iron ore	236	27	1
Steel	154	20	1

*Table 4.1. Metal Production in the Former Soviet Union in 1990*

Sources: Metals and Minerals, 1992; Mining, 1992.

The former Soviet Union's share of world mineral reserves varies from over 40 per cent in iron and manganese, to over 20 per cent in lead, nickel and cobalt, and over 10 per cent in copper and zinc (Dorian - Borisovich, 1992). The future of the mineral sector of the former Soviet Union is for the time being unclear. Foreign mining companies are wary about investing in the former Soviet Union since the ownership rights to the mineral resources are uncertain, the decision-making system is unclear, geological data are lacking, the legal statutes are very inadequate and it is uncertain whether the law will be followed.

The mining industry of the former Soviet Union will nevertheless be a subject of great interest for foreign firms. The mineral sector needs increasing amounts of financing and technical support in ore exploration, mining operations, ore enrichment and processing as well as cleaning and modernization of the already existing plants.

#### **4.4 Europe's Future Economic Architecture**

The growth in the trade of the Western European countries after World War II has been supported by the global attempts at the liberalization of trade in industrial products. Western Europe has furthermore expanded and promoted free trade within the framework of the EC and EFTA. The internal trade in Western Europe has been fairly free, but varying degrees of trade barriers have been used against the rest of the world. The greatest barriers relate to agriculture, the textile industry and the iron and steel industry.

Of the total exports of the EC and EFTA countries in 1991, almost 70 per cent went to other EC or EFTA countries (Table 4.2). This share has climbed by 5 percentage points since 1985 as the share of exports going outside of Europe has fallen correspondingly. Only 3 per cent of Western Europe's exports went to the former Soviet Union or other Eastern European countries during both of these years. There has been a similar shift in the structure of imports. The share of imports coming from outside of Europe fell while the imports from other EC and EFTA countries rose. The share of imports coming from Eastern Europe remained unchanged.

	Exports		Imports	
	1985	1991	1985	1991
Exports and Imports of EC and EFTA countries				
Soviet Union	2	1	2	2
Eastern Europe <sup>1</sup>	1	2	2	2
EC + EFTA	65	70	63	71
Other	32	27	33	26
Total	100	100	100	100
Exports and Imports of Eastern European countries <sup>1</sup>				
Soviet Union	39	18	42	20
Eastern Europe <sup>1</sup>	21	8	23	7
EC + EFTA	23	56	23	53
Other	18	19	13	20
Total	100	100	100	100
Exports and Imports of Soviet Union				
Eastern Europe <sup>1</sup>	47	20	48	19
EC + EFTA	24	50	19	40
Other	29	30	34	41
Total	100	100	100	100

<sup>1</sup> Eastern Europe includes Poland, Hungary, Czechoslovakia, Bulgaria and Romania and in 1985 East Germany.

*Table 4.2. Distribution of Europe's Foreign Trade by Area in 1985 and 1991, %*

Sources: IMF, 1992; Plan Econ; UN, 1990.

Of the exports of the Eastern European countries in 1985 almost 40 per cent went to the Soviet Union, but in 1991 this export share was only 18 per cent. A corresponding collapse from 21 per cent to 8 per cent occurred in export shares directed to other Eastern European countries. The share of exports headed toward the EC and EFTA countries rose from 23 per cent to 56 per cent. There were similar changes in the imports of Eastern European countries.

The trends have not, however, been the same in all countries. In many countries the reduction in exports to and imports from the Soviet Union and other Eastern European countries has been more than compensated by the growth in trade with Western countries. The total exports of Czechoslovakia fell, however, despite swift growth in exports to the west. The exports from Bulgaria and Romania to the west fell also in absolute terms, albeit by not as much as their eastern trade. All in all the Eastern European countries have nevertheless sought to redirect their foreign trade swiftly toward Western Europe (EFTA, 1993).

In 1985 almost half of the Soviet Union's total exports went to other Eastern European countries, but by 1991 this share had fallen to a fifth. The shares of exports to the EC and EFTA countries rose correspondingly from a fourth to one half. The foreign trade of the Soviet Union (CIS) dropped sharply especially in 1991 owing primarily to the collapse in the trade with the former Comecon countries. The share of foreign trade in the Soviet economy was traditionally small, however, under 10 per cent (Kero, 1992).

The former Soviet Union and other Eastern European countries have not constituted a significant target for the exports of Western Europe. On the other hand, the EU and EFTA countries are a very significant export area for the former socialist countries and starting in the mid-1980s their importance has increased sharply.

The trade of the former Comecon countries with the rest of the world was modest. The socialist countries joined GATT fairly late and even then as observers. Duty-free and extensive trade conflicted, for instance, with the principle of socialism's independence. In theory the trade between the socialist countries was based on the principle of comparative advantage, but in practice owing to rigidities in the command system the production structures of the various countries resembled each other more than could be expected on the basis of comparative advantage. For example, the former high level of knowhow in the Czechoslovakian metal industry decayed appreciably during the time of socialism. All the socialist countries became societies dependent upon heavy capital-intensive industry regardless of whether they possessed the necessary natural prerequisites. The production structure was marked by a low number of enterprises, their large size, and the insufficiency of service firms.

On the basis of comparative advantage, it is possible to outline the kinds of output and exports in which the former socialist countries should have natural advantages. First, the entire Eastern European area (incl. the former Soviet Union) is suitable for labour-intensive production since real wages are low and the educational level of the population rather high. As regards the educational level, the competitiveness of the Eastern European countries is fairly good compared to that of the southern countries of the European Union. For example, the clothing and textile industry should have good prerequisites for competing on Western European markets.

A second area is agriculture and food manufacturing. When agriculture and production of foodstuffs get on their feet, the output potential of agriculture will surpass domestic demand so that the Eastern European countries can become significant exporters of agricultural products (Anderson-Tyers, 1993). Furthermore, the increase in production in Eastern Europe is estimated to be so large that, for example, the global price of wheat will fall by several percentage points. During the last few years in several Eastern European countries the growth in western exports has occurred primarily in the form of higher exports of foodstuffs (EFTA, 1993).

The trade between eastern and western Europe has been only a fraction of its potential level (e.g. Hamilton - Winters, 1992). Alternatively, trade between eastern Europe and the Soviet Union was much higher than its natural level. Eastern Europe has a strong demand for industrial products and infrastructure investments. Its supply is weighted in favour of raw material-intensive products, especially from Russia, agricultural products and labour-intensive products that require an average level of human capital and technical knowhow, but not a blend of advanced R&D and production.

The trade of the EU and EFTA with the eastern Central European countries is being opened under the framework of an association agreement and other free trade agreements. These agreements are asymmetrical since the EU and EFTA countries are removing their tariffs by a faster timetable than the eastern Central European countries. The association agreements nevertheless allow for imports quotas in those areas where the eastern Europe would have the best competitive advantage, such as agriculture, steel and textile products. Anti-dumping measures can likewise be used to limit imports, as has already occurred.

The EFTA countries have also signed free trade agreements with Hungary, Poland, the Czech Republic and Slovakia and are preparing corresponding agreements with Bulgaria and Romania. The Baltic countries, Albania and Slovenia have made joint declarations with the EFTA countries, which ordinarily serve as a preliminary stage to free trade agreements (EFTA, 1993).

Eastern Europe is competing as an investment site in the eyes of international investors primarily with Latin America and South-east Asia. It appears that production is being shifted from western to eastern Europe primarily in the steel, chemical, automobile and textile industries. Since the shift and entire scale of the investment flow depend upon the political, institutional and general economic stability of the recipient country, it is impossible to predict the orientation of the investment flows. The same holds over the longer run also for public aid.

The manifold differences in the level of income between the countries on the continent constitute an impetus to labour mobility. Cultural, educational, linguistic and even ethnic similarities promote mobility. The present association agreements do not liberalize labour mobility, nor is it likely that the western European countries would be willing to grant concessions on this point during this millennium. On the other hand, it is clear that the pressures regarding the mobility of labour will force the western countries to open their markets to imports from eastern Europe. It is difficult to know whether the same pressure will force western taxpayers to agree to public support of investment in eastern Europe, as rational as this would be.

Several small Eastern European countries have announced their aim to join the European Union. According to many assessments, this goal is unrealistic for the next twenty years. There are several reasons for this. First, the situation inside the EU will not allow it to accept new members, except for the EFTA countries, in the near future. Second, all Eastern European countries do not fulfill the "natural" criteria for EU membership, such as political stability. Third, the differences in income levels between the EU and the small Eastern European countries are so wide that these countries would under the present regulations receive a great deal of support from the funds of the EU. Nonetheless the EU is encountering political difficulties in the funding of the current subsidy policy. Fourth, combining the Eastern European countries membership in the EU and the current agricultural policy spawning overproduction would be an impossible task in the 1990s.

Thus a realistic alternative in the 1990s for these countries is some degree of free trade in industrial products with the EU and EFTA countries. The Eastern European countries should also trade with each other, but for the time being they have taken measures that increase the trade barriers and the trade between these countries has dwindled. In March 1993 the so-called Visegrad countries (Poland, Hungary, the Czech Republic and Slovakia) initiated the establishment of a mutual free trade zone during a two-year transition period. There are also pressures to shorten this transition period.

It has often been suggested that a natural intermediate phase before possible EU membership for the small Eastern European countries would be some sort of arrangement like the EFTA free trade agreement. One way to bring this about would be for these countries to join EFTA in its present form (Baldwin, 1992).

This alternative would minimize the trade barriers between these countries, so that the mutual trade could be carried out on a wider scale than trade with Western Europe conducted on world market terms. At least at first Western Europe would strive to protect precisely those industrial branches where the Eastern European countries enjoy a comparative advantage (agriculture, the textile and steel industries). In other branches the competition will be keen and low production costs will not necessarily be enough to ensure the capturing of western markets. In trade with each other these countries would be competing on a more equal basis.

As members of EFTA these countries would have to open their economies to imports. The keener competition generated by imports would force firms to boost their productivity and learn to compete. Thus imports would reinforce the structural change in the economy. An important benefit from being in EFTA would be learning about market economies and trade. Furthermore, the EU could give economic and other aid in a co-ordinated fashion by way of EFTA.

This alternative is realistic only if the EFTA countries remain outside of the EU. If the EFTA countries operate within the framework of the agreement on the European Economic Area (EEA) and at the same time negotiate on EU membership, the expansion of EFTA in the direction of Eastern Europe does not appear likely (Sutela, 1993).

If the European economy continues to perform weakly, the internal pressures in the EU will hinder the access of Eastern European products to their markets. It would also be likely that at least public investments to the east would be curbed. It is less likely that Western Europe would try to strengthen the recovery by linking up with Eastern Europe, i.e. seeking closer trade relations and accelerating of the structural reforms in the economies of Eastern Europe.

Table 4.3 presents a scenario for the future economic relations between the three sub-areas of Europe, Western Europe, the economies in transition (excl. CIS countries) as well as Russia and the rest of the CIS countries. The internal relations of Western Europe are presented in the upper left corner.

The view is that Western Europe will witness a transition from the EEA to a broadening of the EU and thereafter to the formation of EMU.

The economic relations between Western Europe and the economies in transition can progress from an European agreement to a EEA style agreement which limits the mobility of labour to the outside. It is hardly likely that trade in agricultural products will be deregulated, even though it is an important export sector for the eastern Central European countries. Western Europe's overproduction and strong agricultural lobby will prevent this from happening. The time will eventually be ripe for the transitional economies to join the EU. Despite the aspirations of the transitional economies, that day will come within at most a few decades.

	Western Europe	Economies in Transition	Russia and other CIS countries
Western Europe	EEA ↓ Broad EU	Europe agreement ↓ EEA (excl. labour mobility and agriculture)	Most favoured nation status ↓ Free trade (excl. agriculture) - security clauses?
Economies in Transition		Free trade	Free trade?
Russia and other CIS			Free trade area ↓ Eastern EU?

*Table 4.3. Future Economic Relations of Sub-areas of Europe*

The trade relationships of Russia and the other CIS countries with Western Europe will perhaps progress gradually from most favoured nation status to free trade. This can nevertheless include exceptions in those areas where Russia's production potential is strong, such as chemicals and the steel industry.

The trade between the economies in transition will perhaps be freed during the next few years. Since their EU membership is not foreseeable in the 1990s, these countries could increase their mutual economic co-operation and end up with, for instance, an arrangement like the EEA. If the economies in transition eventually become EU members, the EU regulations will naturally dictate the mutual economic relations of the economies in transition.

The relations of the economies in transition as well as of Russia and the other CIS countries will perhaps be organized within the framework of some sort of free trade agreement. The economic relations of Russia and the other CIS countries may shift from a free trade arrangement toward an eastern EU.

This would be a market economy version of their earlier division of labour, and would emphasize the independence of each country.

The coming economic architecture in Europe over the next 10-20 years will be marked by great uncertainty. The point of departure is self-evident: Europe is a whole. Western Europe cannot isolate itself and leave Eastern Europe completely outside of its "borders". The western markets are of vital importance to the Eastern European economies. On the other hand, the imports from Eastern Europe represent such a meagre portion of western supply that the freeing of imports will not, in general, cause great adjustment problems. Strong interest groups can, however, slow the progress in trade between Eastern and Western Europe in certain areas deemed sensitive. Uncertainty about economic relations can also keep the economic situation in the European continent weak during the next few decades.



## **Finland in the international division of labour**

5

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### 5.1 Four Scenarios

The development of the international economy and Finland's position in the international division of labour determine the economy's rate of growth, economic policy lines and over the long run the changes in the production structure. In this report two alternatives for global economic developments are used as a starting point: the scenarios of balanced growth and economic crisis (cf. section 3.2). Two alternatives for Finland's participation in European integration are also analysed: Finland is a member of the EU and the European monetary union, or alternatively Finland retains its own currency while either being a member of the EU or participating in the European Economic Area (EEA).

The point of departure for the first integration scenario is that the EU enlarges its membership to include the EFTA countries and the Maastricht treaty is realized for the most part in its original form. In the year 2005 Finland is a member of EMU as a member of the EU. Finland thus in 2005 no longer has possibilities to follow an independent exchange rate policy.

The second integration scenario is one where the Maastricht treaty is not implemented even on the scale of the present EU countries. A common currency system could be in existence in a group of core countries (cf. section 4.2), to which Finland would not belong even if it were an EU member. Finland retains its own currency, so that Finland in principle has a possibility to follow an independent exchange rate policy. This scenario resembles also the situation where at the beginning of the twenty-first century Finland is a member of the EEA but still outside of the EU. The difference between membership in the EU and EEA will perhaps not be large, since possible disparities will be reduced by the lowering of agricultural subsidies in line with GATT and by the need to harmonize the level of taxation and structure with that prevailing in the EU.

EU integration and Finland			
		Finland participates in EMU	Finland still has its own currency
International economy	Balanced growth	1. State in the European Union	2. EU periphery
	Crisis scenario	3. Vanguard of Fortress Europe	4. Member of Nordic Community

The adjacent chart presents four scenarios for Finland's position in Europe based on the international economy and on Finland's participation in European integration. According to Scenario 1, the international scene is marked by balanced growth and Finland participates in EMU as a member of the EU. Scenario 2 is one where there is balanced international growth, but Finland does not participate in EMU, i.e. Finland still has its own currency. In scenario 3 the international economy is subjected to various kinds of crises, but European integration broadens and deepens so that Finland participates in EMU. Scenario 4 comprises both an international economic crisis and European integration whereby Finland has its own currency. In this scenario European integration splinters into parts.

### **State in the European Union**

European integration probably progresses faster in the balanced international growth scenario than under crises circumstances. The point of departure for this scenario is the broadening of the EU and emergence of EMU as well as balance in international economic relations. If European integration is to progress without a hitch, this will require that the credibility of the EMS return by the end of 1994. The floating of the markka will end when it is pegged to the Ecu, at the latest when Finland joins the EU in the middle of the decade.

Finland's participation in EMU would mean that exchange rate policy would be permanently excluded from the economic policy toolbox. Since it is likely that Finland's economy will experience more than the average of international disturbances owing to the one-sided production structure, there will be a strong need for flexible pricing of inputs. Wages and other costs will be more flexible than at present, so that fluctuations in employment and capacity utilization will be dampened. The change in wage behaviour will be promoted by high unemployment and the gradual disappearance of nominal wage illusions.

Increased flexibility will facilitate change in the production structure. The production structure will gradually shift to activities based more on knowledge and knowhow. Finland will constitute a support base for knowhow-intensive business in the neighbouring regions, especially the St. Petersburg area, and Finland will have an extensive subcontracting network with Estonia and St. Petersburg. The growth in foreign trade will be based primarily on the growth in intra-industry trade. This will reduce fluctuations spurred by country-specific shocks. Also the service industries will expand rapidly along with the strengthening of Finland's position as a gateway to the east and increase in tourism.

How and with what kinds of incentives can this scenario be realized if it is deemed worth pursuing? One prerequisite is that the decision-makers in charge of economic policy commit themselves to following the low inflation and fixed exchange rate policies necessary for participation in EMU. The change in expectations will force firms more actively than previously to develop new products, production methods and markets. A second prerequisite is that the recovery in the St. Petersburg area and Estonia is faster and stronger

than estimated in section 4.4. A third condition is that Finland obtains plenty of foreign investment, which will be attracted not only by the neighbouring markets but also by our country's well educated, skilled labour force and relatively low wage level compared to EU partners. A fourth prerequisite is an efficient public and private service sector, a sound transport and communications network, high-quality education and research activities as well as a clean environment and safe society. The social network will remain sound and keener competition will keep the price level of the service sector modest.

Rapid export growth during 1992-1995 will spur a rise in investment in 1994-1996. Investment will be geared especially toward new export output and R&D. Many new firms will be established. Domestic market output will start recovering in 1994. The bank crisis will be brought under control by the end of 1995.

The forest industry will invest in energy and environmental technology and the export of related equipment. The output of the pulp and paper industry will grow relatively slowly, largely due to renewal of machines. The product mix will shift increasingly in favour of wood-free paper. The output and exports of the mechanical wood processing industry will rise faster owing to high-quality design, product development and more efficient marketing.

Agriculture will adjust to the price level prevailing in the EU. The support extended by the EU to Finnish agriculture will be considerable. The EU's new energy taxation will go into force also in Finland. Long-term interest rates will approach Ecu rates and after EMU is realized Ecu rates will prevail in Finland.

Finland's price competitiveness will weaken slightly during 1994-1995, since the Markka will appreciate as the economy recovers. In 1996 and thereafter competitiveness will remain high, since the labour market organizations will adjust to low inflation and fixed exchange rates. Wage dispersions will widen, however, because wages are formed by productivity developments.

### **On the Periphery of the EU**

As long as Finland has its own currency, the compulsion to change economic policy will not be the same as under participation in EMU. Despite the risks associated with exchange rates and the level of interest, attempts will be made to stimulate domestic demand strongly in order to ease unemployment. Finland's cost and price level will rise faster than in the main competitor countries and the currency will remain weak, even if the value of the currency fluctuates widely.

Finland's production structure will remain exposed to foreign fluctuations, since the pick-up in investment in 1994-1996 will still be focused on the forest industry and other traditional industries where a rise in profitability has been spurred by the weakening of the Markka. The focus of investment is affected by the expansion of the forest industry - since the interest in recycling will ebb and waste paper will start to be burned in Germany - by the increased manufacturing of metal and by the construction of a nuclear power plant. The

new export sector will expand slowly, since the bank crisis will continue, thereby hindering the financing of small and medium-sized firms' investment.

Finland joins the EU in the middle of the decade, but the officials cannot guarantee that our country will participate in EMU in the first wave. The Markka is pegged to the Ecu in a quasi-fixed rate regime. This peg does not, however, mean the internalization of a low inflation goal.

The changes in the exchange rate that occurred in Finland in the early 1990s establish a base for continuing the former economic policy line. Despite high unemployment, the labour market settlements in the mid 1990s will be inflationary as wage hikes in the export industries spread also to other branches. Finland is forced to sever its link to the Ecu and float its currency to ease the cost crisis.

In the EU Finland is a remote area that in the European division of labour concentrates increasingly on metal industry as well as pulp and mechanical forest industry products. Economies of scope and energy intensiveness will continue as important features of Finland's output structure. Finland's long-term real interest rate will be continuously higher than in those core countries participating in the European monetary union.

Even though Finland's export markets in the west develop favourably, the growth in Finland's export structure will be disadvantageous since the demand for basic metals and wood products will grow sluggishly on world markets. The neighbouring regions will not provide any impetus to Finland's growth, since their recovery will be slow.

### **Vanguard of Fortress Europe**

The EU, United States and Japan are driven into conflict since they cannot reach a common understanding on continuation of the GATT process nor on granting assistance to Russia. At the same time, high unemployment in the western countries as well as huge public sector and foreign trade deficits encourage the formation of blocs. Trade between areas bogs down and world economic growth is modest. Furthermore, the environment gets polluted as new technology is not taken into use on a wide enough scale owing to weak investment activity. The infrastructure deteriorates. The EU reacts to the challenge by increasing external trade barriers and speeding up European integration. Several core countries establish EMU, which also Finland joins. The liberalization of trade between the EU and eastern Central European countries comes to a halt, since the EU cannot open its own markets within the agreed timetable owing to strong opposition from EU producers.

Finland's situation depends to a great extent upon the nature of the relations between the EU and Russia. If the EU seeks to keep its commercial borders with Russia tightly closed and avoid participating in granting assistance to Russia, Finland will become an isolated area of the EU. Finland will not attract foreign investment and there will be considerable migration to the growth centres of the EU and countries outside of Europe. The sluggish growth in the EU markets will not facilitate any expansion of output since

competition will be keen in all sectors and Finland's remote location will constitute a clear drawback. Exports to areas outside of the EU will be hampered by the countermeasures of other countries to the import restrictions of the EU.

If the EU commits itself to opening trade with Russia, with investment projects and credit, Finland's situation will be brighter. Finland can function as a site for firms geared toward Russian markets and participate in the realization of projects. This can make up for the sluggishness of the growth in EU markets. The production structure can be more versatile than under a closed EU scenario.

Finland's infrastructure cannot be maintained at its former level and there is even less room for further development. There is wider dispersion in education owing to the widespread imposition of fees. Holes form in the social safety net. Political conflicts will become more prevalent in Finland and economic policy will remain unstable.

### **In Nordic Co-operation**

The sustained floating of the EMS currencies will lead to competing devaluations and crush plans for EMU. Even though the EU and EEA might still exist, Western Europe breaks down into regional groups: Baltic Sea area, central European core, Mediterranean area and the British isles. European economic growth will be sluggish during the entire 1990s. Unemployment rises to 10-15 per cent and many EU and EFTA countries limit immigration in contradiction to the EEA agreement.

The reforms in the Eastern European countries get bogged down as the Western European countries shelter their own production and foreign investment in Eastern Europe dries up. In all of these countries unemployment or underemployment is widespread and the standard of living continues to fall.

The developments in the Baltic countries diverge. Lithuania expands its economic ties with Belorussia and Poland. Latvia and Estonia rely more closely on the Nordic countries.

Near anarchy prevails in Russia in the 1990s. Local areas take over control of natural resources. The St. Petersburg area concentrates upon its traditional defence industry. The export of military hardware safeguards the availability of raw materials and energy. Toward the end of the decade the strongest areas seek a return to Russian unity. The process is slow and still in 2005 the standard of living in Russia is lower than at present.

The co-operation of the Nordic countries strengthens and Latvia and Estonia participate in this process in addition to Iceland, Norway, Sweden, Finland and Denmark. Stability is promoted by currency co-operation, which Estonia and Latvia gradually join. This group directs its trade efforts strongly to East Asia and America, the economic development of which is faster than in Europe. Educated persons from Russia and Central Europe move to the Nordic countries, but otherwise immigration is tightly restricted.

The situation in the north is better than in the rest of Europe, even though unemployment is high. The area has strong energy and food output, R&D is not neglected, the basic social structure is in good shape and the level of education remains rather high, even if social security has been cut substantially. Market shares are large in certain niches such as in the forest industry and in some branches of the engineering industry, and Latvia and Estonia offer inexpensive sites for labour-intensive phases of production still for some time. Trade with Western Europe remains duty-free and as a peripheral area detached from the core of the EU the trade relations with the growth areas of the world economy are good.

Owing to the unrest and risk of nuclear accidents in Russia, investments in Finland nevertheless remain modest and emigration from Finland to Sweden, Norway and Denmark rises.

## **5.2 What Kind of European Integration is Realistic at the End of the 1990s?**

The scenarios presented in section 5.1 may seem farfetched in some respects, but at the end of 1993 all these alternatives seem possible. Uncertainty about the world economy and most of all about the economic architecture of Europe is high. Nevertheless, certain scenarios are more likely than others given what is known at this moment. This section aims to present a plausible vision of the integration process.

At the end of 1991 at the EC meeting held in Maastricht it was decided that by the end of this millennium at least some of the EC members would form an Economic and Monetary Union, EMU. The countries participating in EMU would have a common central bank and currency, and their fiscal policy would be co-ordinated by placing ceilings on public sector deficits and indebtedness. At the end of 1993 this goal is still in force.

The monetary union is to be built gradually. In the first stage those EU countries which still do not participate in the exchange rate mechanism (ERM) would join. The United Kingdom joined in 1990, Spain in 1991 and Portugal in the spring of 1992, but Greece has remained outside of the ERM. As a result of the turmoil in the foreign exchange markets in the autumn of 1992, the United Kingdom and Italy have for the time being pulled their currencies out of the ERM. The exchange rate bands were widened in August 1993 after uncertainty in the currency markets had reached a fevered pitch in the summer. The second stage in the establishment of the monetary union started at the beginning of 1994. A European monetary institute will be established to promote co-operation between the central banks of the member countries and co-ordinate monetary policy. At the end of this decade the monetary union can be formed by those countries who fulfil the convergence criteria for balanced public finances as well as those for inflation, interest rates and stability of exchange rates.

In addition to the current EU members, possible new members could join the monetary union if they fulfil the EMU criteria. These would probably be

EFTA countries, which may join the EU as a result of the ongoing membership negotiations. The former socialist countries of Eastern and Central Europe will participate in the economic integration of Europe under the free trade guidelines delineated by the European Agreements.

The outlook for European integration has taken on new nuances recently. The ERM has not held up to the pressure exerted against certain currencies so the establishment of a monetary union has faltered already in the first stage. The problems of the EMS including changes in exchange rates can differentiate the developments in the EU countries especially with respect to inflation targets. The United Kingdom and Denmark do not seem willing to pursue integration as far as envisioned by the Maastricht Treaty. Opposition to EU membership has grown in the EFTA countries seeking membership and Switzerland rejected the EEA agreement in a national referendum. Even though it is possible that something like that envisioned by the Maastricht Treaty will be realized, the likelihood of other scenarios has increased.

At the EC meeting in Edinburgh at the end of 1992, the regional expansion of the EC was emphasized more than the deepening of integration. It is indeed likely that Europe will sport communities with varying closeness of ties by the end of the decade. Some of the EU countries will be on the road to EMU. Those countries that remain outside of EMU owing to their economic structures or political posturing would be part of the EU customs union and internal market. The relations between the EU and some of the EFTA countries would be delineated by the EEA agreement.

Some of the eastern Central European countries could also belong to the EEA sphere. It is more likely, however, that the mobility of labour between these countries and Western Europe will not be freed since the gaps in the standards of living are too wide. East-west integration would thus occur primarily in the form of liberalizing foreign trade. Almost all European countries could participate in the free trade system except perhaps Russia. The development of economic relations between it and Western Europe is extremely difficult to judge.

When Finland started its negotiations on EC membership, it announced that it accepted the goals set out at the Maastricht meeting and thus aimed at membership in a European monetary union. The timetable and precise scope of EMU as well as the transition periods associated with possible membership are still open. Finland could join the EU already in the mid-1990s if, among other things, satisfactory results can be obtained in the negotiations on agriculture and regional policy issues. EU membership will evidently anchor the Finnish Markka tightly enough to the ERM that the interest rate premium generated by exchange rate uncertainty will narrow, even if a common currency is not yet adopted.

If Finland decides not to join the EU for the time being so that the EEA agreement which went into force at the beginning of 1994 delineates Finland's long-term operating environment, whether Sweden remains outside of the EU customs union will take on special relevance. On the other hand, Switzerland's opting out of the EEA or Austria's joining the EU would not affect Finland's situation substantially.

East-west free trade will evidently expand under both the EU and EEA scenarios. From Finland's standpoint these scenarios would not differ economically in this respect. For the Eastern European countries it is important to gain access to the purchasing power of the western markets and safeguard free importation of technology. For the EU and Western European countries it is worthwhile to support the economic reforms of the former socialist countries, if nothing else than to curb emigration pressures. The most natural and efficient way to do this would be to open up the markets, so that support in the form of aid and credit would also be disbursed in an appropriate fashion as regards the international division of labour. Despite the uncertainty associated with developments in Russia, trade relations between Russia and Finland will not differ appreciably from Russia's relations with other western countries, regardless of whether Finland is a member of the EU or not.

It is nevertheless possible that the EU negotiations of at least Austria, Finland and Sweden are far enough along that they become members already at the beginning of 1995. The EEA would remain a very short transition phase for the EFTA countries joining the EU. From the standpoint of the formation of EMU, 1994 is a crucial year as that is when the second stage in the formation of the monetary union begins. The beginning of this stage could be hampered by the fact that some of the EU countries still do not participate in the ERM. A delay in the monetary union could mean that the convergence criteria could be widened from public borrowing and inflation to encompass also clear targets for unemployment and social policy. If this happens, the entire economic and monetary union could take on an entirely new meaning and the adoption of a common currency be postponed until the next millennium. The stability of the foreign exchange markets would thus be based for a considerable amount of time on the EMS, the functioning of which should be improved.

### **5.3 What Guarantees a Good Position for Finland in the International Division of Labour?**

When seeking a role in the international division of labour, there are two alternatives: Finns are active in developing their economic relations or they wait as long as possible and make decisions only when absolutely necessary. From Finland's standpoint, an open, active orientation toward the challenges of integration offers better starting points for promoting welfare. Then there are certain possibilities to exert influence over matters and at the same time keep all "options" open. Integration solutions seldom turn out in the same way the aims were first publicly proposed.

The sheer number of possible alternatives and the uncertainty that relates to this require the readiness to react to new situations as well as flexibility at various levels of the economy. Finland's relative success over the next 10-15 years will hinge to a considerable extent upon its own actions and reactions to external challenges. An overview of the alternatives would have to extend outside of Europe, most of all to the expanding markets of East Asia.

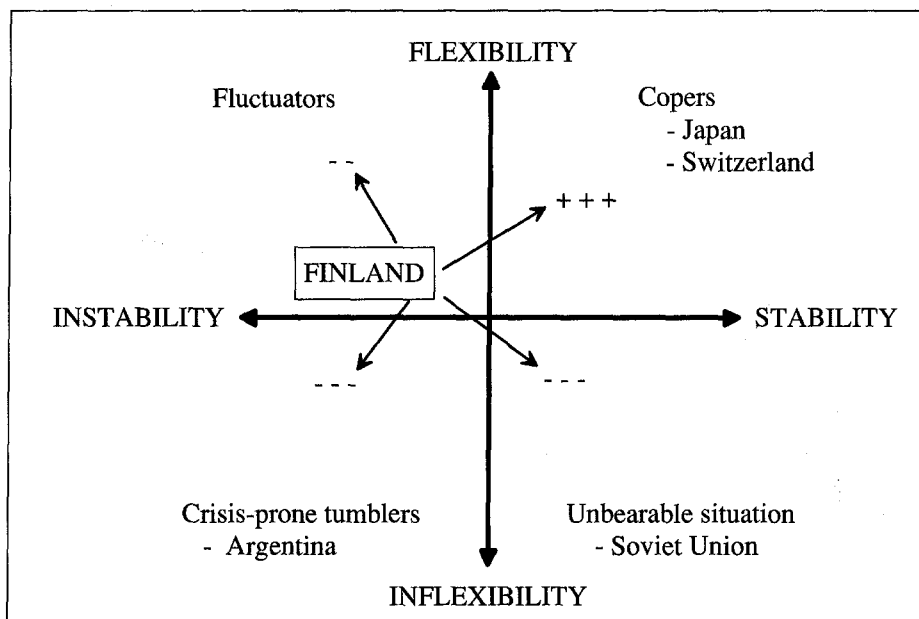
In the opening economy the power and responsibility for the functioning of the economy will be more diffused than in the past. In this kind of a dispersed situation, facing the challenges and taking advantage of the opportunities will require economic stability, which will be fostered by wider understanding between different layers of the society about the basic aspects of the long-term development strategy.

Finland's future alternatives can be mapped out using the framework depicted in figure 5.1. The basic idea is that if changes in the external environment can be accommodated flexibly and if the economy is stable, the country will prosper. Flexibility helps to cope with external disturbances and stability is a basic prerequisite for favourable growth in investment and output. These two factors are intertwined. Stability is nevertheless achieved via flexibility.

Stability is estimated in the following on the basis of changes in key economic variables. The most important variables are gross national product, volume of exports, investment and the variability of key prices. Flexibility is understood to mean how quickly and well a new equilibrium is reached after the economy is hit by a shock. Does the adjustment occur via changes in prices or volumes? A particularly important factor regarding flexibility is technological flexibility. How easily can the productive machinery be modified as external factors change? Other main factors are management flexibility and wage flexibility. Regional and professional mobility, sensitivity to changes in relative wages and flexible retraining schemes are also factors influencing flexibility.

Figure 5.1 presents a qualitative description of the above-described variables as well as examples of how some countries fit into the quadrants. Examples of stable but flexible economies could be Japan and Switzerland. All of the other quadrants are less favourable. For instance, a stable but extremely inflexible economy cannot endure, as the example of the former Soviet Union has shown. An inflexible and unstable economy easily leads to crisis-prone growth and collapse in welfare. Argentina after World War II until the 1980s can be regarded as this type of country. Flexible but unstable economies do not have the ingredients for success either, since a major shock can easily turn flexibility into inflexibility.

In which quadrant is Finland situated? According to estimates made by the OECD secretariat, Finland's labour market flexibility is somewhat better than the average for OECD countries (OECD, 1993b). Finland's economy is also somewhat more unstable than the OECD average (von Hagen - Neuman, 1992; Kajaste, 1993b). Finland's output structure is more raw material-intensive than that in other OECD countries, meaning that the prices of export products fluctuate more than in the competitor economies. Similarly, the devaluation policy and difficulty in finding a stable path in economic policy have been characteristic of Finland. It is also evident that the flexibility in the input market is not sufficient to stabilize the economy in the face of major shocks, such as the experiences of the early 1990s indicate.



*Figure 5.1. Functionality of an Open Economy: Flexibility vs. Inflexibility and Stability vs. Instability: Where is Finland Located and Where Is It Going?*

The improvement of the flexibility and stability of the Finnish economy are key factors determining the successfulness of the economy. In a situation of integrated capital markets, real wage flexibility cannot be achieved any longer by devaluations and inflation. Wage flexibility will occur via labour market solutions. This will require a reduction in nominal wage illusion, so that appreciation of low inflation and stable labour markets grows.

Use of unemployment-related pensions and disability pensions to steer older workers away from the labour market and thus make room for the young, which has played a key role in renewal of the labour force and structural change, will no longer work in the future owing to the limits on the public debt and accumulated pension liabilities. The operative flexibility of the labour markets must be achieved via the placement of employees in new positions so that the labour market mobility rises to a key position. This can best be promoted by training measures.

The exposure to economic shocks will be reduced if the production structure becomes more diverse and the share of goods subject to wide fluctuations in prices declines in output and exports. The development of the production structure will nevertheless be determined by how firms experience Finland as a location for production activities. The public sector can merely safeguard the basic preconditions and steer developments via various kinds of incentives.

A key role is played by the technological and management flexibility inside firms promoted, for instance, by flexible production systems and organizations. This also pertains to diversity in the client base, i.e. that firms are not only subcontractors or dependent on just one market or buyer.

The flexibility and stability of society can be improved if the changes above are implemented by taking into consideration the socio-economic and socio-cultural structures of the Finnish economy. These include the labour market institutions, high rate of unionization as well as a wide scope of voluntary societal activities. Well functioning institutions bring the necessary stability to the economy. If institutions are not renewed along with the changes in the environment, they shrivel away completely. If institutions do not correct their shortcomings and weaknesses quickly enough themselves, the delay spurs instability in the economy. The attempt to change structures and institutions from outside, on the other hand, generates resistance. Increasing the flexibility of organizations, including the political system, is primarily a question of fostering broad consensus about the main objectives and implementation of social and economic policy as well as restoring confidence over the long run as regards these basic questions.

**Resources and  
development  
scenarios**

II

Appraising the development of the production structure from an international standpoint has become more difficult as firms internationalize. The rapid growth in the late 1980s in acquisitions and other Finnish investments directed abroad was primarily motivated by the desire of firms to gain a competitive foothold in the European market before the formation of the internal market. In addition it reflects a permanent change in operative policy. Firm strategy, investments, joint ventures and subcontracting are now planned from a global perspective. National borders basically constitute factors associated with risk in decision making, consumer values and the mobility of goods, which are taken into account in the strategy along with other factors.

The prosperity of industrialized countries will increasingly hinge upon whether they can get out of the way of low cost competitors and concentrate on production areas and manufacturing products where R&D inputs are high. These are typically also products at the beginning of their life cycle enjoying swift growth in demand. This kind of strategy requires extensive inputs in R&D as well as personnel training. Even though basic technology spreads rather quickly, development of successful applications in the marketplace requires additional inputs. Owing to the limited resources of a small country, important factors in the diffusion of technology are foreign trade, participation in international joint ventures, co-operation between firms and co-operation in international research activity.

Finland is in an early stage of the internationalization process. The development of the production structure is affected to a great extent by the dissolving of borders, changes in economic relations, and above all how Finland is viewed as a site for carrying out production activities compared to competitors. For this reason, the evaluation of domestic resources and other factors affecting production conditions provides a basis for forecasting future developments in the production structure. A natural base for the growth of small firms even in an integrating environment is the domestic market.

This section of the book encompassing chapters 6-9 presents those opportunities and threats which the international environment and domestic resources offer for Finland's economic development. Chapter 6 investigates certain institutional and resource-related factors that have an impact upon the production structure. Chapter 7 deals with the development scenarios for the production structure. The public sector in the context of the opening operating environment is evaluated in chapter 8. Since Finland is going through its worst economic crisis during peacetime in this century, it is important in any long-range forecast to consider the risk factors which might in the near future have an impact on the return to a sustainable growth path (chapter 9).

# Factors affecting growth and the structure of production

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## 6.1 Opening of the Economy Continues

Finland was exceptionally self-sufficient in the late 1980s considering its size and level of income. Its foreign trade as a percentage of GDP was of the same magnitude as in Europe's largest industrialized countries, Germany, France and the United Kingdom. Foreign trade relative to GDP in small market economies is almost without exception higher than in Finland. This is partly due to Finland's close proximity to the former Soviet Union, the trade of which was oriented primarily toward the Comecon countries. This meant that the significance of transit trade in Finland's trade has been small, contrary to the situation in the Netherlands, Belgium or Austria. The smallness of Finland's market, remote location, self-sufficient food supply, and specialization into exports of forest industry products in turn explain the modest export and import of products of the same industrial branch, i.e. intra-industry trade with the west.

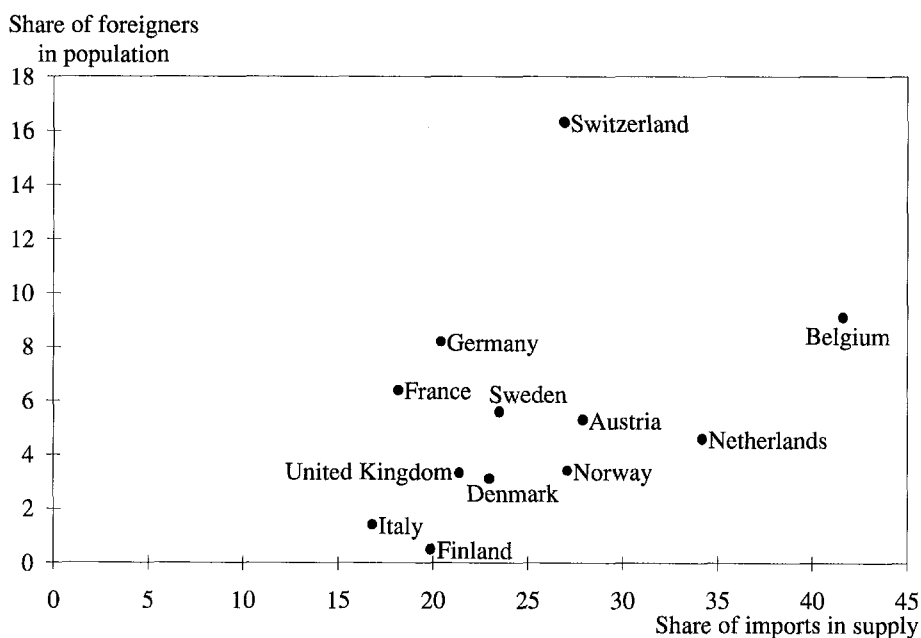


Figure 6.1. *Share of Foreigners in Population in 1990 and Share of Imports in Supply in 1988-1990, %*

Sources: OECD/NA; Sopemi, 1992

Measured by the shares of foreigners in the population, Finland is a very closed economy. Foreigners account for less than one percent of the population even though immigration has been fairly brisk during recent years. The share of foreigners in Western European countries is many times higher. The official amount of foreigners do not give a reliable picture, however, of the openness of an economy since in many countries the number of illegal immigrants is estimated to be higher than those registered in the statistics. Different countries also follow different practices in the granting citizenship so that the number of immigrants can be much higher than the official number of the foreign population. These factors evidently further reinforce the impression of Finland's introverted nature compared to the rest of Europe.

Foreign trade on the broadest possible scale is not a virtue by itself for a small country. The advantage of trade is based on the more efficient use of resources in line with the international division of labour. When cheaper import goods crowd out the more expensive domestic production, resources are freed for applications that are more lucrative from the standpoint of the economy. All trading economies benefit from the deepening of this kind of division of labour and world trade has indeed been liberalized by both global and regional agreements.

### **From Russian Markets to Western Europe**

Finland's export industry has been geared to a large extent toward the Russian markets. Toward the end of the last century, exports to Russia still represented 30-40 per cent of Finland's total exports.

Exports to Russia were more diversified in the 1800s than exports to the west. The latter were mainly composed of exports of butter, tar and sawn timber. Exports to Russia also included products of the textile, paper and metal industries. Exports of these products to the west were almost non-existent still at the turn of the century.

After Finland gained its independence and the Soviet Union was established, the orientation of Finland's exports changed. The Soviet Union became a closed economy. In the interwar period the Soviet Union's share of Finland's total exports was only a few per cent. The western exports of the forest industry products accounted for 80 per cent of Finland's total exports. The exports of the paper industry to the west grew very swiftly and the closing of the eastern market did not mean a catastrophe for this branch. On the other hand, the textile and metal industry became a domestic market branch for a long time.

The diversification of the export structure accelerated in the 1950s. The Soviet Union's share of exports rose considerably, thanks to the metal exports required by the payment of war reparations. The exports of the metal industry to the west subsequently began to grow swiftly so that the share of the sawmill industry in western exports fell.

The break-up of the Soviet Union and the end of bilateral countertrade a few years ago slashed Finland's eastern trade to 5 per cent of total exports,

while as late as the mid-1980s this share had still been a fourth. Some 70 per cent of Finland's merchandise exports nowadays consist of the paper and metal industry's western exports. Despite the branch concentration, the structure of export goods and regional orientation are much more diversified than in the interwar period.

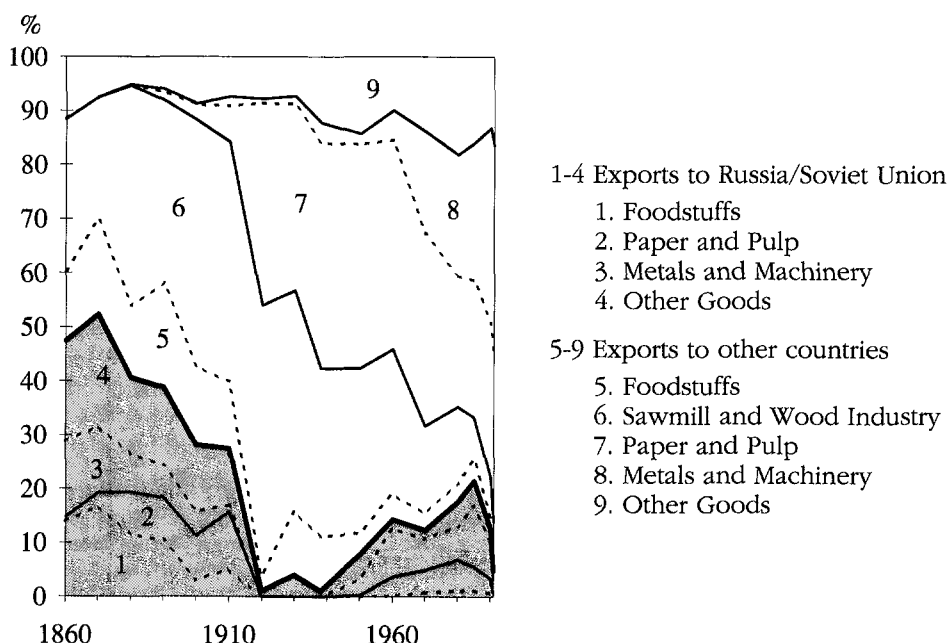
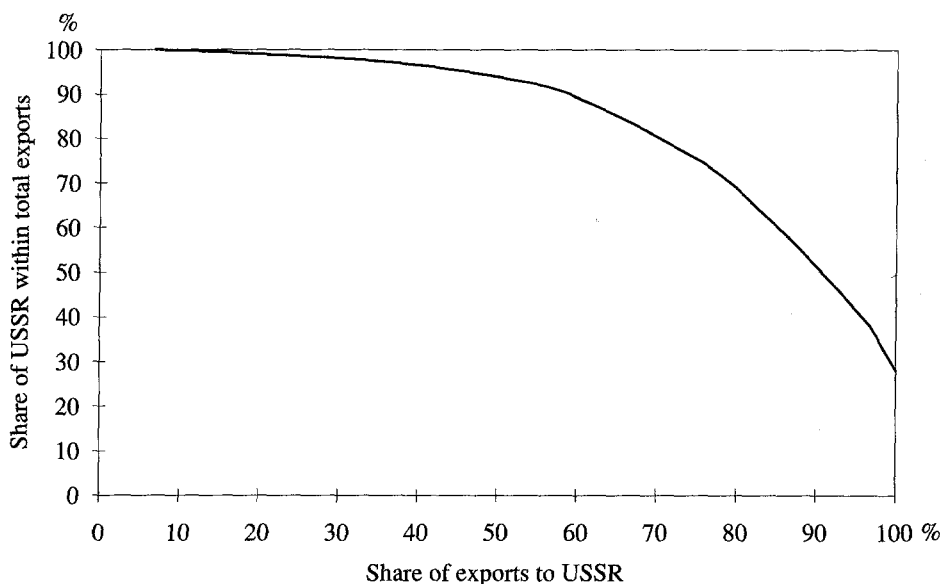


Figure 6.2. Structure of Finnish Merchandise Exports in 1860-1991, %

Sources: Oksanen - Pihkala, 1975; Pihkala, 1969; Tullihallitus.

### Collapse in Finland's Eastern Trade

The Soviet Union's share of Finland's exports was still in the year 1989 almost 15 per cent, i.e. FIM 14.5 billion. In 1991 it was only FIM 4.5 billion. Even though exports to other countries grew during that time, the overall value of merchandise exports fell by almost FIM 7 billion. Exports to the Soviet Union were special with respect to the payment system as well as structure of goods. A tenth of the exports consisted of goods which were not exported anywhere else and over half were goods where the Soviet Union's share of exports was at least 90 per cent (Figure 6.3.). The difficulties in the exports to the Soviet Union meant the vanishing of the market for these goods. The reduction in purchases by the Soviet Union could not be offset by increasing exports elsewhere.



*Figure 6.3. Finland's Exports to Soviet Union in 1989, Cumulatively According to Share of Exports to Soviet Union within Total Exports of Respective Merchandise*

Source: Tullihallitus

There are many reasons why most of the exports previously directed toward the Soviet Union have been unable to find markets elsewhere immediately. The products were in many cases custom-made such as ships or designed to suit the wishes of Russian consumers, such as clothing or footwear. Part of the reason was perhaps that there was no pressing need to ensure the lasting competitiveness of the products' price-quality relation owing to the lack of competition. Another reason was the general weakening of Finland's price competitiveness in the late 1980s.

In 1993 the structure of the exports to Russia and the rest of the republics in the former Soviet Union was completely different than still a couple of years ago. It consists of merchandise that was exported elsewhere. The collapse in exports to Russia meant a considerable shrinkage - on the magnitude of about 7 percent - in the merchandise export markets. Nevertheless part of the capacity previously geared toward the Soviet Union has been able to shift gears fairly flexibly to cater to the demand in export markets elsewhere. The reorientation of exports has nevertheless required product renewal. For example, exports of Finnish ships, which in 1989 consisted largely of tankers, fishing boats and military vessels for the Soviet Union, were 40 per cent smaller in 1991 and consisted of cruise ships and pleasure boats for western export.

Exports from Finland constituted about 15 per cent of the Soviet Union's total western imports still in the mid-1980s. In the first years of the 1990s Finland accounted for only a few per cent of Russia's western imports.

Germany has become the most important import country by far, with an import share of 30 per cent (Kero, 1992). Finland's market share in Russia will perhaps remain much lower than during the times of bilateral countertrade, even though Russia's share in Finnish exports may rise appreciably.

Finland's trade with Estonia and the other Baltic countries has livened up. Their significance for Finland's exports is nevertheless modest. Estonia accounted for less than one percent of Finland's total exports in 1992, which corresponded to Estonia's export share in the 1920s and 1930s (Ahde - Rajasalu, 1992). Estonia nevertheless offers not only expanding export markets but also interesting possibilities for subcontracting and joint ventures. Their number has grown swiftly in the clothing industry and several other areas.

Manufacturing in Estonia and other nearby areas will spur fundamental change in the competitive situation in certain fields. The production costs are so low in these areas that free imports could crowd out domestic manufacturing. On the other hand, these areas offer a location for production oriented toward the Russian and Eastern European markets. Production in neighbouring regions will in any case increase competition in the labour-intensive, low-tech fields.

After the collapse of eastern trade Finland's foreign trade has been focused heavily on Western Europe and also on East Asia. The EC and EFTA countries account for over 70 per cent of Finland's exports and almost the same amount of imports. Germany has become the most important trading partner while the export shares of France, Spain and Italy have grown. The shares of Sweden and the United Kingdom, which previously dominated Finland's western exports, have declined. The new export markets have thus been sought from the largest countries in Central and Southern Europe, where export efforts evidently had been modest as long as the domestic demand was high and the traditional export markets in the neighbouring countries and the United Kingdom were performing well. The growth in exports to new markets has been based to a great extent on the metal industry.

Foreign trade geared toward large areas is quite stable and events like the collapse in Eastern trade are uncommon. The knowledge of markets and close delivery and client relationships foster continuity. Finland is tied to Europe's economy and the direction of Finland's economy hinges upon their development as well. Estimates of Europe's economic development are marked by uncertainties. According to optimistic forecasts Western European integration will increase the competitiveness of the region and foster growth already in the next few years. If Russia's economic reforms bear fruit, economic growth there will pick up, thereby constituting a significant source of growth from the standpoint of Europe and especially Finland. As was shown in chapter 4, however, a bleaker outlook can be justified.

### **External Balance as th Goal of Economic Policy**

The requirement of an external balance will remain a central goal of economic policy as long as Finland has its own currency. Economic

integration will increase competition from imports and the share of imports in aggregate supply. In order to reduce Finland's huge foreign debt, export revenues will have to rise appreciably faster than the value of imports. In Finland at the end of 1992 the ratio of the net foreign debt relative to export revenues from goods and services was about 185 percent, i.e. one of the highest of any OECD country. The higher the indebtedness ratio remains, the greater the portion of export revenues that must be used to pay interest on the foreign debt. High debt servicing expenditures limit import possibilities.

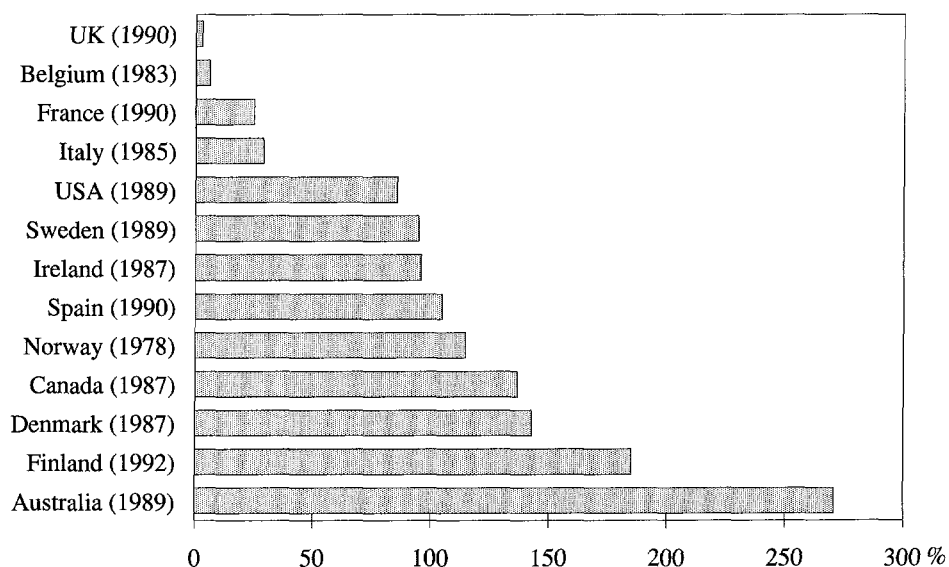


Figure 6.4. Net Foreign Debt Relative to Export Revenues at its Highest Level in Certain OECD Countries, %

Sources: OECD/EO.

Finland's foreign indebtedness relative to export revenues has reached a level that few industrialized countries have reached in recent decades. Of the European countries, the situation begs comparison mainly with Ireland and Denmark. Ireland has got its debt under control with a stringent policy, but this occurred at the expense of employment. The experiences of other countries in bringing their foreign debts under control are similar, even though their indebtedness never approached that of Finland's current level.

The current account deficit is generally regarded as a disturbance related to the cyclical fluctuations or as a means of supplementing domestic saving in the financing of investment during a period of robust growth. Finland's growth rate from the late 1970s until the end of the 1980s exceeded that of Western Europe every year. The current account was running a deficit for several years and it widened quickly in the late 1980s. The widening of the

deficit was caused by the growth differential, deteriorated competitiveness as well as the fact that Finland's economic growth was based primarily on domestic demand. As a consequence, the national debt soared (cf. Figure 1.1).

Finland's present level of indebtedness is so high that its reduction will require the domestic expenditures to be held below incomes formation for a long time. The ceiling on domestic expenditures cannot be allowed to lead to too low a level of investment so that growth possibilities in a longer run do not weaken as the production capacity contracts and ages.

The deregulation of the financial markets has facilitated the financing of the current account deficit, so that the same kinds of risk limits cannot be imposed on the deficit or level of indebtedness as was deemed necessary still in the 1970s. The limits to financing the deficit in the form of high interest rates are sensitive to the level of indebtedness, regardless of whether the borrowers are the government, households or enterprises. In practice this has been evidenced by the lowering of the credit ratings of Finnish borrowers.

Export growth depends not only upon the general growth rate of the markets but also on the country and product structure of exports. There can be considerable variation in the growth rates of different countries. The impact of the changing country structure on exports can be illustrated by the fact that the OECD countries' imports rose in 1960-1992 at an average annual rate of 5.1 per cent if weighted according to each country's share in Finnish exports in 1985, but 4.5 per cent if the actual export shares for each year are used. Finland's OECD exports have thus over the long run been directed toward sluggishly growing markets. As was indicated above, changes in the country structure of exports during recent years nevertheless reflects a swifter reaction to growth differentials of markets.

The sluggish growth in Finland's neighbouring regions hinders the start-up of exporting by new firms. The markets of Sweden or the former Soviet Union have often functioned as a stepping stone for the exports of Finnish firms. In these countries growth is expected to remain sluggish. Since the economic growth of Germany has come to a halt, growing markets will have to be sought from further away.

### **Is the Finnish Economy Prone to Shocks?**

The significance of the structure of output and foreign trade becomes increasingly important under circumstances where exchange rates cannot be changed to adjust to external disturbances. In the recent public debate in Finland the focus has been on the threats associated with the branch structure of exports under fixed exchange rates and, on the other hand, the sensitivity of the production structure to changes in competitive circumstances.

Since Finland's exports consist of goods with higher-than-average price elasticities such as wood processing and metal exports, the economy is feared to be exposed to disturbances that differ from those of other countries. The adjustment to these shocks is hampered under fixed exchange rates if stumpage prices, wages and other costs do not adjust accordingly.

Various studies (Kajaste, 1993b; Tarkka-Åkerholm, 1991) indicate that disturbances coming via foreign trade or other shocks have not been appreciably greater or occurred at different times than in other EC and EFTA countries. In this respect Germany, the Benelux countries, France, Denmark as well as Switzerland, Sweden and Austria form a rather united area as the fluctuations in other countries are stronger and/or different. This kind of conclusion is relatively straightforward when the EC core countries are compared with Germany (Bayoumi-Eichengreen, 1992).

Finland's economic turbulence diminished in the 1980s (Kajaste, 1993b). At least a partial reason for this has been the internal structural change within the forest industry as well as the nature of trade between Finland and the Soviet Union. The share of timber and pulp in the exports of the forest industry has declined swiftly while the share of printing and writing paper with high value added has grown correspondingly. The fluctuations in the price and demand for the latter-mentioned products have been more moderate. The trade with the former Soviet Union has often offset the fluctuations in western trade. This balancing effect has been especially significant in conjunction with the oil price shocks.

Different measures give a different picture of the magnitude of Finland's cyclical fluctuations and their timing with respect to other countries. For example, fluctuations in the volume of exports, inflation or the terms of trade have been, at most, of average magnitude and occurring at approximately the same time as in other EEA countries. On the other hand, fluctuations in the volume of investment and aggregate production have been higher. Even though the fluctuations in the Finnish economy and the divergence vis-à-vis the corresponding fluctuations in Western Europe have decreased during the 1980s compared to the previous decade, the same kind of development has occurred in several other countries as well.

Figure 6.5 presents the exposure to shocks of the EC and EFTA countries (excl. Luxembourg) during 1970-1980 and 1981-1991 depicted as the average deviation of the annual change in GDP and investment from the corresponding changes in OECD Europe.

The graph gives fairly similar results as in other studies on European unity. The core EC countries supplemented by certain EFTA countries comprise a group where economic fluctuations measured by these benchmarks have been the same as the average in Western Europe. One exception has been Denmark, which is generally included in the core, but where fluctuations in investment have been wide in the 1980s and occurring at somewhat different times than in Western European countries. Italy has likewise been situated further away from the core in other studies owing to its wide price fluctuations. Iceland, Ireland and Norway differ from the rest as countries with greater fluctuations. Finland is situated in the middle group.

Finland's economic growth in the 1980s was balanced except for the investment boom toward the end of the decade. This boom was spurred mainly by factors associated with the liberalization of the domestic money markets. The picture changes if the last few years are included since Finland's

economic development has diverged dramatically from developments in the rest of Europe. Part of the reason for this was the break-up of the Soviet Union, which had an exceptionally great impact upon Finland's economy.

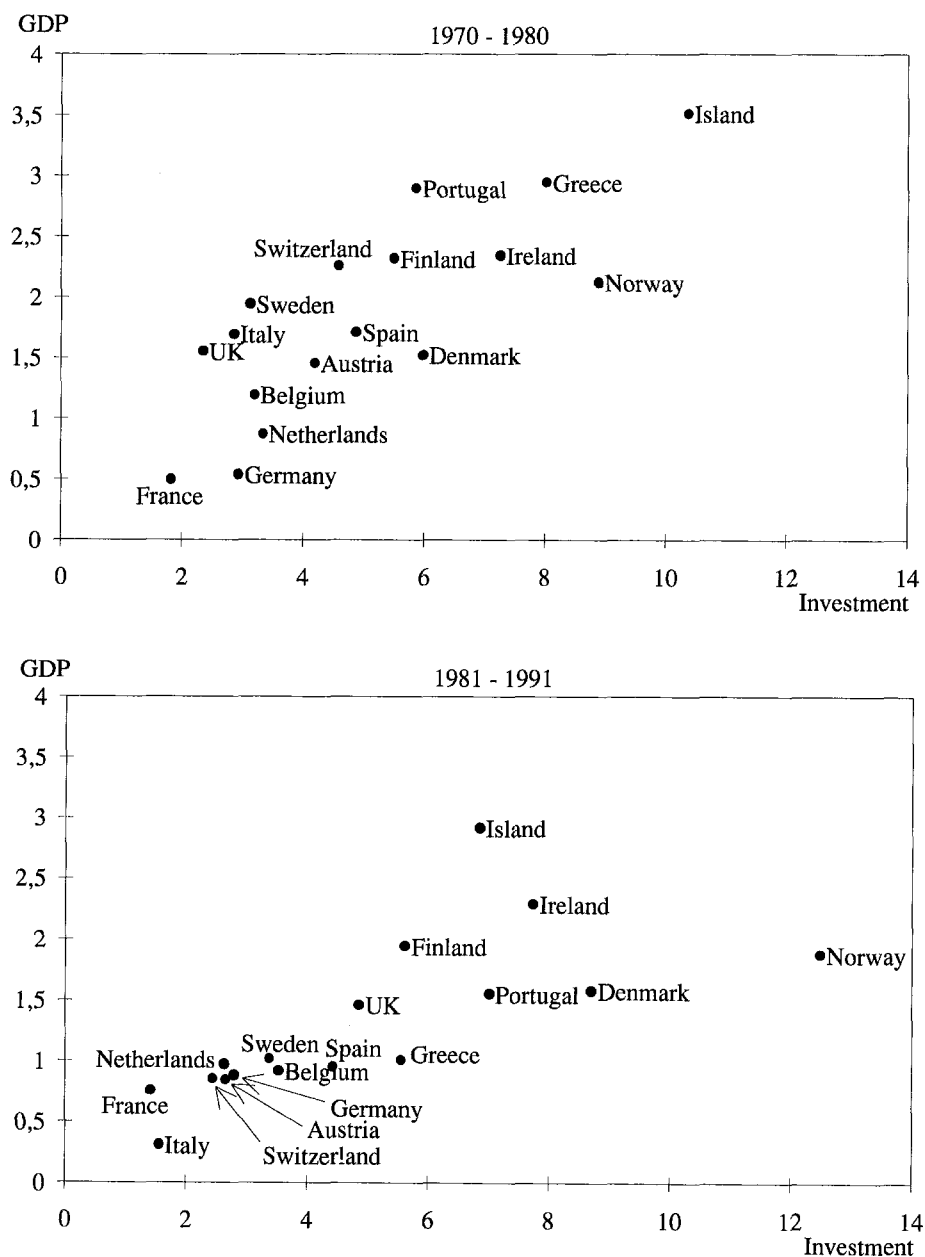


Figure 6.5. Asymmetry of Shocks in EC and EFTA Countries in 1970-1980 and 1981-1991, Measured by Average Deviation of Changes in GDP and Investment from Corresponding Changes in Western Europe, Percentage Points

One way of gaining insight into the national production structure is offered by the studies carried out in the EC and EFTA countries on shares and performance of sensitive industrial branches (branches under increasing pressure after the formation of the internal market). In an EC study 40 industrial branches were estimated to experience profound changes in their competitive environment as a result of the establishment of the internal market. These branches were designated as sensitive. The definition was based primarily on the significance of trade barriers, extent of trade between the EC countries and the price differences across countries. Non-sensitive branches are thus mainly those oriented toward national markets as well as those where trade has already been free and no significant trade barriers have sprung up. This classification scheme is based on national groupings carried out in different countries where the branches deemed sensitive have differed slightly from one another. The classifications performed in the EFTA countries evidently underestimate the share of sensitive branches, since they have not had data available on price deviations across countries (EFTA, 1992).

The share of sensitive branches in Finland within the industrial employment has been the lowest except for Iceland and Norway, about a third. The employment shares of sensitive branches in the other EC and EFTA countries vary from 40 to 50 per cent, except for Germany, Greece and Portugal, where the corresponding shares are 60-70 per cent.

The sensitivity analysis is based on the situation in 1985-1987, which has changed substantially in many respects from Finland's standpoint. On the basis of the results it is nevertheless possible to make certain rough generalizations. The small share of sensitive branches in Finnish industry is partly explained by the exclusion of the forest industry from this group. This does not mean that the preconditions of the forest industry are deemed to be good, but rather that the trade barriers for forest industry products are low and the prices for the same products vary little across the markets of different countries.

In the sensitivity analysis the economic performance and its change in the sensitive branches is also investigated. The static performance is estimated on the basis of the situation in 1985-1987 and dynamic performance based on the change during the early 1980s (Table 6.1).

Static and dynamic analyses give a different picture of the pressures for structural change in the EC and EFTA countries prompted by the formation of the internal market. In several countries where the static performance is estimated as being good, a weakening of the performance indicates great pressures for structural change. These pressures are most prominent in the Southern European countries, which have lost their traditional competitive advantage based on low wages (Kajaste, 1991).

The situation of Finland and Norway with regard to both dimensions of performance is rather poor. In both countries the share of weak branches is nevertheless rather small since the main export branches of both were not included in the investigation. The results for Finland can be interpreted to

mean that since the share of the forest industry in Finnish net exports to the EC countries in particular is high, the other branches are net importers. The performance indicators based on this specialization provide Finland with rather poor starting base. Net imports in several of the sensitive branches dwindled during the 1980s even though they are still clearly under-represented compared to the average for the EC countries. The developments in the forest industry have a considerable impact on the outlook for the Finnish economy as this branch continues to dominate Finnish exports to the EC.

Country	Performance Indicator	
	Static	Dynamic
Germany	139	108
Italy	105	-22
Belgium	76	51
Sweden	58	72
Denmark	52	92
Netherlands	49	-139
Greece	29	-142
Portugal	8	-220
Spain	-9	-212
Austria	-12	-5
United Kingdom	-47	-8
Finland	-65	-16
Norway	-152	-75

Table 6.1. *Performance of Sensitive Branches and Its Change during the 1980s in Certain EC and EFTA Countries<sup>1</sup>*

<sup>1</sup> The estimate of the static performance of sensitive branches is based on four indicators. A national industry is deemed to be efficient if i) it is a net exporter to EC countries, ii) net exporter to other countries, iii) the branch's share of the country's EC exports is higher than the share of this branch in reciprocal trade between EC countries or iv) the share of the branch within the country's industrial production is greater than the average in the EC countries. Each branch is given values of +1, 0, or -1 for each indicator. The performance index for each branch can vary between +4 and -4. The dynamic performance estimate is based on changes in the first three indicators in the early 1980s. The change is given a value of +1, 0, or -1 and the index of each branch can vary between +3 and -3. The performance indicator for sensitive industries presented in the table is obtained by weighting the branches' performance according to the employment shares within total employment of sensitive branches. Sensitive branches in all the countries are the same as those defined in the EC as sensitive to integration.

Sources: Buigues et al., 1990; EFTA, 1992.

How does integration affect the structure of Finland's production and foreign trade? Since Finland's orientation toward Western European markets is already very strong, the changes in the regional structure of foreign trade will probably be very modest. On the other hand, it is not clear whether integration will spur growth in the already budding intra-industry trade and diversification of the export structure or whether Finland's comparative advantage founded on specialization in natural resource-based exports will be emphasized.

The diversification of the export structure would happen faster if Finland attracts foreign investment, for example geared toward the Russian market.

The smallness of Finland's markets and remote location are not very attractive by themselves. Other factors can, however, compensate for this. The prospects for the development of the production structure are evaluated in more detail in chapter 7.

## **6.2 Labour Markets**

### **High Unemployment Spurs Displacement from Labour Markets**

The share of the labour force within the population is high by international comparison in Finland, as it is in other Nordic countries. Over half of the population has belonged to the labour force in recent years. In the EU countries this share is about 45 per cent, but it varies from over 56 in Denmark to 38 per cent in Ireland. The most important reason for the large variation is the propensity of women to work. In the Nordic countries this has been higher than in Central and Southern European countries. Moreover, in Finland nowadays the share of persons aged 35-50 in the population is exceptionally high. Their working is not limited by education or child care like those who are younger, nor is work disability as common yet as among older persons.

The employment rate measured as the share of employed persons within the population varies to an even greater extent across Europe since unemployment is often high in countries with low labour force participation rates. The employment rate is 32 per cent in Ireland, and about 50 per cent in Denmark and Sweden even though it has declined in recent years in both countries. Almost half of the population in Finland was employed at the beginning of the decade but by 1992 this ratio had fallen to 43 per cent, i.e. near the average for the EC, which was around 40 per cent. Also in many European countries unemployment has increased and the employment rate declined.

The labour force participation rates of men in Finland up until age 55 are at practically the same level as in the other Nordic countries or EC countries. For older age groups in Finland the rates display a steep drop: for example, the labour force participation rate of persons aged 60-64 in Finland is half of that in other Nordic countries. Besides Finland, the labour force participation rates of older men are low also in the Netherlands and France. The retirement of men aged 55-59 is extraordinarily common in Finland. On the other hand, in several other countries the prevalence of pensioners is as high as in Finland, even though the labour force participation rates may be higher (Jokelainen, 1991).

The labour force participation rates of women are lower than in the other Nordic countries, especially in younger and older age cohorts. The difference is due partially to the low prevalence of part-time jobs, which in the other Nordic countries offer flexible work opportunities to students, parents with small children and elderly persons. In Central and Southern European countries, such as Spain and the Netherlands, the labour force participation

rates of women are low. In these countries young women's educational levels are rising and it is already common for them to work, which indicates that the labour force participation rates may continue to rise.

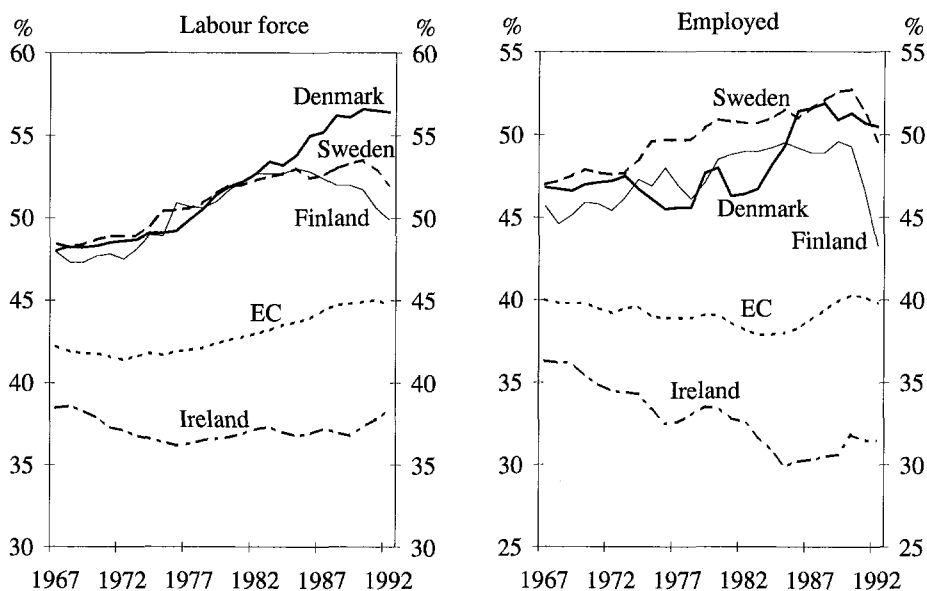


Figure 6.6. Labour Force and Employed Persons Relative to Population in Finland, Sweden, Ireland and Denmark as well as Average for EC Countries in 1967-1992, %

Sources: OECD/EO; OECD/LF.

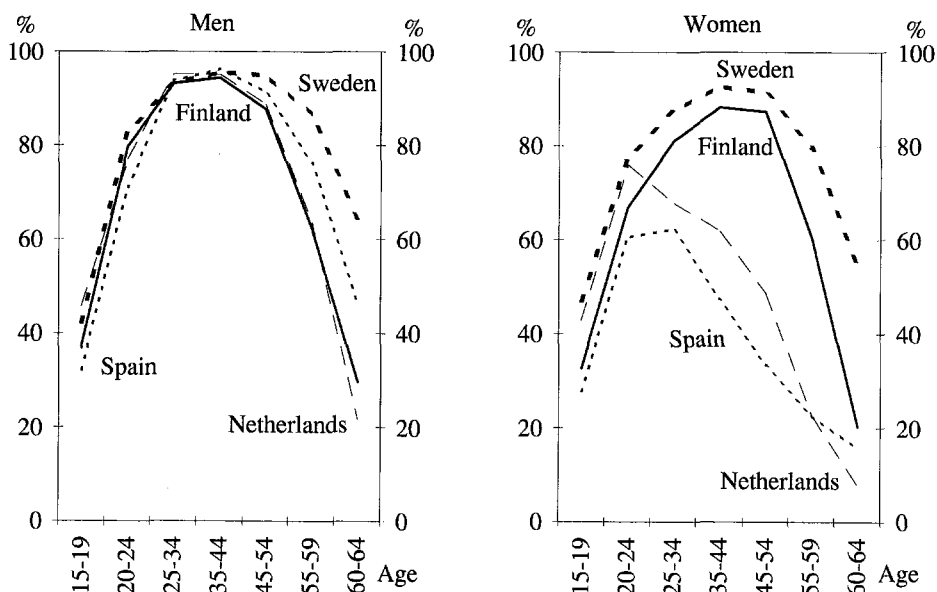


Figure 6.7. Labour Force Participation Rates by Age and Gender in 1991, %

Source: OECD/LF.

The growth in the number of Finns of working age will remain low and the population will get older, which will lower the propensity to be in the labour force. The only factor maintaining significant growth in the supply of labour would be a rise in the labour force participation rate of older persons. The labour force participation rate of women over 55 years old is on the same level as the average in the OECD countries, although considerably lower than in other Nordic countries. On the other hand, the labour force participation rate of Finnish men of the same age is low by international standards. If their propensity to participate in the labour force rose by the year 2005 to the present level in the OECD countries, the labour supply would be 65 thousand greater than if the labour force participation rate remained at the level prevailing in the early 1990s. Since the growth in the entire labour force from 1990 to 2005 is expected to be 60 thousand (Ministry of Labour, 1991), the propensity of older persons to participate in the labour force will have a decisive impact on the development of the supply of labour.

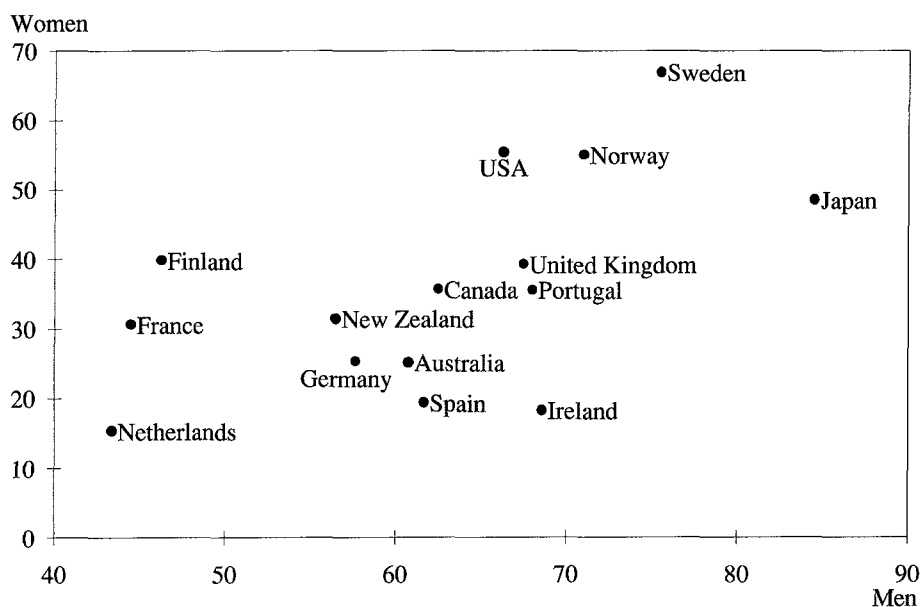


Figure 6.8. Labour Force Participation Rates of Men and Women Aged 55-65 in 1991, %

Source: OECD/LF.

The supply of labour in the early 1990s is well below its potential level owing to the recession. The propensity of especially young persons to enter the labour market has fallen off sharply owing to the shortage of jobs. For this reason, the growth in the supply of labour can, owing to the low starting level, be much faster than assumed in projections made before the recession. Some of the chronically unemployed persons may nevertheless be driven completely out of the labour market. The realized supply of labour in Finland will perhaps hinge very closely upon the developments in the demand for

labour over the next few years. The size of the working age population (aged 15-64) will grow during this decade by a few tens of thousands of persons, after which growth will come to a halt. Since the real supply of labour is almost 100 thousand below the potential level, the development of the working age population nevertheless does not give a good picture of the room for growth in the labour supply. The gap between the potential and realized supply of labour will narrow as the demand for labour recovers. If labour demand continues to decline or remain at a low level, part of the potential supply will be lost permanently. The available labour force resources will be correspondingly smaller at the beginning of the twenty-first century.

Figure 6.9 presents two scenarios for the supply of labour. The upper line depicts a situation where rapid growth in the demand for labour spurs growth in the supply of labour in the next few years. This means that unemployment will remain at a high level until the supply pent-up during the recession is unleashed. Only long-term growth in demand will begin to reduce unemployment. The second scenario depicts a situation where the demand for labour remains modest. The gap between potential and realized supply will continue to grow. In practice this means that part of the persons in the younger age groups would not enter the labour market but would instead remain in school for a longer-than-intended period. Also part of those taking a leave of absence to take care of their children would continue doing housework and a growing portion of older unemployed persons would opt for unemployment-related retirement.

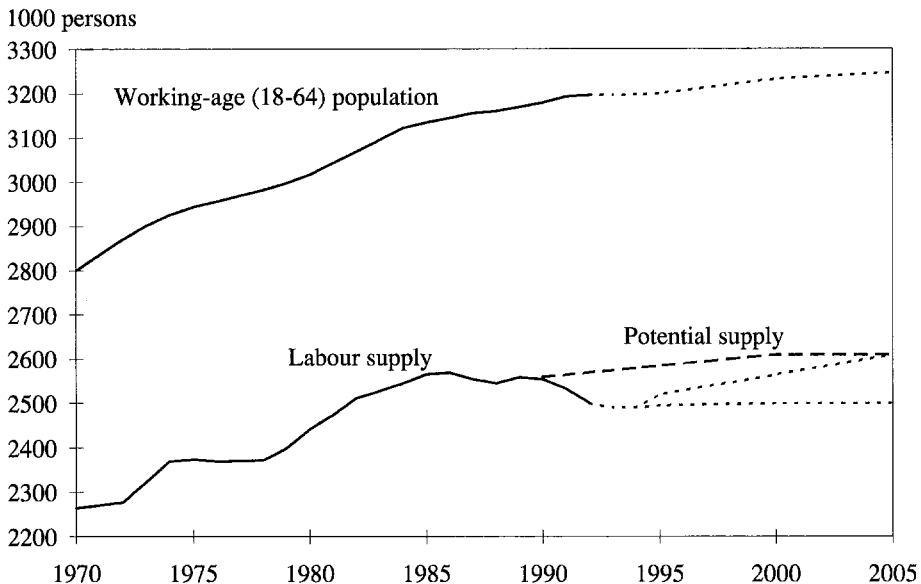


Figure 6.9. Size of Working-Age Population and Labour Supply in 1970-1992 and Forecast for 2005, thousand persons

Sources: Tilastokeskus/TY, VÄ; Työministeriö, 1991.

### Finland's Labour Market Internationalizes

The supply of labour will be affected during the next few decades by the international population and labour supply flows more than domestic factors. Finland has almost 40 years of experience with a common Nordic labour market, which can be considered unique in the post-war period. For instance, the free movement of the labour force within the EC has in practice been considerably more limited and the EFTA agreement does not provide for free mobility of labour between the EFTA countries.

Despite the common Nordic labour market, Finland's labour market has remained national. The share of foreigners in Finland's population is smaller than in other Western European countries. The share has nevertheless risen during the last couple of years owing largely to immigration by Ingrians and other citizens of the former Soviet Union to Finland as well as the inflow of refugees. When Finland's situation is compared to that in its EFTA partners Austria, Sweden or Switzerland, the closed nature of the Finnish labour market becomes readily apparent.

Country	1980	1990
Switzerland	14,1	16,3
Belgium	9,0 (1981)	9,1
West Germany	7,2	8,2
France	6,8 (1982)	6,4
Sweden	5,1	5,6
Austria	3,7	5,3
Netherlands	3,7	4,6
Norway	2,0	3,4
United Kingdom	2,8 (1984)	3,3
Denmark	2,0	3,1
Italy	0,5	1,4
Finland	0,3	0,5

Table 6.2. *Share of Foreigners in Population in 1980 and 1990, %*

Source: Sopemi, 1992.

Migration to Finland continued rather swiftly in 1991-1992 and at the end of 1992 the share of foreigners in the population rose to almost one percent, which is still low internationally. The share of foreigners can nevertheless rise rather quickly in the rest of the 1990s. If, for example, the net immigration of foreigners were about 10 thousand persons per annum until the year 2000, the population share of foreigners would then climb to about 2.5 per cent. This large a migration flow is rather modest when compared to the numbers of persons seeking asylum around the world in recent years. The influx of refugees is not dependent upon the employment situation in countries but rather the refugee policy.

Since the growth in the domestic supply of labour will be only 5-10 thousand persons per annum, depending on the demand for labour, the impact of immigration on the supply of labour is great. The internationalization

of labour markets also in Finland is a likely trend. This can happen in different ways depending upon whether immigration is spurred by a lack of security in the home country of a migrant, the desire to raise the standard of living or the demand-pull of Finland's labour market.

From Finland's standpoint, the most significant factor relates to estimating migration pressures in Russia. There have been numerous attempts to estimate the development of migrant flows in Russia and the former socialist countries. The highest estimates for the numbers of migrants run in the several millions if nationalistic tensions flare up, economic reforms fail and the borders are opened. Results of interviews indicate that about 3-5 per cent of the population would like to move abroad, at least temporarily. Previous large-scale migration flows, such as from the Mediterranean to Central Europe and America or from Mexico to the United States, have been estimated as being of the same magnitude (Layard et al., 1992). If migration on this scale took place over the next 10-20 years, this would mean several hundreds of thousands of migrants per annum. Finland would be a primary destination for only a small portion of wishful migrants. Nevertheless the very size of the population in neighbouring regions means that part of the migration pressure plus refugees coming from outside of Europe could add up to a few tens of thousand immigrants each year.

An increase in the foreign labour force may have considerable impacts upon our economy and labour market. This will be the case especially if immigration occurs freely. Immigration is seen to depend largely on various attachments to the home country based on employment and wage differences in the countries of departure and arrival, the information flows between the countries, and factors reflecting physical and cultural remoteness which affect the propensity to move.

The effects of immigration depend not only upon the number of migrants, but on their age, education, professional skills and other characteristics. Often foreign labour is concentrated within certain branches or tasks of a certain level. A large portion of the foreigners in Finland have been persons with fairly high education engaged as experts in foreign companies. During recent years the portion of those from Russia and developing countries has grown. These immigrants have been placed largely in low-skilled tasks. From the standpoint of the Finnish labour market, language problems are often a factor limiting job placement.

Since the employment situation in Finland will remain weak, the demand-pull for labour will be modest. On the other hand, the large wage differences between Eastern Europe and Finland as well as the strong increase in open unemployment in the East will constitute significant supply-push factors. It is likely that immigration will continue during the next few years unless it is restricted. The work permit procedures offer an effective means of limiting normal immigration. Black markets in labour may nevertheless expand as persons seek to get around these restrictions (Hietala, 1992).

Austria was marked by net emigration to West Germany and Switzerland still in the 1950s, but in the 1960s immigration began to climb and by the end

of the decade there were as many Austrians working in neighbouring countries as there were foreigners working in Austria. Those moving to Austria came primarily from Yugoslavia and Turkey. The change in the Austrian labour market in the 1960s was quite swift since the foreign labour force increased 20-fold from 10 thousand in 1961 to over 220 thousand in 1973, when the share of foreigners in the Austrian labour force rose already to almost 9 per cent (Sopemi, 1974).

One possible scenario for the future is that the developments in Finland in this decade are the same as in Austria in the 1960s. At the same time as the share of foreign labour in Finland grows, especially in low-skilled jobs, the educated Finns will seek work from within the EEA. A recovery in Europe would stimulate demand for labour there at the same time as Finland's high unemployment increases the willingness to emigrate.

### **Labour Market at a Turning Point**

The main goals of labour markets in the Nordic countries have been high employment, equality and security. Influence over the functioning of the labour markets is indeed wielded in many ways. Labour legislation, wage settlements, unemployment security, taxation, the educational system and housing markets are all central elements reflecting upon the labour markets.

Finland's labour market is characterised by a high rate of trade union membership, which contrary to international trends has risen during recent years. Finnish labour market policy during recent decades has been marked by comprehensive wage agreements between the central organizations for employers and trade unions, which have in many ways been reflected in social and labour legislation as well as fiscal policy. The benefit of this type of arrangement compared to decentralized negotiations at the level of trade unions or firms is that equality-related goals and a comprehensive view of the economy can better be taken into consideration in wage agreements. During recent times the significance of the uniformity of employers' negotiating goals has gained greater emphasis in terms of the overall economic performance generated by the negotiating system (Tyrväinen, 1993).

In countries with centralized systems, which includes mainly the Nordic countries and Austria, the real wage flexibility has previously been estimated to be greater than in countries emphasizing trade union-level settlements. The better the real wage flexibility, the lower the rise in unemployment sufficient to prevent the passing on of price shocks into nominal wages. Countries with decentralized systems have also reached a favourable mix of employment and inflation measured in this way.

The pressures to emphasize a system with firm- and workplace-specific agreements have increased all over along with decentralization, liberalization of financial markets and increased openness of economies. The problems of a centralized system is seen to be, among other things, the narrowing of wage differentials despite differences in productivity, the rise in relative wages in the sector sheltered from foreign competition, regulations on business hours

and work times that prevent the efficient use of the capital base. Also the access of young persons to the job market may have been made more difficult because of high starting wages.

A centralized negotiating system can, on the other hand, be assumed to also improve the allocative efficiency of the economies. Firms that are not able to pay wages in line with the agreement have to make their operations more efficient or else shut down. This surely happens in the sectors open to competition and, for instance, the wage differentials between industrial branches in the Nordic countries are small compared to those in Central Europe (Kajaste, 1993a). Areas sheltered from competition, where there are often monopolies oriented toward the domestic market, do not work according to the same mechanism, and the distribution of resources between the open and sheltered sectors can become distorted. Adjustment to the new competitive situation can be painful, as recent developments in Finland have shown.

The corporative system has yet to be tested in the new open environment. The centralized labour market system has been strained especially in Finland and Sweden by the rapid rise in unemployment and as a result of the borrowing of the public sector. There have been attempts to save jobs by implementing workplace-specific wage cuts and flexible working time arrangements or other cost reduction measures.

The financing of social security in Finland, like in other industrialized countries, is based on contributions and taxes determined for the most part according to the wage bill, which causes a tax wedge. Safeguarding a certain disposable wage for an employee comes at a considerably higher cost to the employer. Since personal taxation varies from one country to the next owing to different deduction systems, it is difficult to compare the magnitude of tax wedges precisely. Figure 6.10 is based on calculations by the OECD. The figures for Finland include the pension contributions of employers, even though they go to private pension institutions.

The Finnish unemployment security system does not differ greatly from that in other countries. The basic benefits are not, however, limited to a certain maximum period of time and they are higher than in many other countries, where basic assistance is given in the form of social welfare aid. The terms for wage-related benefits are similar to those in other countries. The difference is that in Finland wage-related unemployment insurance is voluntary like in Sweden and Denmark. In other countries unemployment insurance is based on compulsory insurance schemes. The wage-related unemployment compensation is determined in Finland on the basis of the difference between the basic benefits and previous earnings. In many countries the wage-related unemployment compensation is a fixed portion of previous earnings, up to a certain income ceiling, after which the compensation ratio begins to decline. This means that Finland's unemployment compensation relative to wages is higher for low wage levels but for average or above-average wage levels on par with or somewhat below the levels paid in most other countries (OECD, 1991a).

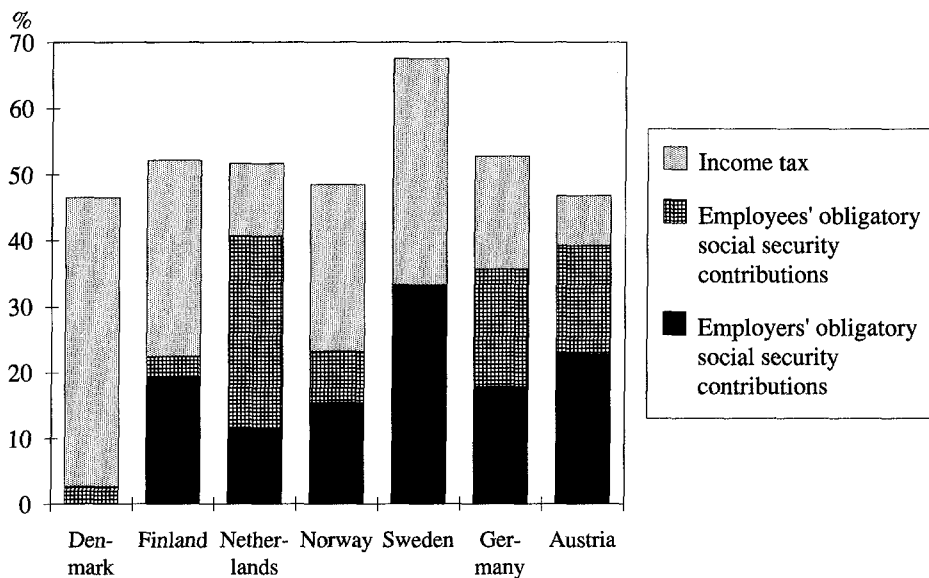


Figure 6.10. Payroll Tax Wedge (Share of Income Taxes and Social Security Contributions Relative to Wages and Social Costs) in 1991, %

Source: OECD, 1992c.

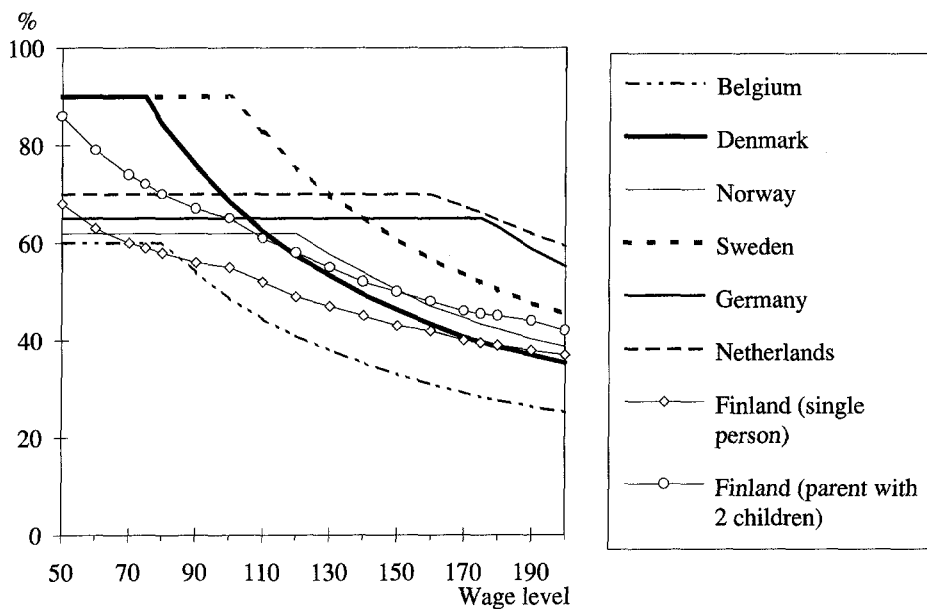


Figure 6.11. Insurance-based Unemployment Compensation Relative to Wages for Various Wage Levels in the Late 1980s, %, average wage level = 100.

Source: OECD, 1993a; calculations by VATT.

For average levels of income unemployment compensation in Finland is about 60 percent of wages, which is approximately the average for the EEA countries. For single wage earners it is slightly lower but for those supporting a family it is higher owing to child-related compensation in the basic benefits. The availability of wage-related earnings is limited to a certain period of time in almost all OECD countries. In Finland wage-related compensation comes to an end after 500 days, which is about the international average. Unemployment compensation is taxable income as it is elsewhere except in Germany, where it is tax exempt if the unemployed person has no other income.

The rapid rise in unemployment compensation expenditures has increased the pressures in many countries to tighten the eligibility requirements or lower the level of compensation. Similar pressures have appeared in Finland as well. The most indisputable finding of studies of the impact of unemployment security on unemployment has been that limiting the compensation period or reducing the compensation after a certain period of time fosters employment (OECD, 1993b). This is due to the fact that the attractiveness of low-wage jobs rises compared to unemployment.

## **6.3 Human Capital**

### **Finnish Educational Level by International Comparison**

Continually upgrading of human capital via education and on-the-job training is a prerequisite for sustaining growth in the welfare of a nation. Even though the models for the new growth theory are being developed all the time, there are considerable problems with measuring human capital and its performance and empirical results of growth models are still rather ambiguous. In all developed countries, however, education and R&D are emphasized as key factors determining economic growth.

Finland's education sector appears to be competitive when measured by several indicators. The number of students past the basic level of education is high. Finland's network of universities relative to population is one of the densest in the world.

Due to differences in the school systems, it is difficult to compare the educational level of populations across countries. According to a recent comparison made by the OECD, the educational level of Finland's adult population (aged 25-64) is much higher than in Southern and Central European countries, on par with that of Denmark, but somewhat lower than that in Norway and Sweden.

In the comparison countries education ends normally at age 15-16. The apprenticeship arrangements prevailing in certain Central European countries (Germany, Switzerland, Austria) explain why those completing the secondary level of education comprise a majority in these countries. The upper level of education can cover very different types of degrees in different countries. For example, a large portion of the upper level education in North America

consists of two-year junior college studies, while in Austria and Italy this includes only university degrees. The comparison presents only a rough picture of the educational level of the population. The clearest criteria is the population share that has completed more than the basic level of education. According to this comparison the best educational level of the Europe countries prevails in Switzerland, Germany and Sweden, and of the overall OECD in the United States, Canada and Japan.

Country	Highest Educational Level Completed			
	Basic level	Secondary level	Upper level	Total
Finland	42	40	18	100
Denmark (1988)	43	40	17	100
Norway (1990)	35	42	21	100
Sweden	33	44	23	100
Netherlands (1990)	45	36	19	100
Belgium	63	20	17	100
Italy	74	20	6	100
Switzerland	20	50	24	100
Germany	22	61	17	100
Austria	35	60	5	100
Canada	28	41	30	100
USA	18	46	35	100
Japan (1987)	30	48	21	100

*Table 6.3. Distribution of Adult Population by Level of Education in 1989, %*

Source: OECD, 1992b.

The scant information available on results of the comprehensive education system, the overall education structure of the population as well as the emphasis on vocational schools in education reflect positively upon Finland. It is another matter how well the school system and working world are linked with one another. Finland has until recently neglected the ties between workplaces and teaching in lower-level and vocational schools in fields where practical training is not required for graduation. Instead of broadening education or extending the length of schooling, the main emphasis should be on developing the content of education and on bringing education and work closer together. During times of high unemployment this is more important than ever.

### **Educational Differences across Various Age Groups Are Wide**

Even though the coverage and level of comprehensive education in Finland has long been competitive with other countries, higher vocational training has received greater attention only in recent decades. For this reason the formal educational level in the older age groups is low. The educational level of young persons, on the other hand, is good. Young women in Finland have a higher education than young men, but for older persons the relation is the opposite (Figure 6.12).

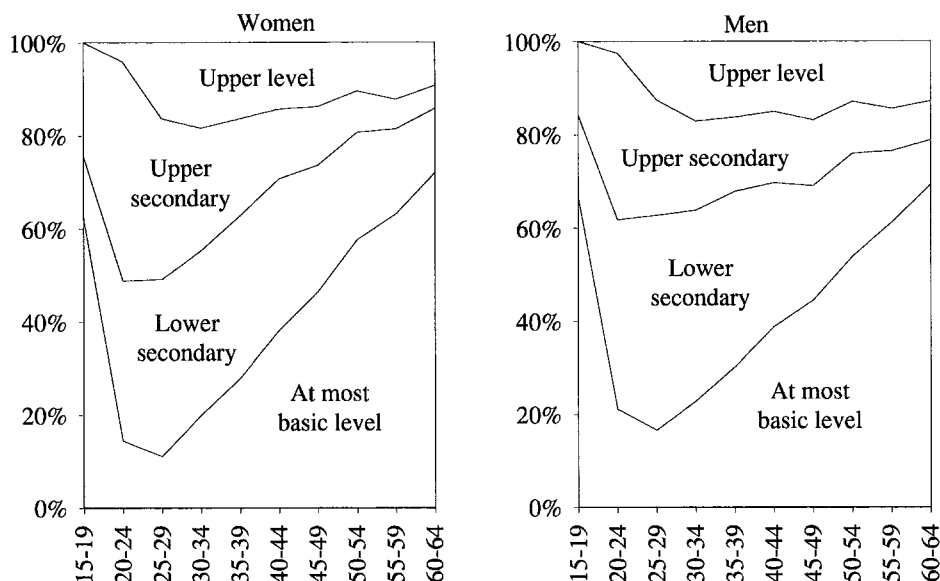


Figure 6.12. Educational Level of Labour Force by Age and Gender in 1990.

Measuring the level of human capital with the labour force's average number of school years or the shares of persons who have completed a certain level of education gives an incomplete picture of the knowhow of the labour force. A significant factor in the accumulation of professional knowledge is the on-the-job learning and personnel training. There are no statistics on these aspects of human capital that are internationally comparable. The scant information available nevertheless indicates that Finland is not a laggard in this respect either. Job training has been given a wide role in Finnish labour policy according to the OECD statistics, albeit considerably less than in Sweden.

Personnel training has expanded considerably in Finland in the 1980s. While under 30 per cent of employees participated in personnel training in 1982, this share had risen to almost 45 per cent by 1989. The economic recession has reduced personnel training somewhat so that in 1991 about 42 per cent of employees participated in training (Ministry of Education, 1993).

The educational level of Finns will continue to rise during already one generation. About 80 per cent of those in the youngest age groups have at least a middle-level vocational education while less than half of those approaching retirement age have a corresponding education. From the standpoint of the labour market the problem is large educational differences across age groups. The renewal of production methods often requires a certain basic knowledge about new information technology, in which the older age groups have not received sufficient training. The expansion of adult training and particularly the customization of personnel education to suit employees' needs eases the carrying out of reforms.

As the international division of labour deepens, the upgrading of the standard of living and development of economies like Finland will be based increasingly upon continued accumulation of human capital. Expansion of adult vocational training is of key importance in this endeavour owing to the ageing of the labour force. Under conditions of high unemployment there are plenty of persons desiring and needing education. Education nevertheless tends to accumulate: those who participate in adult education programmes are those with already the most education.

The quality of human capital and thus the possibilities to raise productivity over the long run have been weakened by the deep recession. High unemployment reduces the growth in human capital achieved by on-the-job training. Particular attention should be given to creation of training positions for young persons as well as generally curbing the growth of long-term unemployment.

The needs of firms are the main criteria in personnel training. As changes in production modes and other structural changes lead to shifting of negotiation systems towards the level of the firm, training issues will increasingly be a matter for individual employees and employers to decide. As the prevalence of fixed-time and other temporary jobs increases, training will become a more important factor promoting continuity of job relationships.

The training needs of unemployed persons is often high and training decisions are of crucial importance for a career. From their standpoint organizations which lend support in applying to schools and give information about education and training opportunities play an important role. Due to the public debt problem, the financing of extensive adult education programmes for unemployed persons should be organized so that in practice unemployment compensation becomes social study aid. This notion is not problem-free since people who commit themselves to educational programmes are not available to the labour market during the time they study. Under the current unemployment situation this will not, however, create bottlenecks in the labour market. The financial responsibility of the individuals themselves will increase, especially in personnel training and adult education programmes.

Most of the adult vocational education will comprise basic schooling or retraining for completion of a certain vocational programme or various kinds of additional education. The content of education should nevertheless cover not only professional subjects but also emphasize international aspects, entrepreneurship and subjects related to state-of-the-art technology. The portion of schooling that is directly related to a certain vocation should also have a wider scope. It should include elements about different phases of production enabling persons to gain a firm command of the overall process. The dividing line between comprehensive and vocational adult education will become blurred.

#### **Finnish R & D Increased Swiftly**

Finland invested heavily in technical knowledge in the 1980. The growth of R&D expenditures in Finland was the fastest of any OECD country in the

1980s. These expenditures relative to GDP almost doubled during the decade, and now stand at 2 per cent. This ratio is as high as in Norway, higher than in Denmark and Canada, but still considerably lower than in Sweden, the United States, Japan and Germany.

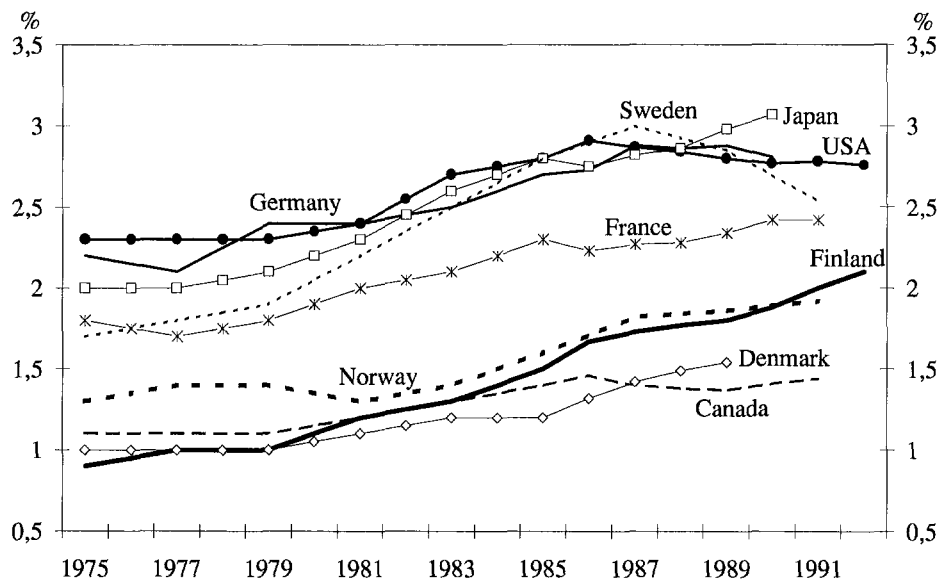


Figure 6.13. R&D Expenditures as a Percentage of GDP during 1975-1992, %

Sources: OECD, 1989; OECD/STI.

The private sector accounts for over 60 per cent of R&D expenditures in Finland. For example, in the United States and Austria the corresponding ratio is about half (Polt, 1992). The high portion of R&D investment by the enterprise sector in Finland is reflected in the rapid growth in the export shares of high-tech products. The OECD secretariat has divided branches into three groups depending on how high R&D expenditures were relative to turnover in the 11 largest OECD countries in the 1970s (OECD, 1992d). R&D expenditures in high-tech branches have been over 4 per cent relative to turnover. This group encompasses such industrial branches as manufacturing of pharmaceuticals, data processing and office equipment, electrical machinery, communications equipment, airplanes and instruments.

In 1981 the share of high-tech industries' products within Finnish exports was under 4 per cent, but in 1990 this ratio was already 11 per cent. The growth was the fastest of any OECD country. During the recession the growth in the share of exports has accelerated, climbing in 1992 to 15 per cent, i.e.

the same level as in Sweden. Finland is still lagging well behind the over 25 per cent shares of large countries such as the United States and Japan (KTM, 1993a).

The R&D expenditures by the Finnish enterprise sector were very unevenly distributed in 1989. According to Statistics Finland, firms with over 500 persons accounted for 86 per cent of R&D expenditures by the enterprise sector. As few as 10 firms accounted for half of enterprises' R&D expenditures. The share of metal and machinery manufacturing within industrial R&D expenditures was 56 per cent in 1990, while its share of fixed investment was only a fourth. The corresponding figures for the chemical industry were 24 per cent and 12 per cent. On the other hand, the forest industry's share of investment was almost 40 percent, but its R&D expenditures were below 10 per cent (Vuori - Ylä-Anttila, 1992).

### **How Can Knowhow Be Upgraded Further?**

Finland's prosperity in the future will depend closely upon how well it is able to exploit the best technology in the manufacture of products in high demand. The achievement of this goal will require an efficient educational system and extensive research by universities and research institutions. How successful Finland is at reaping the benefits of research will nevertheless hinge upon the actions of manufacturers themselves.

One of the main prerequisites for a successful industrial policy is to spawn such kinds of structures in Finland which ensure that Finns can remain on the leading edge as developers of new technology. An efficient innovation system requires not only support of R&D but also better co-operation between research institutions and firms, keeping up with recent advances in international markets and building of close relations with end-users of Finnish products (KTM, 1993a).

Until now large firms have played a dominant role in R&D activity in the enterprise sector. At the same time large firms have created a considerable growth foundation for small innovative firms. These firms may, however, have been harmed by their narrow customer base since they lack the resources for extensive marketing efforts. In order for a small country like Finland to remain internationally competitive, the domestic and foreign contacts of delivery and subcontracting firms should be used to advantage in the diffusion of knowhow.

A precondition for expansion of R&D activities and rapid development of applications is the continuous upgrading of the quality of education. This includes creating the prerequisites for continuous study and self-development at home and abroad. High unemployment poses the worst threat from this standpoint as well. Difficulties in finding a job upon completion of school weakens educational motivation and encourages brain drain. The accumulation of human capital is slowing down also since an increasing portion of the labour force loses the possibility for learning at work. This will have a negative impact upon the Finnish economy over the long run.

## 6.4 The Role of Investments and Infrastructure

New technology is taken into use by way of investment and most world trade is conducted in products manufactured via capital-intensive production methods. In the 1970s there was still a clear connection between the investment rate and growth rate in industrialized countries. This link appears to have grown weaker in the 1980s. Countries have achieved approximately the same growth rates with very different investment rates. The significance of human capital accumulation and innovation are indeed gaining greater emphasis as factors of economic growth.

Finland's investment rate has been high. This has been spurred by the need for investment in infrastructure (e.g. housing), the capital-intensive industrial structure, and often low real rate of interest during the previous times of regulated credit markets. Real interest rates have for some ten years been at least as high as the rate of GDP growth. A higher real rate of interest raises yield requirements and thus raises the efficiency of investment. Changes in taxation have also reduced the relative attractiveness of liability-based financing, so that investment can be expected to become more efficient via this channel as well.

If industrial investment is divided according to export and domestic market-oriented investment on the basis of the shares of exported production, the investment by the open sector in Finland has been low. In practice the same output can often be marketed at home and abroad. This division nevertheless gives an indication of the resources directed toward domestic markets and export-oriented production.

Investment in Finland has been relatively high by international comparison and also subject to wide fluctuations. Investment peaks have occurred in the early 1960s, mid-1970s and late 1980s. The strength of this most recent investment boom was marked by the simultaneous high investment by firms abroad. Investments carried out abroad constituted about a third of the investment by Finnish industry.

### **Direct Investment Abroad, Part of Internationalization of Economy**

Finland became a net investor abroad over a decade ago. The real internationalization of Finnish firms began late compared to other industrial countries, but it occurred more rapidly. Growth in direct investment abroad by Finland was one of the highest of any OECD country. During 1986-1990 investment from Finland abroad climbed at an annual pace of 45 per cent. The recession curbed investment abroad during 1991 and 1992. The main reason for the collapse in net investment was the losses run up by foreign operations. This accounted for half of the decline in foreign direct investment in 1991-1992.

The turnover of Finnish-owned manufacturers abroad is already almost the same magnitude as the value of Finland's exports. Almost 25 per cent of the total work force in 1990 were engaged in firms abroad and the turnover from manufacturers' foreign operations was about FIM 100 billion (VM, 1992).

The internationalization of Finnish firms has bolstered the real competitiveness of the larger firms and increased their readiness to face the competitive challenges posed by integration. In several industrial branches the problem has been one of the weak profitability of foreign units and high indebtedness. The profits repatriated from foreign investments have on a yearly basis been only about one per cent of the amount invested.

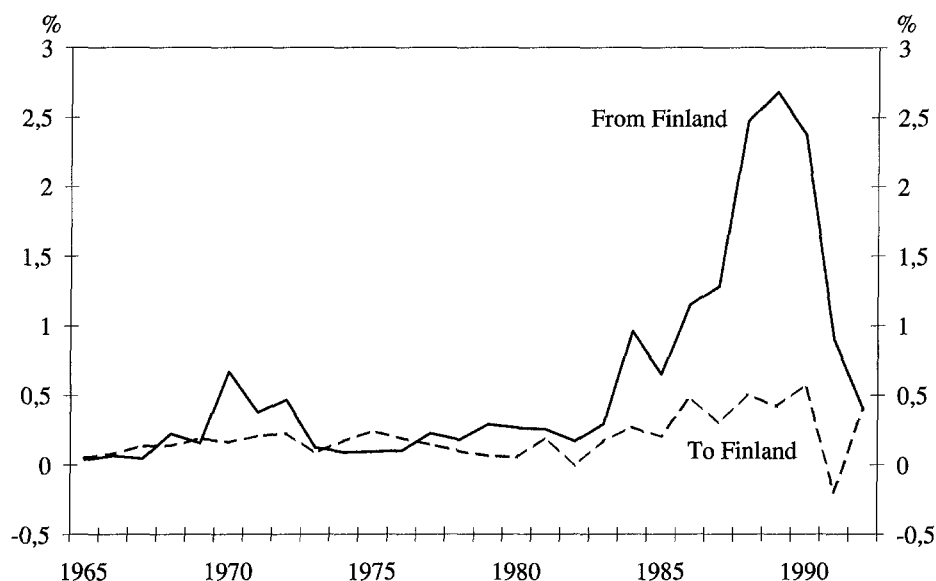


Figure 6.14. Direct Investment (incl. Reinvested Profits) to and from Finland during 1965-1992 as a Percentage of GDP

Source: Astika.

Finnish firms have tended to purchase units producing bulk goods in mature industries, such as the basic metal industry and chemical industry. In these branches the economies of scale are high and the firms must be sufficiently large in order to stay in the market. The motivation behind the purchases has often been the boosting of market shares.

According to a survey made by a taskforce on internationalization set up by the Ministry of Finance, the reason for Finnish firms wishing to shift their operations abroad are similar to the low interest of foreign firms in establishing operations in Finland. In particular the small size of the Finnish market, i.e. the insufficient demand, as well as the remote location are both key factors. Foreign firms do not invest in Finland as a site for manufacturing activities but rather to take care of the parent companies' marketing and sales activities in the Finnish market.

The share of EC countries within Finnish direct investments abroad has been clearly on the rise. Their share in 1992 was about 55 percent. The share of the EFTA countries, especially Sweden, has declined. Due to its near

proximity and the similarity of its society, Sweden has been the natural first site for investment and expansion. As the internationalization process has progressed, the focal point has shifted further away. The influence of the EU - uncertainty about Sweden's joining the EU - and Sweden's relatively high cost level as well as the weakness of its general economic situation have also dampened interest in direct investment from Finland to Sweden.

Demand expectations and preparations for the internal market of the EU have spurred Finnish direct investment in the EU region. The weakening of Finland's price competitiveness relative to the EC countries also increased the direct investment of our firms to the EC region (Karppinen, 1991). Exports of goods and direct investment have constituted alternative strategies of internationalization in this respect. The results of the survey indicate that direct investment abroad by Finnish firms will in the future be aimed increasingly toward the EU countries. The headquarters and R&D activities will nevertheless be kept at home. Internationalization is estimated to be swift, on the other hand, in marketing, finance and logistics operations. Finland's EU membership is estimated to curb Finnish investments abroad and promote foreign direct investment from abroad to Finland somewhat. Finland's EU membership will be an important but not sufficient reason for foreigners to invest here.

Potential sites for Finnish investment include the Baltic countries and other nearby regions. There have been considerable investments in Estonia already, especially in the form of joint ventures. Uncertainty about operations located in these regions if Finland joins the EU may dampen investment activity. On the other hand, the production in these counties can be marketed to the host country as well as elsewhere in Eastern Europe. Investment in Russia is being held up by the tangled unclear ownership rights and lack of investment security. When these are cleared up, the investment flows of Finnish firms will be steered increasingly in this direction.

The investments made from Finland abroad have to a great extent been in production operations, while foreign firms have invested in Finland primarily in sales and marketing units. These divergent investment flows have an impact on the Finnish production structure. The investment flows determine the technological developments since diffusion of technology occurs to an increasing extent via internal transfers of multinational firms and co-operation between firms instead of traditional trade in equipment. For this reason, it would be important for Finland to gain other types of foreign investment than just marketing units.

The relation between foreign investment and exchange rates has received less attention in the public debate in Finland. An unrealistic exchange rate relative to the price level may distort the picture of what kind of investment site different countries offer. If one's own currency is overvalued, investing at home might appear more disadvantageous than otherwise would be the case. On the other hand, sustained undervaluation may give foreign investors too good an impression of the advantages the country offers as a site for investment.

### **How Can Finland Attract Foreign Investment?**

The above-mentioned internationalization taskforce also analyzed the trends in investment directed toward Finland from abroad in the 1990s. In this analysis two different surveys were used: one made in Finland of firms already operating here and another of Finnish commercial secretaries stationed abroad. The results of these surveys indicate that the interest of foreign investors will remain low also in the future. If the developments in Russia and the Baltic countries continue to be positive, the nearness of these markets may be an important motive for foreign firms to invest in Finland. Similar results have been obtained in international surveys about the suitability of different countries or regions as a site for production plants or headquarters. Finland is poorly known and/or it is not deemed to be a very attractive location owing to its remote site and the smallness of its market.

The lifting of restrictions on foreign ownership will increase the possibilities for foreigners to establish operations in Finland. Even though a liberal approach has until now been applied in the granting of permits, the restrictions themselves may have encouraged foreign firms to forgo plans to invest in Finland.

The liberalization of international capital flows and foreign ownership rights have led to keener competition between countries for foreign investment. Finland will have to be increasingly active in order to keep the operations of its own firms at home and to attract high quality foreign productive investment here. The views of investors will have to be taken into consideration in economic policy and other social decision making, especially in taxation and energy policy.

Foreign investment to Finland will be a key channel for renewing the Finnish production structure and for obtaining new technology and knowhow. Attention will have to be focused increasingly on upgrading the quality of investment. Especially the R&D activities of internationalizing firms as well as general knowhow-intensive operations should be kept in Finland. A key question is the level of education and infrastructure as well as flexibility of the labour market.

Direct investment is not as sensitive to expectations of changes in exchange rates as portfolio investment. Nevertheless the lack of confidence in the external value of the Markka has made it increasingly difficult to attract foreign investment to Finland. A long-range, credible economic policy will bring stability, which will foster domestic and foreign investment in Finland.

From the standpoint of investment developments a central factor is the expected yield. This is affected not only by factors such as the infrastructure of the society, labour market and location, but also by taxation. The difference between the yield requirements of marginal investments and net return obtained by investors is called the tax wedge. If this is significant, the investment rate of the economy will remain low. Variation in the tax wedge for different types of investment will also weaken the efficient allocation of capital.

The OECD has compared the tax wedges of investment in different countries in 1991 (OECD, 1991b). According to the study, Finland's average tax wedge was one of the highest. This holds especially for investment financed by retained earnings or share issues. The tax wedge in Finland for debt financing was negative, which reflected the favourable treatment of debt financing in taxation. Of various types of investment the tax wedge was greatest in inventory investment. The tax wedge for machinery and equipment was also well above the average for the EC and OECD.

Finland's capital taxation reforms have changed Finland's position. The tax wedge in Finland is on par with the average for the EC and lower than in many OECD countries. Especially with regard to equity financing the situation in Finland is favourable.

Country	By Form of Financing			By Type of Investment			Average
	Retained Earnings	Equity	Debt	Machinery	Buildings	Inventory	
Denmark	1,4	5,0	3,2	2,1	2,3	3,2	2,4
France	3,0	7,4	-0,1	1,4	2,3	4,6	2,3
Germany	1,0	1,5	0,5	1,2	1,2	-0,1	0,9
Ireland	0,3	2,5	4,4	1,9	1,7	2,3	1,9
Italy	4,3	2,8	-0,3	2,3	3,2	2,3	2,6
Spain	0,9	3,2	3,5	1,6	1,5	3,5	2,0
United Kingdom	2,1	1,4	2,2	1,5	1,7	3,6	2,0
Norway	3,6	0,8	1,1	1,4	2,0	5,5	2,5
Sweden	2,9	2,1	0,5	1,4	1,9	3,5	2,0
Finland	7,2	8,5	-1,3	3,3	4,2	7,0	4,4
Finland 1993	2,6	1,1	1,1	1,4	1,7	3,2	1,9
Averages:							
EC	1,7	4,1	1,2	1,4	1,8	2,7	1,8
OECD	2,7	4,7	1,0	1,8	2,3	3,6	2,3

Table 6.4. *Investment Tax Wedge in Certain OECD Countries in 1991 and in Finland in 1991 and 1993, %*

Sources: OECD, 1991b; VATT, 1993

As regards the Finnish investment environment, the problems include the current disequilibria, which are reflected in interest and exchange rate uncertainty. If the economy can be steered back toward a stable growth path, many other long-range growth factors are rather positive. The position in the international division of labour will become clearer in the next few years and the difference between the EEA environment and EU membership will not be very great.

Finland's cost level, tax treatment of capital income and social infrastructure are competitive from the standpoint of Western Europe. Even though the internationalization of Finnish firms will perhaps continue to be swift, the flows of direct investment will even up since foreign investment in Finland will perhaps grow considerably from the low level of recent years.

### High Quality Infrastructure Will Boost Productivity

The infrastructure comprises factors of production which firms and consumers can use collectively (Johansson, 1992). The infrastructure is the means by which flows of production factors, communication, contacts between persons and firms as well as other contacts taking place in markets are realized. The infrastructure provides the availability of resources to economic agents. Thus the infrastructure is a central aspect of the potential production.

The infrastructure of the economy is comprised of railway and road systems, airports, telecommunications, energy utilities as well as water and waste management. Public buildings and housing are often considered as infrastructure. Here they are not included since the purpose of this analysis is to evaluate the role of the productive infrastructure. The infrastructure encompasses many components ranging from production of individual services for small regions to services linking the country with the rest of the world. The share of roads within the infrastructure has been slightly over half. This share has been growing (Table 6.5) since the portion of road investment within infrastructure investment has been high, especially in the 1960s. The share of the second most important area of infrastructure, energy and heat distribution, has dwindled as the share of energy distribution investment declined in the 1960s and 1970s.

Year	Railways	Roads	Energy and heat distribution <sup>1</sup>	Harbours and waterways	Water and sewage	Commun- ications	Air transport
1960	7	42	29	8	8	5	1
1970	10	49	20	9	5	6	1
1980	11	49	18	7	6	7	1
1993	10	53	15	6	5	8	1
2005	9	55	15	6	5	9	1

<sup>1</sup> Includes also civil engineering works for energy production but not buildings or machinery and equipment.

*Table 6.5. Distribution of Productive Infrastructure in 1960-2005, %*

Investment in the infrastructure has been rather high in Finland compared to Sweden and the United States.

The infrastructure carries a special significance in Finland since about 15 per cent of the price of goods represent transport costs. Finland's infrastructure is not congested. For example, the road congestion in Finland is light and temporary. Finland thus enjoys a good position compared to Central Europe.

The amount and quality of the infrastructure affects the decisions of the private sector in many ways. A well-functioning infrastructure is a key factor when enterprises consider the location of new production facilities. According to a study conducted in Sweden (Anderstig, 1992), international access, proximity of universities and availability of a highly educated labour force

are factors which explain the competitiveness of different areas. From the standpoint of a firm, it is important that the infrastructure is maintained and that no bottlenecks form if production is expanded. The upgrading of the infrastructure reduces bottlenecks in the short run, so that production costs decline and total factor productivity rises.

	1960 - 1988	1960 - 1973	1974 - 1988
Enterprises			
Finland	4,2	5,2	3,2
Sweden <sup>1</sup>	3,8	4,7	3,0
West Germany <sup>2</sup>	n.a.	6,3	2,8
USA <sup>1</sup>	3,4	4,3	3,1
Infrastructure			
Finland	4,1	5,5	2,8
Sweden <sup>1</sup>	2,6	4,1	1,3
West Germany <sup>2</sup>	n.a.	7,7	3,2
USA <sup>1</sup>	2,6	4,1	1,4

*Table 6.6. Changes in Gross Capital Stock of Enterprises and Changes in Capital Stock of Infrastructure, per cent per annum*

<sup>1</sup> Source: Berndt - Hansson, 1991.

<sup>2</sup> Source: Conrad - Seitz, 1992.

## 6.5 Factors of Growth Change

Finland's rapid growth during recent decades was based on many factors which cannot be depended upon in the future. Important growth factors included the swift rise in the educational level of the labour force and rapid growth in the supply of labour owing to the age structure of the population and rising participation of women in the labour market. In the future the average age of the labour force will rise. The share of young persons with higher educations and the labour force participation rates of women are beginning to peak. The accumulation of human capital occurs increasingly as a result of on-the-job training and adult education programmes. The supply of labour inputs depends in turn on whether older persons remain in the labour market or retire and on developments in working time.

A new factor with a growing impact in the labour market is the foreign population. Immigration can increase the supply of labour and flexibility of the labour market. At the same time it will accelerate the segmentation of the labour market. The shift in emphasis from centralized negotiations to settlements at the workplace and firm level will likewise promote greater flexibility in the labour market. The rate of organized labour is exceptionally high and these kinds of changes will put the labour market practices and reform of labour market organizations to the test.

Another important factor of growth has been the high rates of saving and investment. As a result the productive capital base has been expanded and

upgraded. The infrastructure has likewise not been overloaded and has kept in good shape. The collapse in investment during the last couple of years and slow recovery are spurring a rapid deterioration in the situation. The resources at hand for expansion and upgrading of the production capacity and infrastructure are scant since a considerable portion of income must be used to reduce indebtedness.

Domestic investment is facing increasing competition from foreign investment alternatives. The broadening of the internationalization of Finnish firms in the late 1980s is an integral factor in the changes taking place in the Finnish production structure. The same prerequisites which affect the decisions of Finnish firms between domestic and foreign investment alternatives likewise determine to what extent Finland can attract foreign investors. Factors such as the well functioning productive infrastructure, cost level and quality of the environment should compensate from the drawbacks of the smallness of Finland's markets and remote location. The influence of Russian and other nearby regions on the orientation of investment will remain a question mark for a long time.

In the future the developments in the economy will be based to an increasing degree on raising the efficiency of capital and other production inputs and flexibly shifting from one area to the next as the demand outlook changes. This will require growing inputs into R&D, education and marketing, in order to develop and sell new products. Under conditions of high unemployment this kind of shift toward intensive growth will not be easy to bring about.

Considerable changes in the economic conditions have already taken place and will continue in the overall business environment. The time is behind us when a fourth of exports took place in the context of long-term bilateral countertrade agreements and when real interest rates were for years negative. The whole economy is opening up to real international competition. The profitability of operations can no longer be safeguarded by changes in the exchange rate, regulation of interest rates, limitation of imports or governmental support as before. This is perhaps the greatest change in Finland's growth factors. At the same time, it is impossible to estimate the effects of these changes beforehand. The outcome will hinge upon how the economic agents - the central and local government, firms, workers, farmers as well as retired persons - adjust to the change in their environment.



# **Production structure scenarios**

7

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There have been two major changes in Finland's production structure over the long run. The first occurred at the turn of the century when the share of agriculture and forestry in GDP declined below 50 per cent and began to shrink fast. This structural change manifested itself also in a rapid decline in the share of the labour force engaged in agriculture, even though the amount of agriculture and forestry workers still remained high for a long time. The share of agriculture and forestry within total output fell steadily during this century, except during wartime, and it now stands at 5 per cent.

Another turning point was in the late 1940s and early 1950s when the output share of the secondary production and construction reached a level of 40 per cent, where it has remained for the next thirty years. The share of manufacturing reached a level of 32 per cent in 1974 and 1980. It fell steadily in the 1980s, declining to 23 per cent in 1992. During the last decade the production structure has been marked by rapid growth in private and public services.

Activity	1860	1900	1950	1992
Primary Production	62	49	26	5
Secondary Production	16	23	40	30
Private Services	17	23	26	44
Public Services	5	5	9	20

*Table 7.1. Shares of Various Branches within GDP during 1860-1992, %*

Sources: Hjerpe, Riitta, 1988; for year 1992: Tilastokeskus/KT and calculations by VATT.

The structural change that has taken place in Finland has differed from those taking place in other industrial countries in that the share of manufacturing started to decline from a rather low level and service expansion progressed rapidly. The decline in the relative significance of manufacturing and related exports has been reflected in calls for a renewed phase of industrialization. Another topic of debate related to the structure of the economy has been the relation between the public sector and the rest of the economy as well as the needs for change in the service sector prompted by an open economy.

The focus of chapter is primarily on aspects of the former theme based on the international economic scenarios presented in Part I of this book and on the changes in Finland's business environment and domestic resources evaluated in Chapter 6. The role of the public sector is evaluated more closely in Chapter 8.

## 7.1 Finland's Production and Export Structure by International Comparison

Finland's production structure prior to the current recession did not differ appreciably from that of other small industrialized countries. The share of primary production is higher than average owing to the significance of forestry. The share of manufacturing is higher than in Denmark, on par with that of Sweden and the Netherlands, but considerably lower than in Austria. Norway's dependence upon oil and gas production keeps its manufacturing industry relative small while mining and quarrying is large. In 1990 construction activity was exceptionally brisk in Finland and its share of output high. The size of the wholesale and retail trade and hotel services in Finland were somewhat smaller than in the comparison countries. The Netherlands differs from the others in that the output share of public services is small since corresponding services are obtained from the private enterprise or non-profit sectors on the basis of income transfers.

	Austria	Finland	Sweden	Denmark	Netherlands	Norway
Agriculture and forestry	3,3	6,0	2,8	4,4	4,5	3,1
Mining and quarrying	0,3	0,3	0,4	1,0	3,3	14,3
Manufacturing	27,3	21,0	21,6	18,6	21,7	14,6
Electricity, gas and water	2,6	2,3	2,8	1,8	2,0	4,2
Construction	7,2	9,4	7,5	6,0	6,3	4,7
Trade	13,3	8,8	9,1	11,7	} 14,0	10,4
Hotels and restaurants	3,7	2,0	1,5	1,3		1,4
Transports	4,0	5,8	4,1	6,8	} 6,8	7,8
Telecommunications	2,5	2,0	2,2	1,9		2,7
Finance and insurance services	7,1	4,8	5,4	3,0	} 18,2	4,7
Business services	10,2	13,7	14,7	15,8		10,2
Other private services	4,9	6,6	5,3	6,0	11,6	5,1
Public services	13,6	17,2	22,5	21,6	11,4	16,8
Total	100,0	100,0	100,0	100,0	100,0	100,0

Table 7.2. *Production Structure in Nordic Countries, Austria and Netherlands in 1990, %*

Source: OECD/NA.

Robust growth in output in the OECD countries has been experienced during recent years in certain service areas, such as finance and business services, and industrial branches related to new technology. The rapid growth in finance and business services has its roots in changes in the industrial activity. Industrial firms are increasingly prone to purchase services which they previously carried out themselves. The rapid growth in these services is also partly a result of advances in information technology, which firms specialized in data processing have been able to exploit and thus offer new "information products" (OECD, 1992h).

The fastest growth in the industrial branches in the OECD area in the 1980s has been the manufacturing of electrotechnical products and machinery. The

growth in the paper industry has also been rather swift. On the other hand, the output of the shipbuilding industry, textile and clothing industry, steel industry and tobacco industry has fallen (Figure 7.1).

The aggregate growth of the manufacturing industry in Finland and also the branch-wise growth profile has been almost the same as the average in the OECD countries. The main difference is that in Finland branches oriented toward the home market, such as the food, beverage and tobacco industry, manufacturing of metal products as well as building materials grew owing to strong domestic demand faster than the average for the OECD region. The Finnish electrotechnical industry grew faster than the norm in the OECD countries. The shipbuilding industry likewise expanded while in the OECD countries as a whole it shrank. Finland witnessed a fall in the output of the textile, wearing apparel and leather industries as well as in the wood and automobile industries. The early 1990s have changed the comparative growth somewhat. In Finland the most striking feature is the decline in the output of branches dependent upon domestic demand.

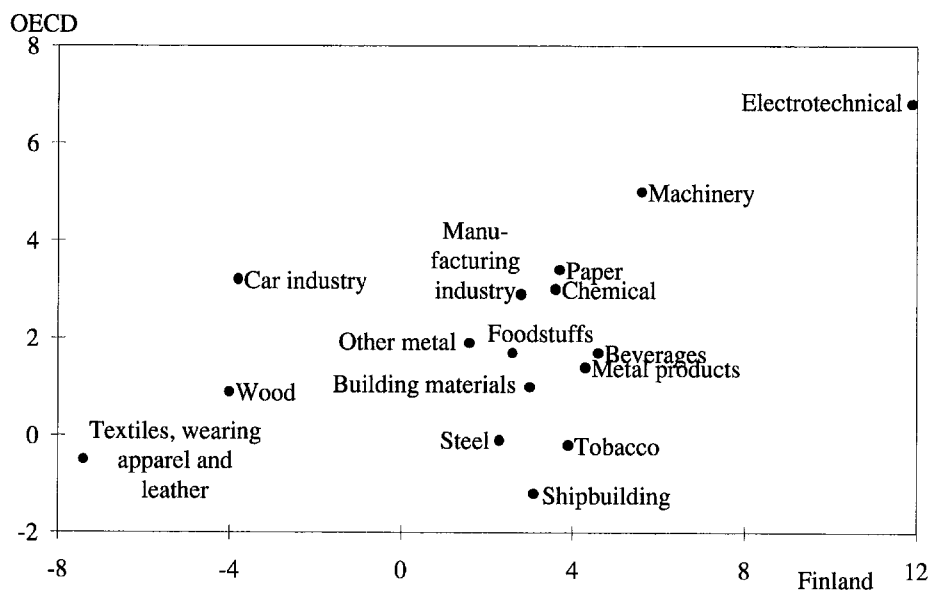


Figure 7.1. Output Growth in Different Industrial Branches in the OECD and Finland during 1980-1990, average % per year

Sources: OECD, 1992d; Tilastokeskus/TT.

The OECD secretariat has developed various kinds of classifications by which the change in the export structures of member countries can be compared. The branches are classified according to their R&D expenditures into high, medium or low technology groups. Another basis for classification is the branch's production factors or the characteristics of its production

process. Thus the export structure of each country can be compared in a uniform manner with the average structure of the OECD. It must be pointed out that the branches are classified in the same group in all countries even though in some countries they could be placed in another group. Especially in the categories by technological content this may be misleading if the R&D expenditures by branch differ appreciably in a certain country from those used in the classifications.

The branches in the technology content categories are classified according to how high the R&D expenditures have been relative to the gross value of output in 11 OECD countries. Only the branch's own R&D expenditures are taken into consideration, so that branches exploiting the inputs of other branches are relegated to the low technology category. For example, pharmaceuticals industry are in the high technology group, the automobile industry is in the middle group and paper industry is in the low technology group.

	1970	1980	1990
By Technological Content			
High technology branches	20	40	54
Medium technology branches	36	46	64
Low technology branches	197	193	186
By Characteristics of Production			
Natural resource-intensive branches	304	255	258
Labour-intensive branches	69	96	64
Economies-of-scale branches	48	53	67
Specialized products	44	58	94
Knowhow-intensive branches	6	26	30

*Table 7.3. Structure of Finnish Exports Compared to Total OECD in 1970, 1980 and 1990, Ind (OECD) = 100*

Source: OECD, 1992d.

In the categories grouped according to the characteristics of the production process, the branches have been classified by the single most important factor that affects the competitiveness of each branch. In natural resource-intensive branches of central importance is the availability of raw materials; the food and paper industries, for example, belong to this group. The most important factor determining competitiveness for labour-intensive branches is the cost of labour; examples of branches in this group are the clothing industry and manufacturing of metal products. The nature of the production process puts the iron and steel industries, among others, into the economies-of-scale branch. The factor determining the competitiveness of specialized products is the readiness to differentiate products to suit discerning demand; a prime example is the machinery industry except computers and communications equipment, which are classified as knowhow-intensive output together with the pharmaceuticals industry.

Compared with all OECD countries, in Finland the shares within exports of high technology products as well as knowhow-intensive or tailor-made products have increased swiftly. With the exception of the latter group, the export shares for these products are nevertheless much lower than the average in the OECD countries. According to this classification scheme, Finland is still specialized in exports of low technology and natural resource-intensive products. This is naturally due to the inclusion of the forest industry in this group.

The forest industry's share of exports fell below 50 per cent in the 1960s. Total net exports, where the imported inputs required for the export production and multiplier effects are deducted, the share of the forest industry was below half around 1970. The share of the forest industry within net export during the past 10 years remained around 35 per cent. Net exports are now rather evenly divided between the forest industry, metal industry and other exports.

	Exports				Net exports			
	Forest Industry	Metal Industry	Other Exports	Total	Forest Industry	Metal Industry	Other Exports	Total
1970	45	21	34	100	50	18	32	100
1978	34	29	37	100	38	27	35	100
1982	32	30	38	100	35	29	36	100
1985	32	32	36	100	35	30	35	100
1989	33	35	32	100	36	32	32	100
1992 <sup>1</sup>	32	36	32	100	34	32	34	100

<sup>1</sup> Net imports for 1992 are estimated on the basis of import shares from 1989 input-output statistics.

*Table 7.4. Distribution of Exports and Net Exports by Branch during 1970-1992, %*

The metal industry bypassed the forest industry in the late 1980s, but the higher domestic content ratio (70 per cent in the metal industry vs. 85 per cent in the forest industry in 1989) has kept the forest industry ahead of the metal industry as a net exporter. The metal industry's share has nevertheless risen steadily. This is partly the result of the decline in the domestic content ratio of the forest sector. As the value added content of the paper industry's products has climbed, it has used increasing amounts of imported chemical industry and clay industry products in its production.

## 7.2 Changing Environment of Forest Sector

### Finland Is Significant Factor in Forest Sector

Finland's paper production in 1990 was almost 4 per cent of total world production and 13 per cent of European production. The shares of paper industry exports are considerably higher at 14 and 24 per cent respectively. Finland is a more significant producer and exporter of graphic paper

products than it is in the overall paper and board category. A third of the European countries' combined exports of graphic paper comes from Finland. Finland is also one of the world's largest exporters of packing board. Compared to Sweden and Canada the share of newsprint within output in Finland is smaller. Newsprint is a product which can be made from recycled paper and for which the recycling demands are the strongest. The nearness of markets is an important factor in the production of newsprint owing to the need to collect recycled fibres and the relative cheapness of the product.

Finland's exports account for at least a tenth of Western European imports in many forest industry products. Finland is also an important source of sawn wood and plywood for Europe, and Europe is an important market area for Finland (Table 7.5).

	Consumption	Imports
Timber	5	11
Plywood	9	12
Pulp	4	10
Newsprint	13	20
Graphic paper	15	26

*Table 7.5. Finland's Share of Western European Consumption and Imports in 1990, %*

Consumption of publishing papers, i.e. newsprint and graphic paper, is estimated to increase by 3 per cent a year in Western Europe in the 1990s. The fastest growth will be in consumption of special coated graphic paper. The per capita level of paper consumption in Western Europe will approach that of North America. Consumption of paper in East Asia will grow by over 6 per cent per annum (Salonen, 1991).

The capacity of the world forest industry will grow according to the FAO (1992) by 2.5-3 per cent per annum in the next few years, i.e. at the same pace as demand. The magnitude of investment, long building times and rigidities in supply owing to the capital intensity of production cause temporary situations of insufficient and excessive demand, which spur fluctuations in the prices of the forest industry.

By 2005 Finland's share of the world export markets is estimated to shrink, especially in newsprint. The Finnish paper industry will perhaps retain its share of uncoated and coated wood containing graphic paper as well as uncoated woodfree paper in the export markets. The Finnish paper industry is predicted to expand its world market shares in coated woodfree paper (Myrreen - Anhava, 1992).

### **Paper R cycling - Threat to Finnish Forest Industry?**

Production strategies in Finland have been based on large plants producing wood-containing (made from mechanical pulp) graphic paper (Lammi,

1992). The pulp and paper industry has raised the value added of its products by shifting from newsprint to graphic paper. Furthermore, in the 1980s the share of woodfree and coated paper has grown within the production of graphic paper. The share of wood-containing paper within production is higher than average. Part of the reason is that our forests have a high prevalence of spruce trees, which are highly suitable for manufacturing of wood-containing paper.

The production costs of paper made from mechanical pulp are lower than paper made from chemical pulp. Uncoated woodfree paper uses a third more wood than uncoated paper made from mechanical pulp. The high price of wood and low price of energy have until now steered production toward wood-saving production of paper from mechanical pulp.

The relative decline in the price of raw timber and possible rise in the price of energy, for example due to energy and carbon dioxide taxes in the EC, may increase the competitiveness of chemical pulp-based paper on the market. Chemical pulp can be recycled several times so that it is more attractive from the point of view of recycling. Chemical pulp-based paper can be manufactured using deciduous trees, which can be imported in considerable quantities from Russia. The cultivated forests of the temperate zone compete with birch in these types of products.

The calls for increased use of recycled fibre (recycled paper) can be a prime threat to the increased use of virgin fibres available from Finland's forests. Germany has proposed minimum limits on the content of recycled fibres in paper. Finland's paper production is so high relative to consumption that not even an above-average rate of recycling is sufficient to raise the recycled fibre content any higher than five per cent of the total wood fibre used.

In 1991 the global production of paper and board used 160 million tonnes of virgin fibre and 90 million tonnes of recycled fibre. The recycling rate (percentage collected) as well as the share of recycled fibre in output is the highest in the Netherlands. The share of recycled fibres in countries specialized in production of paper is rather low unless they are situated close to large paper consumption areas, such as Austria (Table 7.6).

The use of recycled paper is estimated to increase in Europe so that the share of recycled paper in the use of fibre by the paper industry will rise from the 36 per cent level prevailing in 1990 to 50 per cent by the year 2000 (Uusivuori, 1992). The share of recycled pulp is estimated at 80-85 per cent in the manufacture of newsprint, 75 per cent in the manufacturing of board and 30-35 percent in the main export products of graphic paper.

The above-estimated increase in the use of recycled fibres and a 2.5 per cent annual growth rate in paper production mean that the demand for raw timber by the pulp and paper industry will decline. The average 60-65 per cent recycled fibre content rate for the total paper industry is beginning to reach its upper limit. In Europe this level is forecast to be reached by the year 2010.

If Finland concentrated to an increasing extent on production of graphic paper, the impact of increased recycling would be less in Finland if newsprint

and board are also manufactured on a large scale. The growth in the demand for graphic paper is estimated to be faster than paper using more recycled fibre (Uusivuori, 1992).

If Finland concentrates on narrow market segments in paper production, the risks multiple. The cyclical sensitivity can grow, but especially new competitors, changes in the price competitiveness and also new substitute products can constitute a worse threat than in a situation where the product range is more diversified. One solution to this dilemma is growing internationalization, a result of which is that different products are produced in different regions. Thus the Finnish-owned production can be considerably more diversified than just the production located at home.

	Recycling Rate 1991	Share of Recycling Fibres 1989
Netherlands	55	65
Sweden	54	11
Austria	53	38
Finland	51	5
Japan	51	49
Germany	50	45
Spain	38	62
United States	36	26
France	34	46
United Kingdom	33	57
Canada (1988)	28	11
Norway (1988)	26	8

*Table 7.6. Recycling Rate and Share of Recycled Fibres Used in Paper Production, %*

Source: Lammi, 1992

From the standpoint of the environment and energy use, the recycling of paper also has its limits. According to one study (Virtanen - Nilsson, 1992), complete recycling (in practice a collection rate of 90 percent) reduces overall consumption of energy, but increases use of fossil fuels and thus sulphur dioxide and nitrogen oxide emissions as well as net emissions of carbon dioxide. According to the study the burning of paper for energy production would evidently be one way of reusing paper. Furthermore, maximum recycling reduces use of raw timber, decreases the price of wood and thus makes silviculture investment unprofitable.

The large-scale production of paper is technically very demanding. The increased use of recycled fibres reduces the significance of scale economies in the cheapest grades of paper. Global consumption of paper is continuously increasing. By safeguarding technical competitiveness as well as concentrating on the right products and the fastest growing markets, the Finnish forest industry has good possibilities to keep its position.

#### **Mechanical Forest Industry Has Growth Potential**

The Finnish forest base does not carry its former significance for the investments of the forest industry. Despite the large savings in felling activity,

Finland can base its manufacturing on imported timber since Finnish technology and other knowhow of this branch is one of the best in the world. The import of raw timber is still much lower than in Sweden. The import and export of raw timber serves to equalize prices of raw timber across Europe.

The share of stumpage prices within the export prices of sawn timber in 1990 was 50 per cent and 69 per cent of the plant price. The respective shares in newsprint were 18 and 36 per cent and in graphic paper even lower, at 12 and 25 per cent. Devaluations and a nominal decline in stumpage prices have changed the cost structure of the forest industry and the relative cost position compared to other countries appreciably.

The decline in domestic raw timber prices has a great direct impact on the sawmill industry. It improves the competitiveness of the rest of the forest industry as well. The scale of the use of recycled fibre hinges also on the relative prices of recycled pulp and virgin pulp. A decline in the price of raw timber increases the competitiveness of virgin pulp.

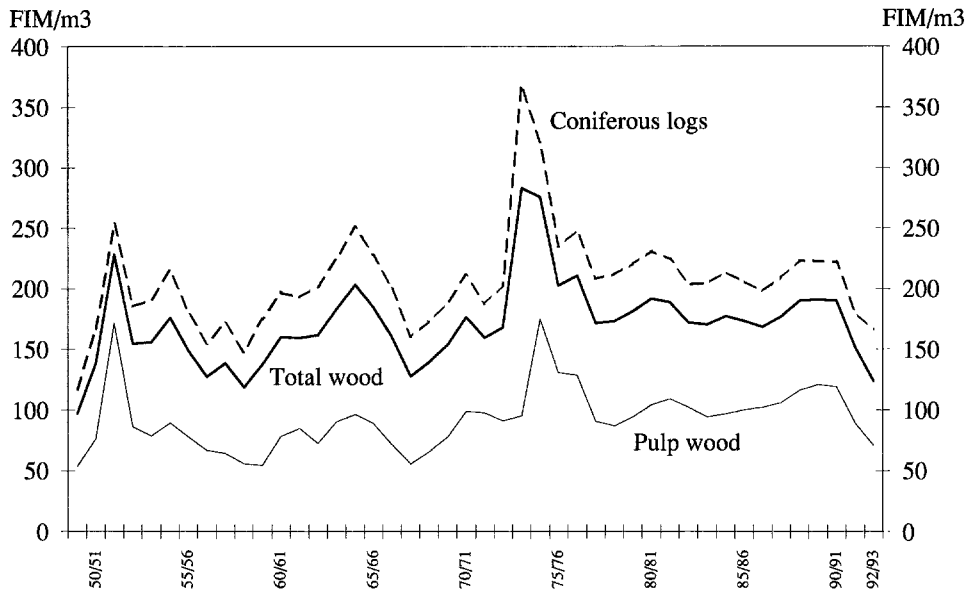


Figure 7.2. Real Stumpage Prices in Finland during 1950-1993, FIM per cubic metre, 1985 prices

Source: Forest Research Institute

The demand for the products of the mechanical forest industry is expected to grow in the EU area by almost one per cent per annum during the next twenty years, i.e. very slowly. The focal point in the demand for sawn timber will shift from new construction to renovation work. Demand will be concentrated on better grades of sawn timber, which can be used, for example, in interiors. The marketing potential of coniferous sawn wood is being boosted by the worsening of the availability of tropical deciduous

sawn wood. Wood panels and deciduous sawn wood from the temperate zone are nevertheless competitors (Myréen - Anhava, 1992).

In Finland the mechanical processing of wood is labour intensive and regionally dispersed. Competitiveness can be increased by reorganization of the processing chain, optimal use of materials, selective procurement of timber, new production strategies as well as new products, which can be designs, components and product parts. Competitiveness can also be improved by greater exploitation of automation, modification of wood, use of composite materials and greater use of subcontracting and network structures. In furniture production there are considerable possibilities to upgrade the value added by automating production.

Finland's furniture industry and the rest of the mechanical forest industry have good possibilities to boost exports as far as competitiveness is concerned. The mechanical forest industry shifted much of its focus toward the domestic market during the 1980s. The boosting of exports will require renewed operative strategies and products. The problems from the standpoint of exports are the quality and design of the products, the lack of marketing channels fostering close customer relations and small scale of production.

## **7.3 Outlook for Production Structure**

### **Exports and Imports by Branch**

In drawing up projections for the production structure, manufacturing has been divided into four groups, primarily on the basis of foreign trade features (Figure 7.3).

The forest industry comprises the wood industry as well as manufacturing of pulp and paper. The share of exports relative to total output has fluctuated during the last twenty years around 60 per cent owing mainly to the export or domestic market orientation of the wood industry. The imports of these branches cover only a tenth of their domestic consumption, but during the 1980s imports climbed steadily.

The metal industry includes the basic metals industry and the metal products and engineering industries. The share of exports relative to output has risen from 30 per cent to over half during the last twenty years. The imports of metal products account for half of domestic consumption and this share has risen steadily since the mid-1970s.

"Other export" industries include the textile, wearing apparel and leather industries, the chemical industry and the branch "other manufacturing". The export shares of these branches are about a third of production while the corresponding import shares are about half of domestic consumption.

The domestic market industry is comprised of other branches: food industry, printing and publishing industry and building materials. The share of exports relative to the output of these branches rose appreciably in the 1970s but fell again in the 1980s. It now stands at only 5 per cent despite modest growth in recent years. Imports are also low and cover only 7 per cent of the domestic consumption of these branches' products.

Each group includes subbranches, where the export and import shares are different than the average for the group. Even such a rough grouping indicates the similar trends in exports and imports of the open sector branches, i.e. growth in intra-industry trade.

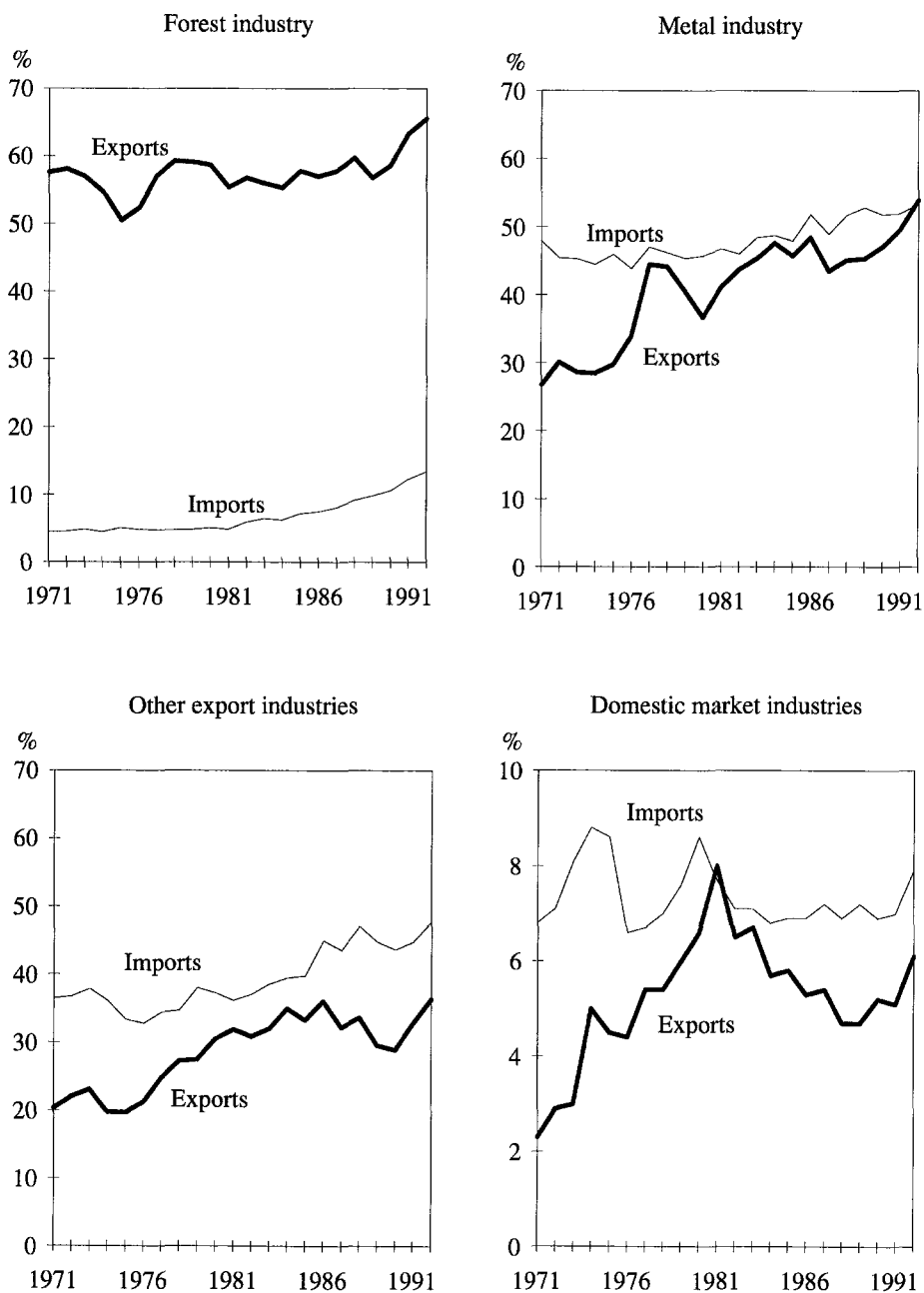


Figure 7.3. Exports as a Percentage of Output and Imports as a Percentage of Domestic Consumption by Branch during 1971-1992, %

### **Where Will Export-Driven Growth Come from?**

Finland's production and export structures have become more diversified over the long run. During the last decade this development has been sluggish with respect to the main industrial branches, since the growth of the forest industry was swift. The structural change was nevertheless still rapid at the commodity or product group level. As regards the forest industry there was growth in the share of products with the highest value added while in the metal industry the share of the electrotechnical products in particular expanded.

Owing to pressures to change emanating from the international economy, the emphasis has been upon production requiring high knowhow and technology. The new low-cost countries are all the time capturing the markets of products based on more traditional technology. The share of high technology or knowhow-based branches within merchandise exports has grown swiftly in Finland, even though their share is still lower than the average in the OECD.

In the following, two scenarios are sketched out about exports as well as the structure of production whereby 5 per cent annual growth in exports can be achieved until 2005. This corresponds to the export growth curve that the growth forecast for imports of Western countries would facilitate if Finnish competitiveness does not weaken appreciably. The growth target for exports is thus not impossible to achieve in light of the international growth estimates.

### **Scenario I**

Export scenario I is based on the presumption of rapid expansion of non-forest sector exports. This trend would be bolstered by sluggish growth in paper markets based on virgin fibres as recycled paper captures market shares. Production based on wide-scale imports of recycled pulp or waste paper is unable to compete with production located closer to the areas producing waste paper and at the same time the markets for recycled paper (Forsman et al., 1993). The production and export of Finnish paper would grow slower than the market. Finland would not become an exporter of pulp, but growth would be based on production of paper out of chemical pulp. The growth of this sector would be fostered by environmental friendliness of the overall production chain (savings in fellings, energy consumption based on renewable sources, closed circulation systems and pollution-free bleaching).

The growth in the mechanical forest industry could be faster and concentrated upon furniture and other products with higher value added. There would be a considerable rise in the value added content of the overall forest sector. The Markka-denominated growth in the volume of production and exports would be faster than the growth in terms of tonnage. In this scenario the share of recycled fibres within domestic use of pulp increases by three-fold from its 1990 level. By the year 2005 the use of recycled fibres would correspond to about 75 per cent of domestic consumption of paper

products. In practice this will require imports of recycled fibre, since such a high recycling rate cannot be achieved when part of the paper products are unsuitable for recycling.

All in all, reaching the export target in this scenario would hinge upon the expansion of the exports by other branches than the forest industry. The best possibilities for expansion in the metal industry are in the machinery industry and electrotechnical industry. The growth possibilities for output of technology related to energy, the environment and communications are good. Finland is already a significant producer in these fields, and there are many small firms in these branches which could have exportable products if the firms are able to invest enough in marketing. In other fields of the machinery industry the technological competitiveness of Finnish products is perhaps high enough but growth in markets will be more sluggish. Manufacturing of basic metals and transport vehicles is hindered by the global overcapacity, which will take a long time to abate. Specialization and possible growth in the Russian market can nevertheless provide opportunities for expansion.

The growth in the exports of the rest of the export industry, especially those of the pharmaceuticals industry and clothing industry may be swift. The high R&D expenditures of the pharmaceuticals industry have already produced export successes and new products are coming to the market continuously. The clothing industry has shrunk appreciably during recent years, but use of cheap labour in neighbouring regions and upgrading of product design may rekindle growth in the exports and domestic production of this branch. Export of the food industry may grow even if export subsidies are discontinued along with EU membership. The output and exports of the subbranches in the food industry already open to free trade have developed favourably.

There are also growth opportunities in exports of services. A modest weakening of Finland's price competitiveness would not make Finland an expensive country for European tourists. The balancing of the services account will come not only from improved price competitiveness but also over the long run from greater emphasis on Finnish nature and wide-open spaces as environmental factors gain greater weight in the decisions of consumers. Another subbranch with export potential is the transport sector. Finland can be an inexpensive transit route to Russia for a long time still since the land connections to Central Europe are in poor shape and the capacity of the Russian harbours is limited. Also growth in exports in the form of construction and engineering projects will bolster exports. This can also entail greater exports by public service institutions.

## **Scenario II**

In the second export scenario the point of departure is that the structure of exports changes slowly and that Finland's position in the international division of labour continues to be based to a great extent on the forest sector. The prerequisite for this kind of development is that the threats associated with the recycling of paper do not turn out to be so great, that they would

limit the expansion of paper production in Finland appreciably. In many European countries, Japan and the United States the recycling rates are already rather high. There will perhaps be no jump in the recycling rate of waste paper and in production of recycled pulp that would, for example, spur a permanent collapse in the prices of pulp made from virgin fibres. It is also possible that waste paper will start to be used more in production of energy, if energy taxation favours these kinds of fuel.

The expansion in the production of the paper industry would be based on the preservation of overall market shares in Western Europe and on the rapid growth in exports to Eastern Europe and Asia, where demand for paper can grow swiftly. The production structure of the paper industry would develop according to this scenario in accordance with the projections in the report issued by the committee of the Forest 2000 programme.

The growth in exports would continue more evenly in different branches, but it would be fastest in the electrotechnical and machinery industry. This scenario could be characterized as one where the growth in exports in the next few years is still strongly dependent upon the expansion of the output of traditional export firms. Even though new export firms would be born in the 1990s, their share of exports would still be modest even at the end of this period. This can be a realistic alternative in the respect that the threshold for starting export activities is not very low even in an integrating Europe since markets must be sought directly from Central Europe more than before. Until now exporters could first test the waters in the Swedish or Soviet market, where Finns have had a competitive edge not only with regard to the geographical proximity but also special trade relations, fewer language problems and knowledge of the demands of customers.

Branch	1975	1990	2005	
			I	II
Forest industry	36	33	25	30
Metal industry	26	38	48	40
Other exports	38	29	27	30
Total	100	100	100	100

*Table 7.7. Distribution of Total Finnish Exports by Branch in 1975, 1990 and 2005, %*

In scenario I the share of the metal industry in total exports would climb to almost half while the share of the forest industry would fall to a fourth. The change in the structure of exports would be much the same as in the 1970s. In scenario II the structural change in exports would be slight compared to the situation prevailing in the 1980s (cf. Table 7.4.). In both scenarios the share of other exports would remain the same. This would require the favourable development of service exports in particular.

### Structure of Demand Determined by Balance Targets

The growth in imports will accelerate as the economy opens up and its share of total supply rises. This will be the most readily apparent in agriculture and the food industry if Finland joins the EU. A slightly over 5 per cent annual growth rate for exports would enable an increase in aggregate output of over three per cent and at most a three per cent increase in domestic demand in order for the growth in imports to remain under control from the standpoint of the external balance. The net foreign debt in 2005 would thus be clearly lower than annual export revenues. This would require that the terms of trade not deteriorate appreciably.

The structure of domestic demand would differ somewhat under the different export scenarios. The increase in investment under the second scenario with an export structure like the current one would be faster since the increase in exports would be concentrated toward capital-intensive branches. Correspondingly, the rise in private consumption would be slightly slower.

	1960 - 1973	1973 - 1992	1992 - 2005	
			I	II
GDP at market prices	5,0	2,1	3 1/4	3 1/4
Imports	7,2	2,7	5	5
Exports	7,1	3,2	5 1/4	5 1/4
Private consumption	5,2	2,0	3 1/4	3
Investment	4,7	-0,1	3 1/2	4
Public consumption	5,4	3,8	1 1/4	1 1/4

Table 7.8. *Changes in Demand and Supply Components from 1960 to 2005, per cent per annum*

The growth in public consumption will remain sluggish in both scenarios because the balancing of the public sector will last the entire period under investigation. The borrowing by the public sector must be reined in enough by the year 2005 so that the great pressures on expenditures owing to the ageing of the population can be kept under control in the future.

Exports as a percentage of GDP would rise to a third and the share of public consumption and investment would decline to slightly over 20 per cent in the year 2005. Even though the share of investment within GDP would rise from its present level, it would be clearly lower in the export scenarios than the average in recent decades. Finland would enter a period of intensive growth.

In the case that the growth in Finland's export markets remains sluggish and the volume of exports increases by 2-3 per cent per annum, the relative growth in the various components of demand and supply would be similar to that under the faster growth scenario. In order to reduce the foreign debt, domestic demand would have to grow more slowly than incomes formation, i.e. aggregate production. At the same time public expenditures would have to grow more slowly than the income base of the public sector, i.e. aggregate

production. The need for an export driven recovery is not any less urgent under conditions of slow export growth.

The developments of various demand components would resemble the trends of other industrialized countries in the 1980s, from which Finland displayed considerable divergence (Figure 7.4).

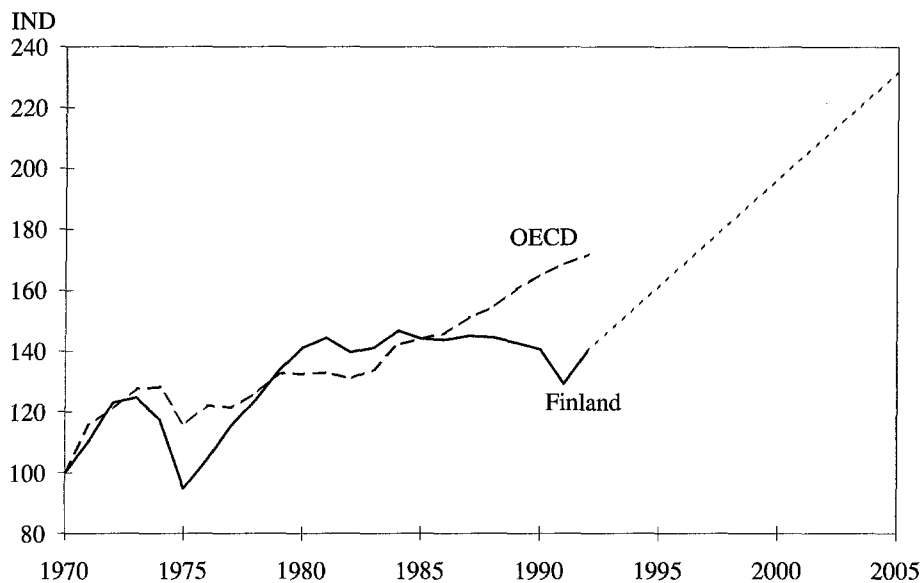


Figure 7.4. Volume of Exports Relative to Volume of Public Consumption in OECD Countries Weighted by Finland's Exports in 1970-1992 and in Finland in 1970-2005. Ind (1970) = 100

In the sluggish international growth scenario the need to reduce the foreign debt is high and that is why the savings ratio of the economy will remain high. The same amount of income must be saved in order to repay the foreign debt in the case of sluggish growth as under the faster growth scenario. The uncertainty spurred by slow growth can raise the saving rate of the economy and thus ease a solution to the debt limit. A high saving ratio will nevertheless keep the domestic demand low and unemployment high. The reining in of public borrowing may also be considerably more difficult in the case of sluggish growth than during a time of faster growth since the pressures on expenditures caused by unemployment will remain high.

The biggest problem in the slow-growth scenario is how unemployment can be brought down. The boosting of exports will require the preservation of sound price competitiveness, so that the investment of the open sector will not shrink too much. The adjustment pressure will focus upon private and public consumption, which together account for two thirds of aggregate demand. In the slow-growth scenario it is difficult, but necessary, to trim public expenditures. It is also especially important to redirect expenditures to support the strategy of opening the economy. Education and research as well as R&D must be emphasized more than ever.

It is difficult to judge what will happen when competition for the slowly growing resources grows keener. The labour markets will probably differentiate and wage differentials grow. The efficiency and productivity of export businesses is high, so that the employment possibilities of this sector will be weaker than previously. Only a basic level of public services can be ensured. Other services will be obtained as private services. This can spur a differentiation of educational, health and social services into public and private services.

The structural change in private consumption will slow down in the sluggish-growth scenario. The share of necessities (housing, clothing and food) will remain high in private consumption while the share of durable goods and luxury goods will slowly increase.

### **Open Sector Expands**

The growth in the economy is fastest in the open and opening sectors of the economy. An exception is agriculture, the production of which will fall. The pace of the decline will depend upon whether Finland decides to join the EU. If Finland participates only in the EEA, agricultural output will nevertheless decline because trade in agricultural products will be liberalized in line with the latest round of GATT talks and because the financing of overproduction will not be feasible owing to the growing debt of the public sector. Similar pressures will be exerted by the need to bring domestic consumer prices closer to those in neighbouring countries. The use of price subsidies will be limited by the same need to rein in public borrowing as pertains to other support policies.

According to studies on the impact of EU membership, agricultural output is estimated to dwindle over the long run by 35-40 per cent from its current level (Törmä - Rutherford, 1993). The estimates are naturally rough projections since these studies are not able to take into account possible any extraordinary measures coming with membership. The results depend in great part upon the exchange rates used in the comparison of Finnish and EC producer prices. The drop in output will be lower if Finland's Arctic conditions are taken into account in agricultural support arrangements. On the other hand, the value of the Markka is exceptionally weak at present and as the imbalances in the economy abate it will probably appreciate. This can widen the differences in producer prices calculated in the same currency by the middle of the decade when at the earliest Finland could join the EU.

Forestry output is estimated to grow from its low starting level. Forestry's share of value added is higher than the share of agriculture. Growth in forestry will be bolstered by growing use of wood as a source of energy, even though during the period under investigation this will not have any significant impact upon the energy sector.

The developments in different industrial branches vary in the scenarios in that in the first scenario of diversifying exports the output of the metal industry will grow considerably faster, over 6 per cent per annum. In the second scenario based on the present structure the growth of the metal

industry would be about 5 per cent, i.e. of the same magnitude as during the period 1973-1990. The value added in the forest industry would rise in the two scenarios by 3 and 4 per cent per annum, respectively. In both scenarios the growth would be based on raising the value added content and a recovery in the mechanical forest industry. The growth in the rest of the export industry is estimated at 3-3.5 per cent per annum, with the rate of growth varying widely across the various product groups. The fastest expansion would be certain chemical industry branches, such as the pharmaceuticals industry, which has invested heavily in new product development. On the other hand, there are subbranches in the chemical industry where the demand is slackening, such as the output of fertilizer. The situation is similar in the textile, wearing apparel and leather industry. Production which combines high quality and the possibilities to use the inexpensive labour of neighbouring regions may be able to expand in Finland. Labour-intensive phases of production will perhaps shift to low-wage countries. The growth in the domestic industry will be sluggish as certain subbranches of the food industry contract in the face of growing imports and the overcapacity in the building materials industry is eliminated.

In other private sectors the expansion in transport, communications, tourism and business-oriented services may be swift. This will require the favourable development of both exports and transit transport. Both stand a good chance if Finland maintains its price competitiveness. The growth in the wholesale and retail trade can be brisk when the economy stages a turnaround and the pent-up consumer demand is unleashed. In many branches geared toward domestic demand the level of output is exceptionally low and even a return to "normal" demand levels will require rather swift growth for a few years.

The growth in social services will slow down considerably. The greatest reason for this is the reining in of the growth in public services. Even though this is partially offset by increased growth in private services, the overall growth in the sector will be clearly lower than previously. The increased need for public services will still be modest by the year 2005 and the need to save and raise the efficiency of output will be emphasized.

The growth in public services might be faster if their exports could be made more worthwhile. Service organizations, such as educational programmes, maternity care and related guidance programmes can be shifted to other countries or institutions located in Finland could be used for the needs of foreigners. These kinds of activities have been already tried, in particular in the education sector. Student places have been offered to Estonians and residents of other nearby regions. Financing could be forthcoming at least partially from the international organizations giving aid to Eastern Europe. The expansion of public service exports may still occur primarily within the framework of various kinds of aid programmes, so that this will be limited by the same financing problems as those facing the overall public sector.

Table 7.12 presents projections for output by branch under export scenario I and scenario II assuming that the international economy experiences

		1960-1973	1973-1992	1992-2005	
				I	II
Primary production	Output	0,1	0,1	0	1
	- Labour input	-3,7	-3,8	-4 1/2	-4 1/4
	- Capital input	2,6	1,2	-2 1/2	-1 1/2
	- Total factor productivity	2,1	2,6	4	4 1/2
Forest industry	Output	6,0	1,3	3	4
	- Labour input	0,4	-3,0	-1/2	0
	- Capital input	5,6	2,4	2 1/2	4
	- Total factor productivity	3,5	2,1	2 1/4	2 1/4
Metal industry	Output	7,0	4,1	6 1/2	5
	- Labour input	2,2	-1,4	2 1/4	1/2
	- Capital input	5,1	3,8	4 1/2	3 1/2
	- Total factor productivity	3,8	3,8	3 1/2	3 1/2
Other export industries	Output	7,9	0,9	3	3 1/2
	- Labour input	0,4	-4,3	-1 1/2	-1
	- Capital input	7,0	2,9	1	2 1/2
	- Total factor productivity	4,5	1,9	3 1/4	3
Home market industries	Output	5,6	2,1	2	2
	- Labour input	1,7	-1,7	-1 1/2	-1 1/2
	- Capital input	5,0	3,6	1/4	1/4
	- Total factor productivity	2,6	1,8	2 3/4	2 3/4
Energy	Output	8,1	3,6	2 1/4	2 3/4
	- Labour input	1,5	0,2	-1 1/4	-3/4
	- Capital input	3,7	3,2	1 3/4	2
	- Total factor productivity	5,2	1,4	1 1/2	1 3/4
Other enterprises	Output	5,3	2,1	4	4
	- Labour input	1,0	-0,6	-1/2	-1/2
	- Capital input	6,1	3,6	2	2
	- Total factor productivity	2,5	1,2	3 1/2	3 1/2
Social services	Output	4,2	2,8	2 1/4	2 1/4
	- Labour input	1,9	1,3	1/2	1/2
	- Capital input	5,6	4,3	1 1/2	1 1/2
	- Total factor productivity	1,8	1,1	1 1/2	1 1/2
Total economy excl. ownership of housing	Output	4,6	2,2	3 1/4	3 1/4
	- Labour input	-0,1	-1,1	-1/2	-1/2
	- Capital input	5,1	3,3	1 3/4	1 3/4
	- Total factor productivity	3,0	1,8	3	3

Table 7.9. *Components of Output Growth by Branch during 1960-2005, per cent per annum*

balanced growth. The use of the scenarios is intended to emphasize the significance of threats to the forest sector. In order to solve Finland's current problems the best scenario would be for the rapid expansion of all main export branches. If one of the main export branches experiences great difficulties, the preconditions for solving the debt problem and lowering unemployment will be weak.

Under conditions of sluggish export demand, the expansion of domestic production that acts as a substitute for imports will ease the managing of the debt problem. This will require that competitiveness remain high since

		1960- 1973	1973- 1992	1992- 2005	
				I	II
Primary production	Change in labour productivity	3,9	4,1	4,7	5,5
	- Impact of change in total factor productivity	2,1	2,6	3,9	4,5
	- Impact of change in capital intensity	1,8	1,4	0,6	0,8
Forest industry	Change in labour productivity	5,6	4,5	3,5	4,0
	- Impact of change in total factor productivity	3,5	2,1	2,3	2,3
	- Impact of change in capital intensity	2,1	2,3	1,2	1,7
Metal industry	Change in labour productivity	4,7	5,6	4,2	4,5
	- Impact of change in total factor productivity	3,8	3,8	3,5	3,5
	- Impact of change in capital intensity	0,9	1,7	0,7	1,0
Other export industries	Change in labour productivity	7,5	5,4	4,6	4,5
	- Impact of change in total factor productivity	4,5	1,9	3,3	2,9
	- Impact of change in capital intensity	3,0	3,4	1,2	1,6
Home market industries	Change in labour productivity	3,8	3,9	3,6	3,6
	- Impact of change in total factor productivity	2,6	1,8	2,8	2,8
	- Impact of change in capital intensity	1,3	2,1	0,7	0,7
Energy	Change in labour productivity	6,6	3,4	3,5	3,5
	- Impact of change in total factor productivity	5,2	1,4	1,6	1,8
	- Impact of change in capital intensity	1,4	2,0	1,9	1,7
Other enterprises	Change in labour productivity	4,2	2,7	4,5	4,5
	- Impact of change in total factor productivity	2,5	1,2	3,5	3,6
	- Impact of change in capital intensity	1,8	1,5	1,0	0,9
Social services	Change in labour productivity	2,3	1,5	1,7	1,7
	- Impact of change in total factor productivity	1,8	1,1	1,6	1,7
	- Impact of change in capital intensity	0,5	0,4	0,1	0,1
Total economy excl. ownership of housing	Change in labour productivity	4,7	3,3	3,6	3,7
	- Impact of change in total factor productivity	3,0	1,8	2,9	2,9
	- Impact of change in capital intensity	1,7	1,4	0,7	0,8

*Table 7.10. Components of Changes in Labour Productivity by Branch during 1960-2005, per cent per annum*

import competition will grow keener. Restrictions on imports would act as a spur to more expensive domestic production and thus welfare losses. Under sluggish growth the greatest adjustment pressures would be on consumer demand, but on the other hand the growth in the share of necessities in consumption would bolster domestic market output.

### **Output Growth Hinges Increasingly upon Growth in Productivity**

The growth in productivity in the overall economy and especially manufacturing has continued to be swift also during the recession. This is partly caused by the change in firm structure, as inefficient firms have closed down their operations, and profitability problems force cuts in labour costs also in firms that continue to operate. This is nevertheless also a question of increases in productivity facilitated by long-term technical progress, organizational change and new production methods. The gradual diffusion

of new modes of production throughout the economy will be of crucial importance in the future for the expansion of the economy and maintenance of competitiveness.

The increased capital inputs and higher capital intensity in production have until now been important components of growth in output and productivity. Rising capital intensity has been supported by a low and often negative real interest rate, while on the other hand real labour costs have risen all the time. In the future the rise in capital intensity is estimated to slow down and the total factor productivity to take on greater significance. The rise in productivity will be based increasingly upon upgrading the knowledge of the labour force instead of increasing the amount of production equipment per employee. Raising total factor productivity indeed means growth especially in the productivity of capital.

This change can be seen more clearly in other industries than in the forest and metal industries. In these branches the rise in total factor productivity has been already an important factor behind the previous growth in productivity. The acceleration of the productivity growth in the service branches (other enterprise sector in table 7.9 and 7.10) will be a precondition for the rise in the level of wages since in the open economy these branches will be exposed to greater competition from imports. In services the polarization of the firm structure will perhaps occur, on the one hand, in large chains and, on the other hand, in family businesses operating in local markets (cf. section 7.4). The differences in productivity depicted by traditional measures may be large across firms since self-employed persons tend to expend more labour inputs than hired workers.

The growth in the productivity of social service sector reflects mainly the expanded use of commercial substitutes or supplementary activities. Even though the efficiency of public services will improve, it will not be seen in the measure of productivity used in the National Accounts. The volume of service output is measured in the National Accounts in accordance with use of inputs, in practice labour inputs.

The improvement in competitiveness and productivity in industry and the overall open sector is related to the changes in operative strategies of firms. Due to rapid internationalization, the production located in Finland constitutes only a fraction of the total production of many firms. Also firm strategies to forge alliances, subcontracting networks and joint ventures emphasize that a great part of the output located in Finland is closely related to a global whole. Its development is affected by the performance of production located elsewhere. The division of labour between various parts is defined by how internal flows of merchandise and services and distribution to customers are handled. The rapid expansion of this kind of network economy has placed greater emphasis on logistics and the significance of flexibility in a firm's strategy. The product mix must be renewed and differentiated quickly in accordance with changes and characteristics of markets. This will require flexible use of capital. In addition to the traditional measures of productivity (cost efficiency of output or a product's price/cost relation) the certainty of

delivery, production flexibility, custom-made design and other similar factors will gain more weight.

The change in the environment is great for firms that until now have been operating largely on the domestic market behind import barriers. Firms have indeed been compelled to adapt to new conditions in light of the deep slump in domestic demand in recent years. The recession has increased cost awareness and shown that competitiveness is of importance also in areas where competition has traditionally been modest and the rise in costs could easily be passed on into prices. In these areas the growth in productivity is estimated to accelerate appreciably.

The growth in productivity can be slowed by at least two factors. First, the current recession and high unemployment affect the long-run productivity by slowing the renewal of resources in firms. The renewal of machinery and equipment after intermittently falling behind is easier when the profitability of a firm improves. The most difficult task is to accommodate R&D activity and personnel knowhow. In many firms the average age of the labour force will climb at the same pace as the calendar or even faster, since the young persons cannot be hired or the newest arrivals will have to be let go. At the same time the introduction of new knowhow will slow down and also the changes in production methods can be more difficult to implement.

The changes in the emphasis of various activities in the overall enterprise sector and industry are depicted in Figure 7.5. Still in the 1970s the main emphasis in the development of production was in fixed investment and even there the share of construction was rather high. Thereafter fixed investment has been weighted more toward purchases of machinery and equipment.

The share of R&D relative to the value added in the total enterprise sector is still low, but it is continuously rising. Since these expenditures are concentrated in a few industrial branches, the share of expenditures is greater in industry. It has already for several years been more significant than building investment by the manufacturing industries. There is a lack of detailed data on training costs, but the wages paid by the enterprise sector during on-the-job training are probably of the same magnitude as R&D expenditures, i.e. 5 per cent of value added. Personnel training has increased swiftly in the 1980s.

A new feature of development strategies in the 1980s has been internationalization. Foreign direct investment in the 1980s was equivalent to almost a fourth of domestic investment by industry. They will continue to increase and increasingly smaller firms will attempt to gain a foothold in new markets and safeguard a level of technical knowhow.

Another factor that can hinder the growth in productivity in the statistics is the change in the firm structure. Successful attempts to spawn of new businesses and support small businesses are reflected, at least temporarily, in a slowdown in the growth in productivity. The rise in productivity is the faster, the greater a share of growth in output prompted by expansionary investment by already existing firms, since expansionary investments are

generally also rationalization investments. The dampening effect of the expansion of small firms activities on growth in productivity is nevertheless only a temporary phenomenon and it safeguards the expansionary possibilities of a branch over the long run. These kinds of changes in the firm structure can also have a significant impact upon employment.

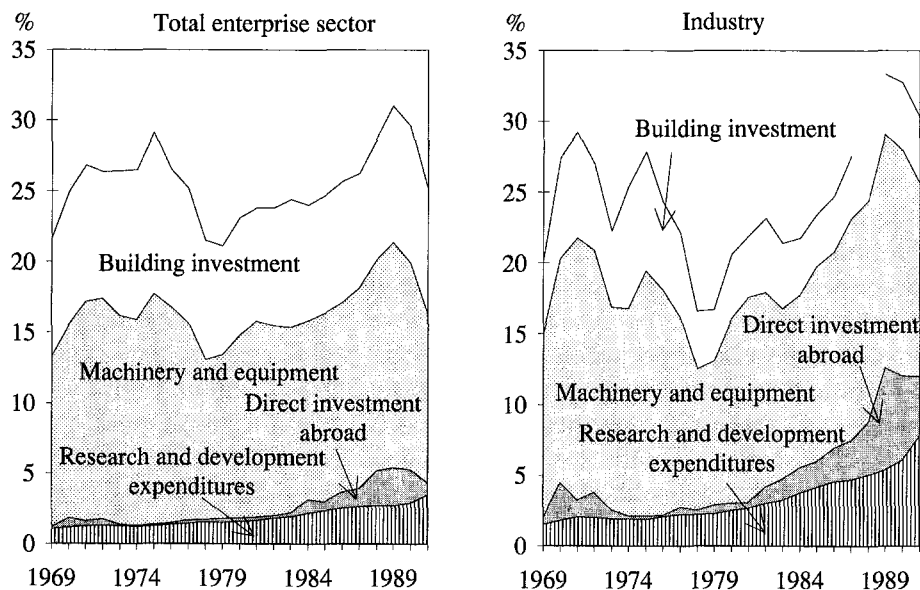


Figure 7.5. *Construction and Machinery Investment, Direct Investment Abroad and R&D Expenditures as a Percentage of Value Added in Total Enterprise Sector and Industry<sup>1</sup> in 1969-1991, %*

<sup>1</sup> In 1988 industrial building investment was negative, since many firms transferred their real estate under the ownership of special real estate entities, which are classified as other business activities. This transfer does not appear in the investment of the total enterprise sector.

Sources: Astika; Tilastokeskus, 1991; Tilastokeskus/Tut.

### Need for Energy and Environmental Emissions Hinge upon Structure of Output

The structural scenarios evaluated above lead to similar growth in aggregate output and exports. They differ from one another clearly from the standpoint of energy consumption and environmental impact. The slow growth in the forest industry as well as the shift towards chemical pulp-based paper and toward the mechanical forest industry mean that there is little additional need to outpurchase energy in scenario I. The primary consumption of energy would rise by slightly less than one per cent and consumption of electricity by under 2 per cent per annum. The consumption of both would grow considerably more slowly than aggregate production.

Scenario II based on the present type of export structure leads to almost 10 per cent greater primary energy and 10 per cent greater electricity need in the year 2005. Compared with recent estimates by the Ministry of Trade

and Industry, the consumption of energy would be clearly higher in this second scenario while in the first scenario it would fall slightly short of the Ministry's estimate (KTM, 1993b).

The projections of energy needs are rather sensitive to growth in output and structure as well as assumptions about the payoff from energy savings. In both scenarios the investment threshold for energy savings is estimated to remain at current levels, which corresponds to about a 30 per cent return requirement. Savings investments should thus pay themselves back in a little over three years. It is possible that taxation of energy and/or emissions will be raised. Raising this kind of taxation will lower the threshold for savings investment by making more savings projects profitable. This was simulated by lowering the return requirement for savings investments to 10 per cent. According to the model the strengthening of energy savings would lower the consumption of electricity in the year 2005 by 10 per cent.

Consumption in 1992	63
Consumption in 2005	
- Skenario I, current savings	80
- Skenario I, additional savings	72
- Skenario II, current savings	89
- Skenario II, additional savings	80

*Table 7.11. Estimates of Electricity Demand in 2005, TWh*

In the projections for energy needs the net importation of electricity is assumed to end by the year 2005. The increase in non-integrated production of electricity is assumed to take place either by coal power plant or partly by nuclear power. Integrated production of electricity and heat using oil and coal is estimated to be replaced with natural gas and to a small extent peat. The increased consumption of natural gas would require importation of natural gas also from the west either by pipeline or by sea since there are perhaps no possibilities to increase natural gas purchases from Russia. The solution to the production of electricity will affect more than anything the developments in carbon dioxide emissions. In both structural scenarios sulphur emissions will decline appreciably and nitrogen emissions will remain at approximately the current level.

If the additional supply of electricity is produced with coal power plants, the emissions of carbon dioxide will rise from the 53 million tonnes of 1990 to about 73 million tonnes in the first scenario and 80 million tonnes in the second scenario. If the savings in electricity were nevertheless stronger than estimated (investment threshold is a 10 per cent return requirement) the carbon dioxide emissions will correspond to 65 and 71 million tonnes, respectively. If in addition a 1000 MW nuclear power plant is built, the emissions would be 58 and 64 million tonnes, respectively, in these scenarios.

The calculations indicate that if imports of electricity are discontinued, the freezing of Finland's carbon dioxide emissions is very difficult even in case the demand for electricity grows slowly. Also the reduction of nitrogen oxides is difficult since most of them come from motor vehicles. Even if rail transport were promoted strongly, road traffic would retain its position both in personnel and freight transport. Technical progress is nevertheless reducing fuel consumption and facilitating cleaner exhaust more efficiently and inexpensively.

## 7.4 Will Unemployment Continue to Rise?

### Long-Term Cyclical Trough or Permanent Slowdown in Growth?

The forecasts in this book are based on fresh international projections about the prospects for the global economy and especially Europe. Even though these scenarios do not represent the most optimistic estimates, the future can also be much bleaker, as is indicated in Chapter 3. This would mean the exacerbation of the unemployment problem unless new social and economic arrangements are developed.

The slightly over 3 per cent annual growth in aggregate output starting from the present base will by 2005 still be insufficient to close the gap between the full employment path and realized growth. This difference can be illustrated with the aid of Figure 7.6, where in addition to realized output several of the long-term forecasts compiled by the Economic Planning Centre are presented. The most recent of these (TASKU, 1990) is a forecast made in

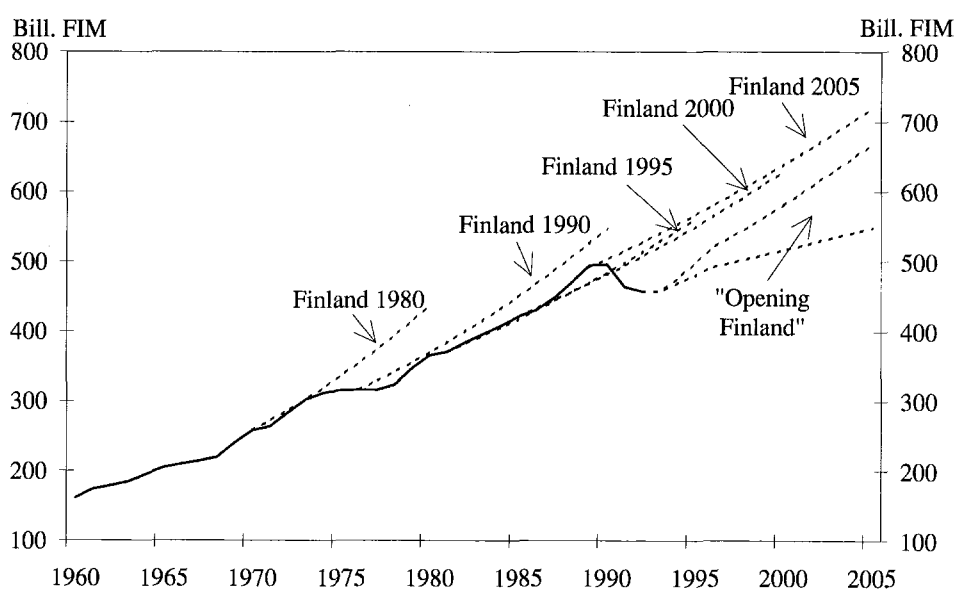


Figure 7.6. Finland's GDP during 1960-1992 and Output Forecasts Made at Various Times, billions of FIM in 1992 prices.

the late 1980s assuming a growth curve with a 3 per cent rate of unemployment. The forecasts presented in this book are depicted with a band, the upper boundary of which would require slightly over 3 per cent annual growth. This could be realized under balanced growth in the international economy. The lower boundary depicts the scenario where the developments in the international economy are marked by crisis and Finland's growth remains at 1.5 per cent on average during the forecast period.

Finland has during its statistical history experienced prolong periods of recession during the 1880s, the first world war and civil war, the 1930s and the second world war. The slump of recent years is so deep that long-run (13 years) average growth will be lower than at any time after the World War II, even if aggregate output rises from now on at a three per cent pace. On the other hand, the slowdown in the long-run average growth rate since the 1970s has been very apparent. Growth remaining at a 1.5 per cent level until 2005 would continue this downward trend in the growth rate.

In recent medium-term forecasts the average rate of economic growth is forecast at 3 - 4 per cent. In individual years the growth will probably exceed this rate appreciably if Finland is able to keep its present price competitiveness. Figure 7.7 depicts the forecasts of this book combined with these medium-term forecasts so that in the faster growth scenario aggregate output rises on average by 3.25 percent per annum over 1993-2005 and in the slower growth scenario the average growth for the period remains at 1.5 per cent per annum.

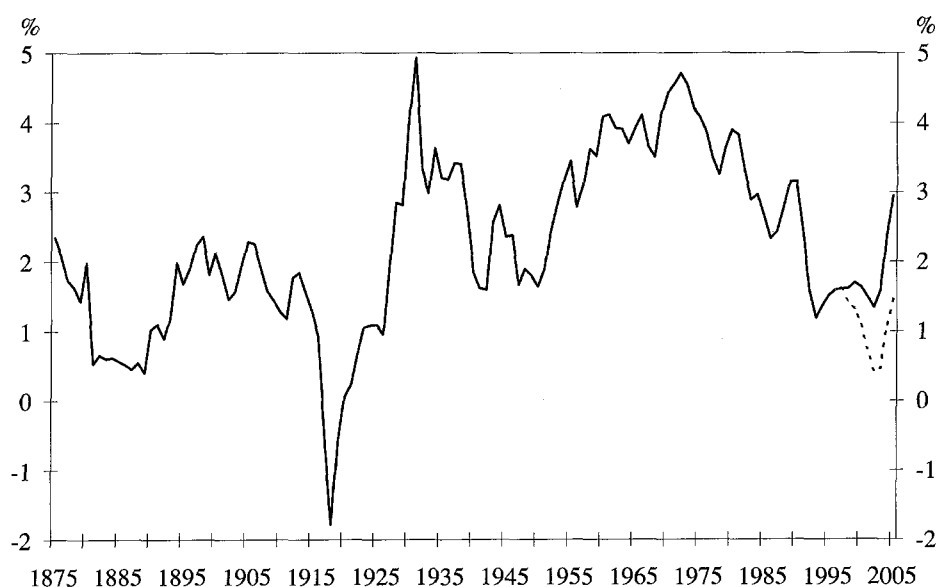


Figure 7.7. Average Growth in Real Income per Capita for Moving 13-Year Periods in 1875-2005

**Impact of Growth on Job Creation**

The same aggregate growth can spur very divergent trends in employment in different countries or at different times. The dissimilarities are due mainly to growth differentials across branches, the divergent trends in work time and most of all differences in the growth of productivity. The developments in North America and the EC during the last twenty years are examples of different trends in employment under conditions of similar output growth rates.

In both regions the growth in output since the 1970s until 1990 was of the same magnitude, i.e. about 70 per cent. The number of employed persons in the EC area increased by 9 per cent and in North America by 50 per cent. Jobs were created in North America mainly in the service industries but jobs in manufacturing also increased. In the EC the number of jobs fell in agriculture and manufacturing, and jobs in services increased more slowly than in the United States. The growth differences can be seen in divergent trends in productivity in these economies. In North America the rise in productivity per employee has been slow and the large group of working poor has become a problem (OECD, 1993b). The rise in productivity in the EC area has been swift but at the same time the unemployment rate has increased by three- or four-fold during a twenty-year period.

In the same period Finnish output growth was clearly higher than in the EC area or North America. The number of employed persons increased slightly more than in the EC area, but much less than in North America. The growth in employment was rapid after the previous period of recession in 1978-1985. Employment did not rise in the late 1980s despite rapid growth in output. During this decade both output and the number of employed persons has fallen (Figure 7.8).

In light of the above examples, the connection between output and employment is not as clear-cut as is often assumed. The number of employed persons will not necessarily increase even if the Finnish economy grew at an annual pace of three per cent over the next 13 years. The growth in productivity may continue to be so swift that the demand for labour inputs measured in manhours may continue to fall (see Table 7.9). The average number of hours worked per employee has fallen in Finland at a rate of slightly over half a per cent per annum, i.e. a reduction in the demand for labour inputs of the same magnitude would have kept the number of employed persons unchanged. In this decade the amount of regular work hours will hardly be shortened. It is one of the shortest in Europe and there have been calls to lengthen it on many occasions. Since part-time work, temporary work and other kinds of irregular forms of work time are becoming more common, the average number of manhours worked in a year may continue to fall.

The number of employed persons could be increased by a shift in exports toward labour-intensive branches. The direct impact on employment of the change in the structure of exports will be slight if the developments in the overall economy is otherwise similar. The direct job-creation by exports is

slight and the structure of exports would have to change fundamentally in order for the disparity in domestic content across different export branches to have a clear impact upon aggregate employment. The difference between scenario I and II in the number of employed persons is about 20 thousand (i.e. 1 per cent) in favour of scenario I. Employment trends will be determined in the future as well primarily on the basis of domestic demand (see Chapter 9). Another factor affecting employment is the firm structure.

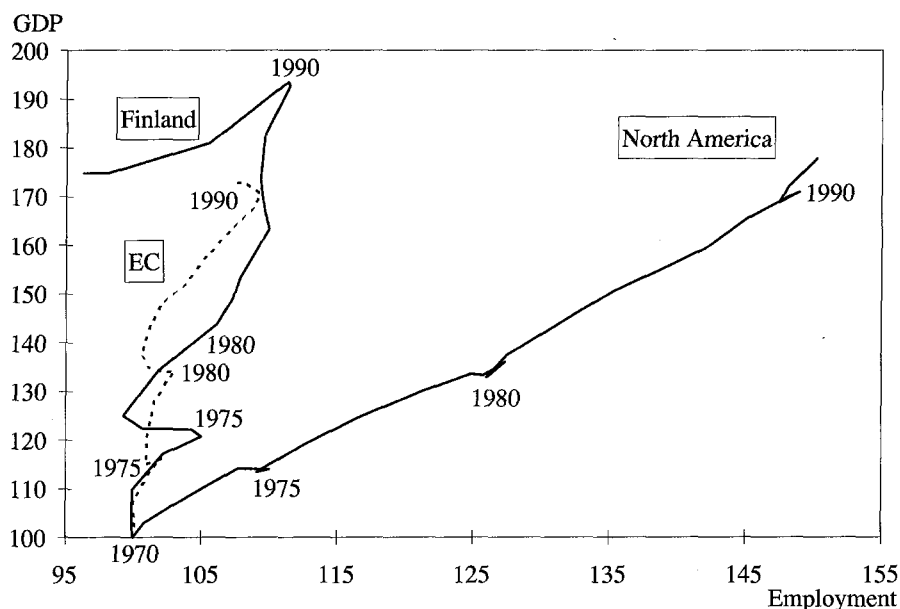


Figure 7.8. Output and Number of Jobs in EC Countries, North America and Finland in 1970-1993, Ind (1970) = 100

### Firm Structure and Employment

In order to estimate the impact of the firm structure on employment, some model simulations have been carried out. The presumption is that the growth in output is weighted toward new small firms which require more labour than if the expansion occurs in large firms. This is carried out by simulating a slower pace at which labour saving technical advances are adopted in new production capacity so that the labour input in some branches is 10 per cent higher in the year 2005 than according to earlier estimates of the production function. The new small-scale businesses are estimated to be born primarily in the food industry servicing local markets, in the wholesale and retail trade, transport as well as business services. In the overall economy this would increase the demand for labour inputs by almost 3 per cent or about 60 thousand persons.

The employment share of small firms climbed considerably in Finland in the late 1980s in manufacturing and construction. In the wholesale and retail trade this trend has not been as clear, even if the share of firms engaging over 500 persons within the overall labour force fell. On the other hand, the share of firms with under 10 persons within the labour force declined. Compared to many Central and Northern European countries there are few differences in the distribution of the labour force according to firm size. In the mid-1980s the large firms' share of personnel in Finland was somewhat greater than in many other countries. The share of medium-sized firms was correspondingly smaller. There was a similar difference in the distribution of the labour force in manufacturing. On the other hand, construction and service branches in Finland are dominated by large firms considerably more than in comparable countries. The share of small firms is high in Southern Europe and Denmark.

Firm Size	Finland 1986	Finland 1990	Denmark	Belgium	France	Germany	Italy	Netherlands	Spain	Sweden	United Kingdom
All Branches											
1 - 9 empl.	16	19	17	24	15	18	36	14	31	10	23
10 - 99 empl.	24	26	42	29	29	27	36	28	43	17	24
100 - 499 empl.	16	17	23	16	17	19	10	17	17	13	23
over 500 empl.	44	38	18	31	40	36	18	41	10	61	30
TOTAL	100	100	100	100	100	100	100	100	100	100	100

*Table 7.12. Distribution of Personnel by Firm Size in Private Sector (excl. Agriculture) in Various Countries in 1986 and in Finland in 1986 and 1990, %.*

Sources: EC, 1990; SOU, 1992; Tilastokeskus, 1988, 1992a.

Since the turnover or value added per employee is much lower in small firms than in large, the growth in the share of small firms in the output of a branch means a higher labour-intensity of output. The change in firm structure depicted in practice means the expansion of family businesses. This trend is becoming more common especially in the service branches as, for instance, immigrants are allowed to set up businesses more freely than before. In the face of the current high unemployment, another factor having a similar impact is the growing tendency of unemployed persons to employ themselves and related support programmes. Many of the persons unemployed nowadays are well educated, previously engaged in managerial tasks, whose readiness to start their own businesses is relatively high.

Even though the change in the firm structure is no long-term solution to the unemployment dilemma, it may hasten the decline in unemployment. At the same time the growth base for production may strengthen and the potential to generate new products and production methods will increase as the firm base diversifies.

### **Employment Developments by Branch**

Several scenarios for the developments in employment by branch until the year 2005 can be presented. The dwindling of the agricultural and forestry labour force will continue in all these scenarios but export-driven growth can, for instance, mean a slight upswing in manufacturing employment or at least a halt in the downward trend of the 1980s. This will nevertheless require not only relatively fast growth in output but also a shift in the weight of exports and production toward more labour-intensive branches and the establishment of many new firms.

The amount of persons engaged in the "other enterprises" sector (construction, wholesale and retail trade, finance and business services), which has experienced rapid growth during the 1980s will continue to fall in the next few years as domestic demand continues to be in a slump. Over the longer run, the domestic demand for the services of these branches will nevertheless grow quickly and also exports will expand. The trends in employment will depend greatly upon changes in the firm structure and wage developments. One possibility is that the streamlining and concentration of activities will be a permanent feature so that employment will increase primarily via liberalization of open hours and greater use of part-time work. These branches have the most developed part-time labour markets and the prevalence of part-time jobs may increase swiftly. Another scenario is that many new jobs are created in these branches as a result of the slow rise in wages. This corresponds to the developments in the United States and Austria. This scenario is marked by the widening of wage differentials across branches and firms.

The number of persons engaged in public and private welfare services will increase slowly during the forecast period. The increase in the labour force will nevertheless be hastened by the increased prevalence of part-time work. This branch is undergoing a clear structural change. The labour force in public services will shrink in the next few years and not start to rise again until toward the end of the decade. These developments depend primarily upon the local government's service strategies. The streamlining of the government's own services will lead to the corresponding expansion of private services since the overall demand for education, health, and social services will grow. The trends in employment in this branch will be affected fundamentally by the wage policies followed.

Figure 7.9 presents the trends in employment by branch under balanced economic growth combined with relatively swift economic growth in Finland. The lower boundary depicts a scenario whereby the growth in productivity is rapid and the average work time is not shortened appreciably. The growing output in this case would then be realized in each year with the same number of persons employed in 1992. The trend of the upper boundary would require the above-described changes in firm structure and wage structure as well as the increasing prevalence of part-time work. The number of persons working would grow by 150-200 thousand. The total number of persons working in 2005 would, however, be lower than in the late 1980s.

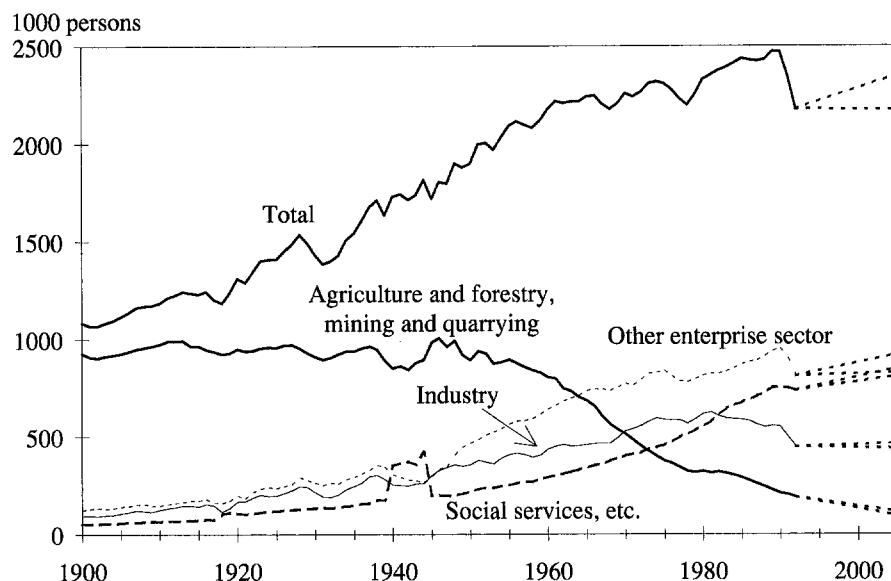


Figure 7.9. *Employees by Branch in 1900-2005, thousand persons<sup>1</sup>*

<sup>1</sup> Figures presented are in accordance with the Labour Force Survey of Statistics Finland. For 1900 - 1959 the number of employees is based on annual manhours worked published in the study by Riitta Hjerpe (1988).

According to both scenarios the rate of unemployment would remain at a high level at the beginning of the twenty-first century. Even according to some of the brighter employment scenarios it would be only slightly under 10 percent. If annual growth in output is only 1.5 per cent, unemployment will not fall below 20 per cent unless extraordinary measures are taken.

### Do We Face a Work-Sharing Society?

Calls for the redistribution of work as a means of lowering unemployment are always more prevalent during a recession. This occurred in Europe and the United States in the 1930s, where the interest was primarily directed toward the shortening of regular work time or the rotating of unemployment via temporary layoffs. A corresponding situation occurred in Finland in the late 1970s. A committee was set up at that time to look into aspects of this matter on a wider scope than just the connection between work time and employment. The current recession has renewed the debate on expanding the use of part-time work in various forms.

There are no unambiguous results about the impact on job creation of the shortening of the regular work time. The most convincing result is that a large portion of the shortened time would be made up by raising the efficiency of time use and the acceleration of growth in productivity (Romppanen, 1980; Eriksson - Fellman, 1991). Nor have layoffs been able to distribute

unemployment more evenly since layoffs are already now in use to such an extent that there have been calls to limit their use, at least under the current conditions.

The expanded use of part-time work is seen as a more promising means of dividing work for several reasons. It promotes the flexible use of production capacity and facilitates the lengthening of the hours when shops are open. In combination of part-time retirement this would soften the impact of an ageing labour force by enabling the exploitation of older worker's professional skills and lighten the problems in financing pensions. The interest of workers in part-time work has been high and growing all the time (Ministry of Labour, 1993b). The high indebtedness of households may, on the other hand, may have eroded the interest in part-time work somewhat in recent years.

The rapid increase in the prevalence of part-time work is limited by the narrowness of Finland's part-time markets and its concentration on a few branches. In many branches the preconceptions about part-time work are great. People feel they are being relegated to the periphery of the labour market, from which it will be difficult to come back. This suspicion can be increased by the attempts to use part-time work as a means of employment policy. The most important prerequisite for the expansion of part-time work is perhaps the changing of general attitudes to be more positive toward irregular forms of working. Part-time work could thus be seen as a part of labour market flexibility. Some of the main factors that increase the willingness to work part-time are making it voluntary and the possibility to return to full-time work.

If unemployment remains high and the growth in productivity continues to be swift, this increases the pressure for radical changes in working hours. For example, there has been a rekindling of the debate in Finland about moving to a two-shift society, originally suggested by professor Seppänen back in the 1960s (Seppänen, 1967). In its original form, the work week would consist of six-hour work days, six days a week. The average work time would not be appreciably shorter and a prerequisite would be such an increase in demand for output that another shift could be hired. If applied as a five-day work week, this would in turn require such a considerable decrease in wages that it would perhaps not be feasible to make the transition all at once. It could be adopted primarily as branch and firm-specific form in tandem with other new forms of work time.

A permanent improvement in employment is made difficult by the fact that the number of persons employed is the same as in the early 1960s, even though output is 2.6 times greater and the normal manhours worked in a year shorter by a fifth than at that time. In the adjacent graph the trends in unemployment until 2005 are depicted according to the scenarios of faster and slower growth in output. Unemployment in both scenarios will depend considerably on the trends in various work times and firm structure. The graph also presents an estimate of the trends in long-term unemployment since this is becoming a particularly difficult problem.

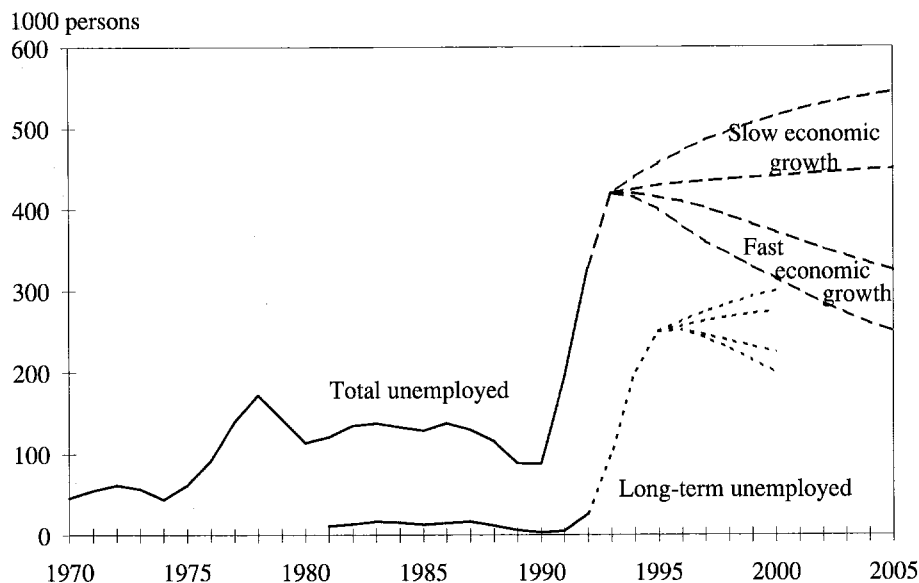


Figure 7.10. Number of Unemployed and Long-Term Unemployed during 1970-2005, thousand persons

Unemployment will remain high even if there is relatively swift growth in exports and production, a substantial rise in the labour intensity of firm structure and greater prevalence of part-time work. This is partly caused by the growth in the number of long-term unemployed persons. Their employment opportunities will be affected by the upswing in the supply of labour as the demand for labour recovers. The unleashing of the supply pent up during the recession will mean that there will be plenty of young educated persons entering the job market so that it will be increasingly difficult for older long-term unemployed persons to obtain work.

If economic growth slows down permanently to the rate of 1.5 per cent in line with the global crisis scenario evaluated in Chapter 3, or even lower, it will be impossible to lower unemployment via traditional means. The open sector must operate efficiently in these conditions too, and the growth in productivity will continue to be appreciably faster than growth in output. In this case unemployment can be lowered only by radical means to redistribute work and income, by redefining the relation between work and livelihood in a new way (e.g. basic income) and/or by approving of rapidly growing differences in the wage levels of different wage earner groups and different income levels in different population groups. As long as aggregate income in the economy grows, the incomes distribution policy can to some extent divide work and livelihood anew. Under the conditions of an open economy the mobility of factors of production will nevertheless narrow the possibilities to even out income distribution. If chronic unemployment were to be reduced with a system like the unemployment pension scheme of the 1980s,

the whole level of pension security would have to be radically revamped. This would occur in any case under conditions of slow growth.

The adjustment to slower growth can be both eased and hindered by the fact that other European countries face the same situation. The adjustment would be eased in that the same types of solutions, based on incomes distribution policies, redistribution of work or growth in income differences, would be in common use. On the other hand, the adjustment could be difficult since the infighting for market shares would be fierce, even if Europe seeks to protect itself against the competition coming from outside. Finland's situation would be made more difficult by the weakness of the starting point; high unemployment and a high foreign debt as well as considerable public indebtedness. Even under conditions of sluggish growth domestic demand would have to be held in check in order to reduce the indebtedness.

## **7.5 Export-Driven Growth in All Cases**

Finland's production structure and the development of the entire economy is linked closer with the international economy than previously. There can be no turning back in the process of opening the economy nor is it possible to remain in the situation of the status quo. For example, restricting the internationalization of firms and capital movements is in practice impossible unless there is a shift to a completely regulated economy.

The opening of the economy together with the current debt problems means that it is difficult to find any viable alternatives to a development strategy of export-driven growth and import substitution. Finland's price competitiveness and growth in global markets will thus set the pace for Finland's economic growth over the next 10-15 year horizon. This is a rather short time for any fundamental change in the structure of exports. The expansion of exports will still hinge for a long time upon the performance of the traditional branches and export firms. The most favourable development alternative would be if the traditional exports expanded rapidly in tandem with the emergence of new exports of goods and services.

The forest sector, especially its raw material market, is nevertheless faced with such considerable risk factors that growth similar to that witnessed in the 1980s cannot be relied upon even under favourable conditions regarding competitiveness. Both the growth in the supply of recycled fibres and fast-growing tropical fibres can weaken the possibilities of the domestic pulp and paper industry based on virgin fibres to expand in Finland. The price level of pulp and paper might remain low for a long time. On the other hand, it is not impossible that recycled paper be used increasingly in the production of energy and that paper made from virgin fibres will retain a considerable market share owing to paper quality requirements and user preferences. Benefiting from this scenario will require greater environmental friendliness all along the paper production chain. The most stable prospects for the future seem to be those of the mechanical forest industry if it is able to renew its

products and find new markets which it forsook in the 1980s as it diverted its efforts to meeting the robust domestic demand.

The growth in exports perhaps depends to a greater extent on other branches than just the forest industry. Exports have increased in those branches that over the long run have invested in new products, such as in the electrotechnical, machinery and pharmaceuticals industries. For this reason the share of high technology exports has risen to 15 percent of total exports. The sustained growth of exports will require the birth of new innovative firms and above all else their success in gaining access to export markets. This should be the main task of industrial policy.

It is impossible to sustain economic growth that is faster than in other countries over the long run unless the structural change in exports spurs an continuous improvement in the terms of trade. The strengthening of domestic demand will nevertheless increase imports so much that the current account would start to run a deficit and the foreign debt would once again begin to climb. If the growth in exports and output is based more than previously on the boosting of total factor productivity instead of emphasizing capital intensity and high investment, this will ease the limitation posed by the current account. Better use of the capital base can be promoted by new production models and logistic solutions.

The growth of exports will eventually give a boost to domestic demand, which will be of decisive importance for raising employment. The recovery of domestic demand will not solve the unemployment problem since the improvement of many domestic branches will require a rapid rise in productivity. Keener import and domestic competition will curb the rise in prices necessary for an improvement in profitability.

Another factor hindering the reduction of unemployment is the increased prevalence of long-term unemployment. Some persons have withdrawn from the labour market during the recession, but this pent-up supply will be unleashed as the demand for labour recovers. The new educated labour force competes with the unemployed for jobs so that the long-term unemployment will not begin to decline until there is a sustained strengthening in the demand for labour.

Under conditions of sluggish international growth it is difficult to find a solution to unemployment using traditional means. In any case lowering unemployment would require the emergence of new labour-intensive businesses and greater use of part-time jobs, work carried out at home or other types of job relations that are not in wide use yet in Finland. In practice this type of development would mean the widening of income differentials between working persons, but it might enable more people to hold jobs. Nonetheless, Finland has little hope of being able to compete with the neighbouring regions or other low-wage countries in labour-intensive production. The widening of wage differentials could ease unemployment in service branches somewhat. A potential problem is the emergence of a large group of working poor, as has been witnessed in the United States.

## **Public sector seeks its role**

# 8

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## **8.1 Points of Departure for Public Sector Developments**

One of the main tasks of the public sector is to promote the creation of a society where the citizens wish to live and work and where domestic and foreign firms wish to invest. In this way the country can compete for the best labour resources and the investment of firms. The public sector takes care of the state of human capital by creating the preconditions for a sound educational system, health care, social services and research activities. Another main responsibility of the public sector is also to keep the infrastructure in competitive shape. The public sector's own activities must be efficient and allocated from the standpoint of the overall welfare of the society.

The public sector influences the behaviour of households, firms and other organizations with its tax and fee policies, income transfers and its own services and investment. These guidance and incentive effects are of central importance as the public sector seeks to promote the stability and flexibility of society. A well-functioning society is a basic prerequisite for Finnish success in international competition.

The most important questions facing the public sector in the future are:

1. What kinds of challenges do European integration and developments in Finland's neighbouring regions present for the public sector's operations and for the level and structure of expenditures and taxation?
2. What kinds of measures are needed so that the guidance and incentive system formed by the public sector support efficient and fair activity in the overall economy?
3. How will Finland cope with the pressures on expenditures generated by the ageing of the population after the year 2000? A related question is how the pension schemes will adjust to the carrying capacity of the economy.
4. How will the fiscal deficit of the public sector be gradually reined in and the steep climb in the public debt brought to a halt?

Competition with the East Asian countries and the United States sets external restrictions on the activities and scope of the public sectors in Europe. Many European countries are indeed striving to restrict the size of their public sectors. The freedom of movement in goods, services, labour and capital inside of Europe will standardize the public sectors of different countries. The taxation of the EU region will harmonize in certain respects. The more

sensitive an object subject to tax is to move, the more unified its taxation will be in different countries. The public sector of Finland will also have to adjust to the tax practices of competitor countries.

## **8.2 Public Sector Financing Provides Framework for Expenditures**

### **Finland Has Nordic Tax System**

During 1960-1990 the ratio of taxes per GDP of the European OECD countries rose by 14 percentage points. Most of this occurred in the 1970s even if the taxation of many OECD countries was raised in the 1980s as well. The rise in the tax-per-GDP ratio in the 1980s was nevertheless much slower in many countries, except in Finland, Sweden and Denmark, than in the previous decade.

The variation in the tax ratio is wide across countries. The tax ratios of the United States and Japan are considerably lower than in other industrialized countries, while the tax rates in the Nordic countries are high. Finland's gross tax ratio, when taking into consideration the private pension contributions and obligatory social insurance contributions, was one of the highest in the OECD in 1991, ranked behind Sweden, Denmark, Norway and the Netherlands. From the standpoint of international tax competition, the taxation levels of Finland and the other Nordic countries are very high.

The development of the tax system in the OECD countries has since the 1980s been weighted toward boosting the efficiency of the economy. The tax base has been widened by making services increasingly liable to taxation and by discontinuing certain tax deductions, which are regarded as a prime source of inefficiencies in taxation. The marginal tax rate in income and wealth tax has been lowered, in order to reduce the risk of tax flight and tax evasion. The weight in taxation has been shifted from direct taxation to indirect taxation. The multiple levying of taxes in indirect taxation has been sought to be eliminated. The value added tax has been taken into use in as wide a scope as possible. In corporate taxation the goal has been the elimination of double taxation, where the dividends of firms are separated from the firm's after-tax profits and then taxed once again in accordance with personal taxation. Finland's tax system has also been developed in line with these trends.

In Japan and the United States the relative share of taxes on income is higher and taxes on commodities lower than in the EU countries. The income tax revenues of the EC countries comprised a third of their tax proceeds in 1991, and the share of social security and commodities taxes were slightly less than a third. The share of property taxes was under 5 per cent. The structure of taxation in Finland does not differ fundamentally from the typical structures prevailing in the EU countries. Capital taxation is somewhat more moderate in Finland than the average in the EU countries and the share of social security contributions is lower. On the other hand, the level of income taxation in Finland is one of the highest in the OECD countries.

The efficiency losses in the Nordic countries possibly caused by the tax structure appear to be modest compared to the EU countries. The high level of taxation is nevertheless problematic if the quality of services and income transfers is not deemed to be high enough compared to the tax proceeds.

	1960	1970	1980	1985	1990
Finland	26,3	30,4	36,4	41,4	41,1
Finland(k) <sup>1</sup>	26,7	31,0	38,8	44,6	45,8
Sweden	31,1	43,7	61,6	64,7	61,4
Norway	29,9	41,0	48,3	45,6	54,8
Denmark	24,8	40,2	56,2	59,3	58,4
Germany	32,0	38,6	48,5	47,6	46,0
France	34,6	38,5	46,1	52,2	49,9
Netherlands	33,7	43,9	57,5	59,7	55,6
Belgium	30,3	36,5	59,0	62,5	55,2
United Kingdom	32,6	38,8	44,8	46,2	42,1
Ireland	28,0	39,6	50,8	54,8	43,1 <sup>2</sup>
Japan	20,7	19,4	32,6	32,3	32,3
USA	27,8	31,6	33,7	36,7	36,1 <sup>2</sup>
OECD Europe	30,9	36,6	46,0	49,5	48,5
EC	32,1	36,9	46,0	49,8	48,7

<sup>1</sup> Includes employment pensions paid by the private sector.

<sup>2</sup> 1989.

*Table 8.1. Public Expenditures as a Percentage of GDP in 1960-1990, %*

Source: OECD/EO.

The curbing of growth in public expenditures was reflected in the decline in the share of expenditures relative to GDP in several OECD countries in the late 1980s (Table 8.1). The slump in Western Europe has, however, again weakened the balance of the public sector in the early 1990s. The share of public expenditures within GDP in the EC countries rose from 1990 to 1992 by two percentage points and, for example, in Germany by four percentage points.

The share of public expenditures relative to GDP in Finland was below the average in the European OECD countries until the beginning of the 1990s. As a result of the recession the relative size of the public sector has subsequently risen to 60 per cent already, i.e. almost the level prevailing in Sweden. The fastest growing items have been the income transfers to households owing to the manifold increase in unemployment compensation, bank support payments and interest on the public debt.

In the United States and Japan, where the activities of the public sector are focused on tasks such as administration, defence and law enforcement more than in Western Europe, the share of public expenditures is low. In the Nordic countries where the functions of the public sector are wider than elsewhere, the ballooning of the public sector has been swift. The aim of the Nordic countries has been especially on increasing social security and equality. Most of the expenditures are indeed comprised of welfare services

provided by the public sector, income transfers to households and the support to the primary sectors of the economy.

### Income Transfers or Public Services?

There are appreciable differences across countries in the structure of expenditures (Table 8.2). In many Western European countries the emphasis is laid on income transfers. The welfare services in these countries are often produced in the private sector, subsidized by the public sector or procured via income transfers.

In the Nordic countries public expenditures are focused on consumption due to the production of public services. Most of these services consist of welfare services. The significance of traditional administration and security services is small. In Finland the share of public consumption expenditures has been lower than in the other Nordic countries until 1992, but appreciably higher than in most other Western European countries.

In countries with a high level of indebtedness, such as Denmark, the Netherlands, Belgium and Ireland, the share of interest expenditures relative to GDP is very high. Until now the corresponding share in Finland has remained low, but along with the growth in the public debt it has risen very rapidly. Japan differs clearly from the other OECD countries in that its public expenditures are weighted toward investment.

Public income transfers (incl. interest expenditures) have generally grown faster than consumption expenditures (Figure 8.1). Finland ranks among the fastest growing countries. The growth in income transfers in Finland is explained partly by the fact that employment pensions are included in income transfers in order to facilitate international comparability, and their growth was swift in the 1980s.

	Income transfers						Total Expenditures
	Consumption Expenditures	to Households	to Business	Interest Expenditures	Investment	Other Expenditures	
Finland	19,7	13,5	2,8	1,4	3,1	2,2	42,7
Finland (1992)	24,9	22,3	3,5	2,5	3,2	3,3	59,7
Sweden	25,9	19,5	4,5	5,4	3,2	1,9	60,4
Norway	21,0	19,0	5,9	4,0	3,7	1,0	54,6
Denmark	25,1	18,1	3,1	7,4	2,3	3,1	59,1
Germany	18,9	15,7	2,0	2,7	2,3	4,1	45,7
France	18,3	21,4	1,7	2,9	3,2	3,2	50,7
Netherlands	15,3	25,3	1,8	6,7	2,3	5,0	56,4
Belgium	14,5	23,2	3,0	10,6	1,5	3,1	55,9
United Kingdom	19,5	11,9	1,2	3,6	1,8	3,3	41,3
Ireland <sup>1</sup>	17,7	16,6	3,6	9,3	2,9	2,2	52,3
Japan	9,2	11,1	0,8	4,0	5,0	1,5	31,6
USA	17,9	10,8	0,6	5,0	1,6	0,4	36,3

<sup>1</sup> 1987.

Table 8.2. *Public Spending by Expenditure Group in 1989 as a Percentage of GDP*

Source: OECD/NA.

Public consumption expenditures depict in practice also the scope of public activities. Rapid growth in consumption expenditures has generally been associated also with growth in employment. This holds especially for those countries where consumption expenditures are weighted toward welfare services requiring a lot of labour. In certain countries such as Austria, Denmark and Ireland, the employment in the public sector has increased at a faster pace than public consumption expenditures, which may reflect the decline in the relative level of earnings in the public sector or a reduction in the outpurchasing of services. On the other hand, for example in the United Kingdom, Japan, the United States and the Netherlands, employment has risen only slightly or not at all even though real consumption expenditures have increased.

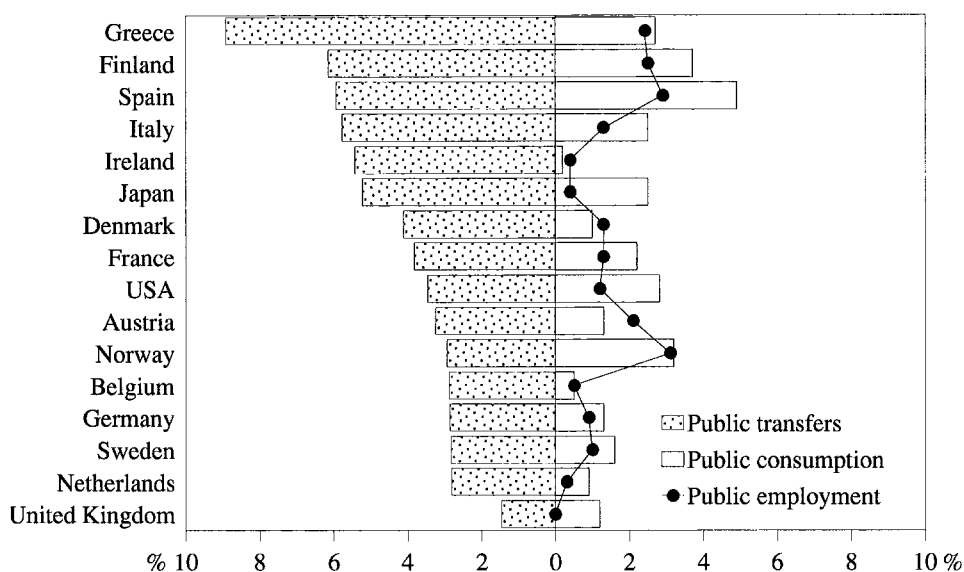


Figure 8.1. *Real Growth of Public Income Transfers<sup>1</sup>, Public Consumption and Public Sector Employees in 1980s, per cent per annum*

<sup>1</sup> Income transfers deflated according to private consumption price index.

Source: OECD/EO.

The volume of public consumption expenditures in Finland grew in the 1980s at a rate of almost 4 per cent per annum and the number of public sector employees about 2.5 per cent a year. Growth in both consumption expenditures and the number of employees was among the fastest in the OECD countries.

The different focus in public expenditures is reflected clearly as differences in the employment shares of the public sector. They are highest in the welfare service-oriented Nordic countries. On the other hand, in Belgium and the Netherlands, where the share of public expenditures is almost of the same magnitude, the share of employment in the public sector is appreciably lower

since expenditures are weighted toward income transfers (Figure 8.2). Before the recession the share of public expenditures relative to GDP in Finland was at the same level as in Germany, but the share of the public sector's employment was higher.

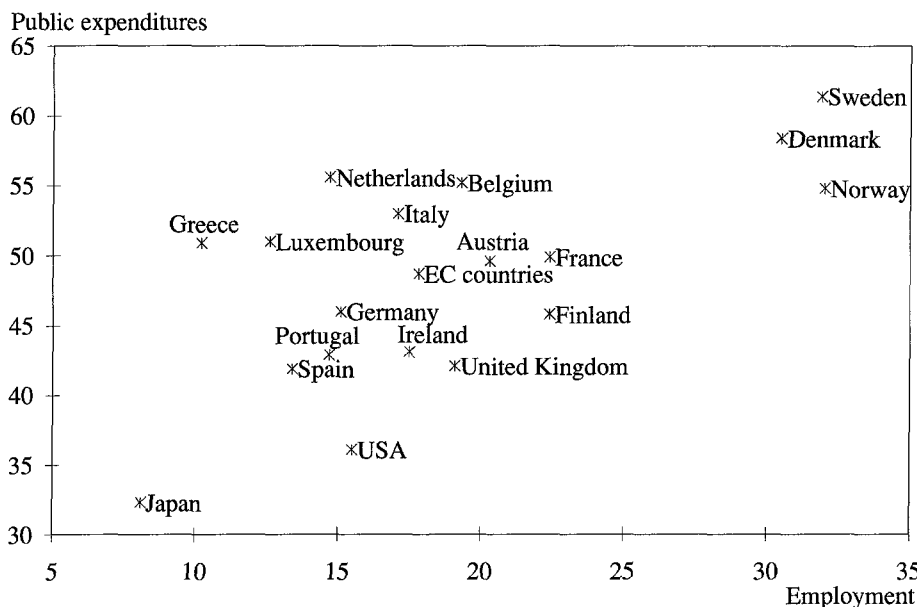


Figure 8.2. Public Expenditures as a Percentage of GDP and Public Employees out of Total Employees in 1990, %

European tax harmonization will create a setting in the 1990s for public expenditures in individual countries. The Nordic countries evidently have a need to streamline the size of their public sectors closer to the norm for Europe. This requires a re-evaluation of the service and income redistribution tasks of the public sector: To what extent does the public sector regard it best to produce basic services and welfare services itself and to what extent will the production of these services be diverted to the private sector?

### 8.3 Balancing of Finland's Public Sector Will Take Long Time

The public debt in Finland has been one of the lowest in Europe. In both 1992 and 1993, the deficit of the public sector was nevertheless about 8 per cent relative to GDP. Aggregate output in 1993 is about 20 per cent below the full employment path. In order to balance the budget, output growth of almost 30 per cent would be required since growth in output of one per cent automatically bolsters the financial position of the public sector by half a percent of GDP. The budget deficit would thus be reined in very slowly by way of output growth.

### **Few Possibilities to Ease Tax Burden**

The tax reforms of recent years have, in addition to easing taxation, been aimed at correcting distortions in taxation and bringing the tax system closer in line with those prevailing in the European countries. The latter objective means pressures to lower excise taxes and the value added tax, which will go into force during 1994.

The structure of the tax system after the reforms already implemented and those to come will not be under any great pressure to change during this decade. The levels of taxation for wage and capital income are nevertheless far from each other. Owing to the deficit of the public sector the pressures to raise taxation of capital income are great. There is nevertheless little leeway in this respect since raising taxation of capital income could lead, for example, to a shift in bank deposits to countries with more lenient tax treatment. Thus the lowering of the marginal tax rates on earned income would be the safest alternative, especially since these are high compared to the rest of Europe.

The possibilities to lower the tax-per-GDP ratio in the next few years are modest even though the tax burden in Finland is one of the highest in the world next to the other Nordic countries and the Netherlands. If income taxation is eased, the tax revenues of the central government must be safeguarded by raising other taxes. The room for manoeuvre lies primarily with the real estate tax as well as environmental and emissions taxes. Furthermore, the level of inheritance and gift taxation could be raised more in line with international practices.

### **Balancing the Financial Position of Public Sector**

In the swift economic growth scenario, the growth in output is estimated to recover slowly by 1995, when it will be 4 per cent. Thereafter until the year 2005 GDP will grow annually by 3.5 per cent. During the forecast period public revenues, excluding interest revenue, will be slightly higher than 40 per cent relative to GDP. Public spending, excluding interest expenditures, will decline in volume terms during 1993-1995 by a total of 5 per cent. The annual spending growth will gradually rise to a level of 2 per cent per annum until 1999 and continue at that pace until 2005. The real rate of interest will exceed the pace of GDP growth appreciably at the beginning of the period and not approach this pace until towards the end of the millennium.

According to the above-mentioned assumptions the gross public debt relative to GDP will almost reach the 80 per cent level in 1999, after which it will begin to slowly decline. In 1999 net interest expenditures will rise to almost 5 per cent of GDP and 12 per cent of public expenditures. Interest expenditures will remain at this level until the year 2005. The debt servicing expenditures will thus substantially impinge upon the possibilities to supply welfare services and incomes transfers.

In the baseline scenario the share of income transfers and public consumption and investment within GDP will dwindle during the forecast period by over 10 percentage points to 43 per cent. Despite the considerable

decline in the share of public expenditures, the debt will rise to a high level and not stabilize until the end of the millennium. The cuts in welfare services would mean a decline in the consumption expenditures of the municipalities in particular, and would be reflected in a corresponding decline in the number of employees unless the wages in the public sector rise at a slower rate than in the private sector.

The baseline scenario requires considerable cuts in public spending over the next few years. Despite this, a long-term debt servicing burden will be incurred. A faster decline in expenditures than envisioned in the baseline scenario over the next few years would improve the balance of the public finances and accelerate the stabilization of the debt. This would also be necessary for the reason that under high real interest rates the debt servicing expenditures will increasingly crowd out the leeway available for welfare services.

The possibilities for cuts in expenditures greater than those assumed in the baseline scenario are nevertheless modest in practice owing to the high unemployment. The stabilization of the debt would be facilitated by a faster rise in the public sector revenues than foreseen in the baseline scenario. Revenues could be enhanced by user fees for services, financing of social security by the payments collected and temporary hikes in taxation. If the revenues of the public sector as a percentage of GDP rose, for example, by two percentage points higher than in the baseline forecast until the end of the 1990s, the debt would stabilize already in 1996. Increasing the revenues of the public sector would weaken the consumption possibilities of households, but perhaps not domestic demand as a whole because part of the savings of households is channelled to sustain the level of welfare services.

The developments in the public debt are affected by very many factors. Figure 8.3 illustrates various stabilization measures and the impact of real interest rates on the public debt. Scenario 1 depicts the level of indebtedness if in 1994 public consumption expenditures were cut compared to the baseline scenario by an amount corresponding to slightly over one percentage point relative to GDP. This would require, for example, a 10 per cent reduction in the wage bill of the public sector. From 1995 onwards the growth of public expenditures would be the same as in the baseline scenario. The public debt would stabilize already in 1996 and thereafter begin to decline steadily.

In scenario 2 income transfers and subsidies are gradually trimmed during 1994-2000 so that in the year 2000 their share of GDP would be about half a percentage point lower than in the baseline scenario. This would mean a lowering of the share of business support expenditures relative to GDP by half of their present level and considerable savings, for example, in unemployment and sickness insurance expenditures. These kinds of measures would take effect rather slowly. The level of indebtedness would start to fall a couple of years earlier than in the baseline forecast, but remain at almost the same level for a long time.

Scenario 3 depicts the effect of the above-mentioned rise in the revenues of the public sector. Public revenues relative to GDP in 1994-2000 are two percentage points higher than in the baseline scenario. Revenues subsequently return to the levels assumed in the baseline scenario. The debt starts to fall relatively quickly and already in the year 2000 the difference vis-à-vis the baseline scenario is almost 15 percentage points. After this the gap remains the same.

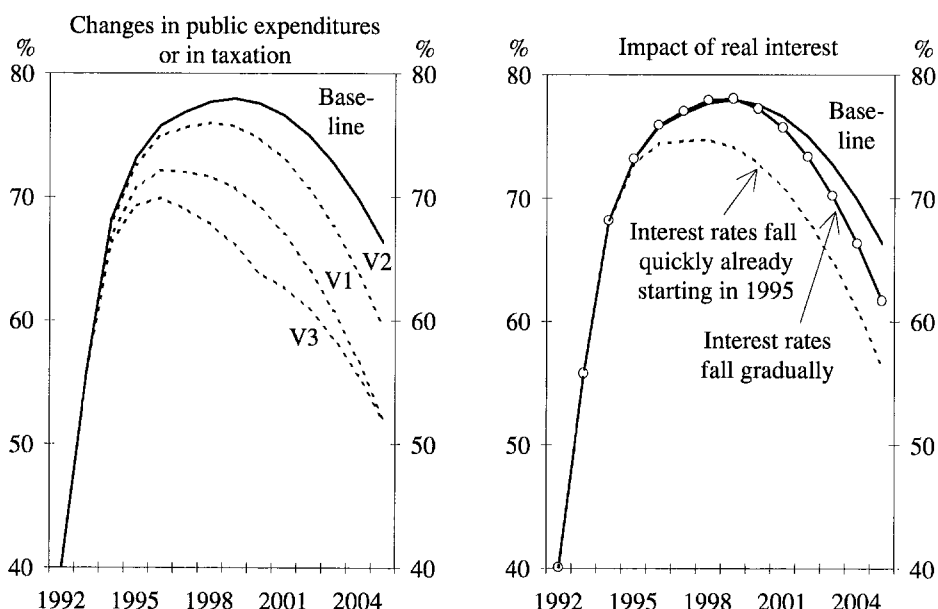


Figure 8.3. Various Scenarios for Gross Public Debt Relative to GDP during 1992-2005, %

These simulations have been calculated assuming that the economy grows in accordance with the baseline scenario. In practice this will not happen as both the fall in expenditures and hikes in taxation affect aggregate demand and production costs. At least as significant an indirect effect is how efficient and credible the measures to rein in the public debt are seen. If they change expectations about the economy and the level of interest, the overall impact may be much greater than impact of the measures separately.

Over the long run real interest rates will correspond to the rate of growth in the economy. This kind of development is built into the scenario where real interest rates gradually fall to the rate of economic growth, slightly over 3 percent, and already below this toward the end of the period. The gap vis-à-vis the baseline scenario gradually widens, but fairly slowly.

If belief in Finland's economy is restored quickly, so that real interest rates fall appreciably at the beginning of the period and the declining trend continues so that real interest rates remain below the rate of economic growth, the level of indebtedness would start to fall in the latter half of the

1990s. In the year 2005 the level of indebtedness would be 10 percentage points lower than in the baseline scenario. This indicates how important an improvement in the faith in the economy is from the standpoint of solving the debt dilemma. A decline in the level of interest would bring some room for manoeuvre to the economy so that the cuts in public expenditures and/or the tightening of taxation would not have to be so stringent.

The calculations above show how difficult it is to rein in the public debt even under conditions of favourable economic growth. The public sector cannot inflate its debt under the circumstances of free capital mobility since two thirds of the debt has been borrowed from abroad. The consequent depreciation of the Markka would raise the foreign debt correspondingly while at the same time the business conditions in the domestic market would deteriorate and the tax base would crumble. Devaluation expectations would raise real interest rates. Keeping a tight rein on inflation is indeed an important prerequisite for stabilization of the public debt.

#### **8.4 Re-evaluation of Public Activities**

Taming the indebtedness of the public sector via spending cuts and structural change will last at least until the beginning of the next century. It would succeed faster if the growth in output is swifter than forecast and if the revenues of the public sector can be enhanced at least temporarily. When reflecting upon the scale and timing of measures designed to address to these problems, it is necessary to take into consideration the especially difficult cyclical situation as well as the fact that an efficient and well-functioning public sector will in the future be an increasingly important asset for the competitiveness of the economy.

During the last decade the public sector has gradually taken on a wider role in economic activities in the form of normative regulations, taxation, services, subsidies, income transfers and investment. The efficiency of these measures from the standpoint of their original aims has often been called into question. For this reason in the future there is a need to limit the operational scope of the public sector as well as the extent of its participation. A clearer division of tasks between the public and private sectors' activities is needed.

The improvement of the public sector's operational efficiency pertains primarily to the public services and investment. In this respect the main question is whether the public sector will still be mainly a producer of services or will its focus shift increasingly from the production of services to their financing. Likewise here will be a shift from the public sector producing the services itself to procuring them from private service organizations. The latter trend will be more prevalent in the future.

By international standards, the emphasis in Finland is on public services, which is a favourable phenomenon from the standpoint of employment. A prerequisite for continuation of this kind of a policy line is the improvement in the efficiency and competitiveness of public activities. Since public services are tightly bound to a certain location, it is not easy to create

alternative private service markets in a thinly populated country. Privatization might easily entail shifts from public service monopolies to private service monopolies. In those activities where competition can be safeguarded, privatization can spur greater efficiency in the public production of services. If the activities of the public sector can successfully be made more efficient and flexible, then it is sensible to keep the scope of public services wide.

The basic task of the public sector over the long run is to safeguard a competitive infrastructure so that Finland can remain an attractive investment site for Finnish and foreign firms as well as a good place for Finnish citizens to live. A physical infrastructure as well as education and level of basic health care must be ensured in the future, too. In turn the income transfers and business subsidies aimed at sustaining the achieved level of consumption must be scaled back.

One key question for the activities of the public sector in the 1990s is what kinds of alternatives are available in the financing of the public sector's welfare expenditures. Welfare expenditures were about 40 per cent relative to GDP in 1993. Trends in expenditures depend primarily upon four factors:

1. How many potential recipients of public services and income transfers are there?
2. What is the coverage of recipients, i.e. how many recipients are there relative to potential recipients?
3. What is the level of benefits in the form of services and income transfers for each recipient?
4. How efficiently are the services produced?

The first question is decided on the basis of the age structure of the population. The second and third questions depend upon political decisions. At the present time the coverage of recipients with respect to most services and also income transfers is approximately 100 per cent. In order for expenditures to be cut, either the coverage of recipients must be reduced or the level of benefits for each recipient must be reduced. The important question here is what kind of combination of coverage and level of benefits can best safeguard the financing of public services and income transfers. Will taxpayers be more willing to finance public expenditures if they know that they will receive in return public services and income transfers when they are in need?

The fourth question is related not only to the suitability of private or public organizations as efficient producers, but also to the internal modes of public sector operations. Studies have found that there can be considerable differences in the efficiency of service units operating in the same field. The efficiency of primary and secondary schools, health centres and homes for the elderly varies across and within the municipalities (Kirjavainen - Loikkanen, 1992; Järviö - Luoma, 1993). By adopting new modes of operations, the efficiency can be raised without weakening the quality of services.

In the next few years decisions will have to be made in the balancing of public finances between employment and the level of wages. Will the public sector strive to keep its relative wage level the same, for example, with respect to the private sector so that the public sector's employment will weaken, or will the relative wage level be lowered, thereby promoting higher employment? The latter alternative would of course be better from the standpoint of employment, but over the long run the quality of the labour force, the level of motivation and the quality of services would be weakened.

An important issue affecting the activities of the public sector and its coming role relates to the basic values of society. Will the emphasis in the values of citizens be placed on the need to increase the freedom of consumer choice, on seeking efficiency and realization of self-interests, or will the emphasis lie on values based on community and solidarity? Under difficult conditions the latter values may gain greater weight, but over the long run the public sector will perhaps adapt its functions in accordance with the values of the former kind.



## **Will Finland reach a sustainable growth path?**

9

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Risks in the Labour Market

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## 9.1 Growth Policy in the Open Economy

Finland's economic environment is affected by swift growth in technology as well as the changes in the international division of labour. The greatest pressures for change are on the labour-intensive industrial branches and services requiring lower skilled labour. These areas are faced with new competitive challenges, for example, from the St. Petersburg area and the Baltic countries.

The competition spurred by opening the economy and the possible regulations coming with EU membership have a decisive impact upon the possibilities to implement growth policies and to reach a favourable employment level. The liberalization of capital movements has been perhaps the most significant change for carrying out economic as well as growth policy. Another significant factor affecting economic and growth policy has been the aspirations to shift to a common currency within the EU. During a transition period this might require commitment to a fixed exchange rate policy. Free capital movements and fixed exchange rates mean that the level of interest rates in Finland will be based on the level of European interest rates and on the expectations regarding Finnish inflation.

The main issue in Finland's growth policy is the relation between real interest rates and growth in output. Over the very long run, the real rate of interest and the rate of growth are approximately the same. Uncertainty about the attitudes toward basic questions in economic policy, most of all inflation and exchange rate policy, the tensions between the government and different interest groups, the bank crisis and great difficulties in stabilizing the public sector have hindered the lowering of long-term interest rates down to the level of competitor countries. For this reason, from the standpoint of long-range growth and growth policy it is important how the short- and medium-term economic policy solutions are able to promote stability and confidence in the restoration of economic balance.

What are the growth policy means at hand in addition to fostering economic stability and confidence in an environment like the one described above? Technological development, which is depicted by the change in total factor productivity, and the savings rate of the economy are the main growth factors. The most important growth policy tools are those measures which increase the flexibility of the economy, improve the prerequisites for generating technological innovation and exploiting technical advances, as well as incentives that promote savings.

The following factors will facilitate the reaching of a sustainable growth path:

1. The labour market functions so that prices and costs rise at most at the same pace as in the competitor countries and labour market flexibility improves.
2. The expenditures of the public sector are focused on education, research, basic health care and other expenditures which augment human capital.
3. Development of incentives in taxation, incomes transfers and services that promote saving, risk taking and entrepreneurship as well as rewarding hard work.
4. The physical infrastructure of the economy is kept in competitive shape.

When Finland narrowed the gap with more developed countries in the productivity race during the last decade, the growth in production was higher than the average in the OECD countries. Does the Finnish economy have the prerequisites for faster growth than in other countries or will growth be determined increasingly by growth in international markets? In order for the economy to grow faster than competitor countries over the long run without running into the constraints set by the foreign debt, there must be a continuous stream of significant new product innovations that can be turned into marketable goods. This kind of production and foreign trade structure ensure that rapid growth will not lead to a chronic deficit in the current account (Krugman, 1989). The structure of Finland's foreign trade has not fulfilled these criteria for rapid growth very well.

## 9.2 Difficult Way Out of a Dead End

The long-run growth in the Finnish economy is overshadowed by unprecedentedly large imbalances: mass unemployment, the high foreign debt relative to export potential as well as the public sector's wide deficit and steep growth in the debt. The question remains of what kind of balance can be attained by the year 2005. Will Finland tame its triple deficits during the period under investigation?

During 1990-1993 output has fallen about a fifth below its potential level. The closing of this gap and providing jobs for newcomers to the labour market would require about 5-6 per cent annual GDP growth over the years 1994-2005. The growth in exports would have to be about 7-8 per cent per annum. It is very unlikely that this kind of growth in the export markets could be achieved, so export growth would require continuous increases in market shares. For this reason, the lowering of unemployment may be the most difficult of the triple deficits to tame.

When searching for the path to balanced growth from the present situation of disequilibria, the question arises of what factors must be put into shape first. One positive factor facilitating the adjustment to the changes in the external environment is the excellent price competitiveness of the exposed sector. The problem remains of what will happen to the price competitiveness

in the next few years. Will it fuel inflation throughout the economy as has historically been the case or will it generate a permanent increase in Finland's export capacity? How much additional capacity will there be for production based on the new product innovations?

A tolerable solution to Finland's triple deficit - unemployment, current account and public finances - must be sought throughout the 1990s. Bringing about a lasting reduction in unemployment is the most difficult of the triple deficits to solve (see chapter 7.4). The relaxation of the debt constraints gives opportunities to stimulate domestic activity. An upswing in the international economy, the reining in of the public sector's borrowing, as well as changes in wage behaviour and other factors improving the flexibility in the labour market would facilitate a solution to the dilemma. The adjustment to integration in the 1990s in the domestic service sector, including the public sector, will be an extremely painful process from the standpoint of employment.

The expansion of the capacity in the exposed sector will be of crucial importance if Finland is to pull out of the current crisis and return to a sustainable growth curve. Only in this way will the debt dilemma be brought under control and the leeway found for stimulating the domestic market. Reducing the rate of unemployment hinges upon a rise in domestic demand (Figure 9.1). The growth of investment will require that profitability remains high for several years, i.e. that the income distribution continues to be favourable from the standpoint of profits. The preconditions for boosting profits are excellent in the export branches. In the sheltered sector the sluggish domestic demand as well as the high foreign currency debt of this sector will keep profitability weak. On the other hand, the sheltered sector does not have great investment needs in the 1990s. The appreciation of the Markka will ease the predicament of the domestic market branches by boosting demand and easing the burden of the foreign currency-denominated credits.

A recovery in investment and consumption demand will require a decline in real long-term interest rates. Even though Finland's interest rates have fallen along with the decline in the level of international rates, real long-term interest rates were almost 2 percentage points higher than corresponding rates in Germany at the beginning of 1994. The main impetus behind the sustained decline in the level of interest rates is the improvement in the credibility of economic policy brought about by implementation of consistent long-range policy measures. Thus inflation expectations and inflation remain at most at the level of competitor countries. The commitment to a low inflation policy will require changes in the functioning of the labour market. A third condition is the gradual reduction in the public deficit. If these conditions are met, the external value of the Finnish Markka could continue to appreciate and stabilize at a level which would eventually enable the Markka to be pegged in connection with EU membership at a level that is more credible than at present.

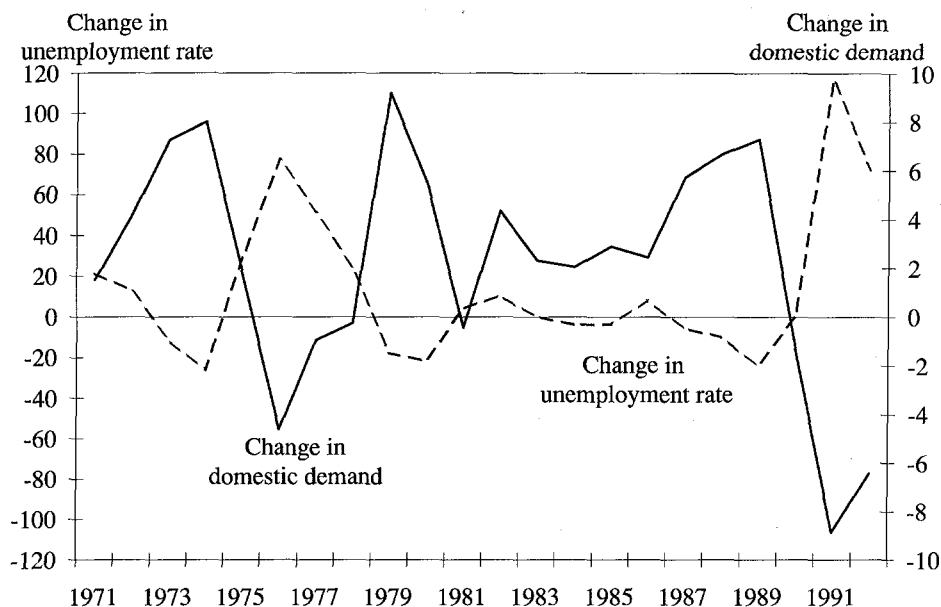


Figure 9.1. *Change in Unemployment Rate and Domestic Demand during 1971-1992, %*

The return to a sustainable growth curve is hindered by many conflicting objectives. The least of these is not the balance of the public sector. In the short run the increased public savings will reduce demand and weaken employment. As the deficit of the public sector shrinks long-term interest rates will nevertheless decline, which will promote the upswing in investment in the export branches and give a boost to aggregate demand. The growth in public saving could strengthen consumer confidence in the future and reduce private saving, which will in turn facilitate an improvement in consumer demand.

A reduction in unemployment will hinge upon growth in output, the key to which is a recovery in domestic demand. The surplus in the current account provides some leeway for this. The largest component in domestic demand, the growth of household consumption, will probably remain sluggish until the mid-1990s since the distribution of income between wages and profits in the sheltered sector cannot perhaps shift in favour of wages very quickly.

The growth in consumer demand will also be dampened if the saving rate of households remains high. Households will perhaps seek to reduce their indebtedness in order to curb interest expenditures and to be better prepared for any unexpected changes in income than they were at the end of the 1980s when the economy overheated. Also uncertainty about pension security can raise the saving rate of pensioners and of the large groups of middle-aged persons.

### 9.3 Conditions For a Recovery and Risk Factors

The conditions for a return to a growth path and better employment are determined by the following four factors:

1. How will investment accelerate in the next few years?
2. How will the public debt be brought under control?
3. Will the behaviour in the labour market change so that it promotes realization of low inflation and interest rates as well as a growth strategy based on fostering of exports?
4. How can the financial system be made to function effectively again?

#### Efficiency and Catalysts of Investment

The recovery of investment depends primarily upon output expectations. The excellent price competitiveness gives possibilities to expand market shares and to crowd out imports in the domestic market. One problem is the weak demand expectations for the domestic market upon which many of the open sectors are also greatly dependent. Another crucial prerequisite for investment is a rise in business profitability. The profitability of the export sector will climb during the next few years, perhaps swiftly, but the profitability of the sheltered sector will remain low. A third factor is the capacity utilization rate, which is lower than at any time since 1960, not only in the home market industries but also in some segments of the export industry (Figure 9.2). The capacity utilization rate of the forest and metal industries is nevertheless rising rapidly from its low 1991 level. A fourth factor affecting investment is the cost of external financing, especially long-term interest rates. Bringing down interest rates to a reasonable level will require the balancing of the economy and low inflation as well as a credible long-range economic policy. A fifth factor is a well-functioning financial sector.

The high investment by the domestic market industry as well as by private services in the late 1980s, the exceptionally low capacity utilization rate, high indebtedness as well as the poor demand outlook and trends in profitability indicate that the level of investment will remain low in these branches. Also housing investment will continue to fall in 1994.

If the European economies recover relatively quickly from the current slump, as is assumed in the balanced growth scenario, and if the price competitiveness of the export industry remains good, the forest and metal industries will be running at almost full capacity in 1994. If real interest rates fall as a result of the enhanced credibility of economic policy, domestic and foreign enterprises will become increasingly interested in Finland as an investment site. Under the conditions listed above, the investment of Finnish industry could rise swiftly during 1994-1996.

Exceptionally strong price competitiveness can lead to expansion of capacity also in areas where profitability of production created by the new investment will remain weak over the long run as a result of changes in the competitive situation and demand. Rapid growth in investment also entails

the danger of the acceleration of inflation and the deterioration of the current account. This risk is also exacerbated by the pressures on consumption via the release of pent-up demand. It is not impossible that the current account, which is quickly improving at the moment, will once again start running a deficit before the foreign debt has been trimmed sufficiently.

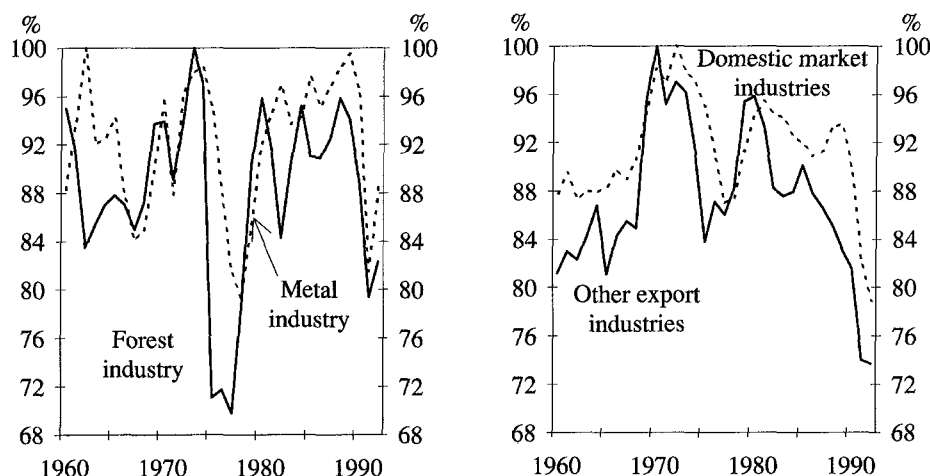


Figure 9.2. Capacity Utilization Rate in the Export and Home Market Branches in 1960-1992

In the international crisis scenario the slump in Europe is rather deep and prolonged. The recovery does not take place until the latter half of the 1990s. The Finnish export competitiveness achieved with the devaluations and wage pacts in 1991-1993 can weaken as a result of competitive devaluations as the European currencies float. The danger is that even the meagre profits of the export industry will be eroded by wage drift in 1994-1995. If Finland succumbs to high unemployment, a rise in nominal wages may be placed ahead of employment also in the service branches and public sector. The slow growth in output will hinder the alleviation of the crisis in the banking system and the balancing of the public sector. Sluggish international demand, high long-term interest rates owing to uncertainty and inflationary expectations, and the high indebtedness of firms mean that investment will not pick up until international demand revives around 1995. The net capital structure will contract during 1993-1995.

### Risks of Reining in the Public Debt

The trimming of the public sector's deficit and progress in reining in the public debt are of profound importance for promoting credibility in the market, a turnaround in the consumer demand of households and the level of long-term interest rates. The balancing of the public sector cannot take place all of a sudden (Chapter 8). The decline in output and factor income

during 1991-1993 has narrowed the tax base of the public sector and raised tax rates high. The unemployment rate in 1994 is 18-19 per cent of the labour force so that the growth in earnings is slow and the tax-paying ability of households weak. The shift to the value added tax in the middle of 1994 will raise the price level of services becoming liable to taxation, reduce their demand and increase unemployment. The trends in the revenues of the public sector are thus weak in the next few years.

The reining in of the public debt will require cuts in public expenditures. The most important factors affecting expenditures are bank support, the expenditures related to unemployment as well as the servicing the public debt. The interest expenditures on the public debt, which will exceed those on education and culture for the next few years, will be affected significantly by changes in the level of interest rates. Unemployment expenditures will be affected by the level of unemployment compensation in addition to trends in the unemployment rate. The curtailment of bank support in 1994 and 1995 will depend upon the level of economic activity, which is estimated to substantially recover. Other forms of business subsidies, especially agricultural subsidies, are also potential savings targets.

Important questions include how fair will the general public deem the cuts in public expenditures to be and what kinds of implications this will have for the willingness of persons to pay taxes. Will the social fabric be able to bear a situation where the livelihood of large groups is endangered by chronic unemployment?

If the international economy develops in accordance with the balanced growth scenario, the reining in the public debt will be considerably easier than under a crisis in the international economy. In the latter scenario unemployment expenditures and bank support are greater than in the former scenario. In the crisis scenario the international level of interest rates will probably decline under conditions of sluggish demand for financing, which will enable a decline in domestic interest rates.

### **Risks in the Labour Market**

Finland's labour markets have reached a cross-roads in the 1990s. The adjustment to integration will require a different type of wage policy than people have been accustomed to in Finland. Changes in exchange rates and coping with the debt problem will have profound impacts on the distribution of income between households as well as on the distribution of income between profits and wages. In order for the functioning of the labour market to support the economy's long-range strategy, the share of profits in factor income will have to remain high during 1994-1995. The high unemployment rate and the low capacity utilization rate will keep wage developments modest in 1994, so that price competitiveness will remain high.

Trends in profitability and wages will diverge appreciably in different branches in the next few years. The recovery in the profitability in the export industry is swift, but the profitability of home market branches will remain weak for some time. The profound divergence in profitability trends across

the branches and within firms will lead to very different wage-paying ability in different segments of the economy. The strong competitiveness in the exposed sector of the economy will give an impetus to wage drift as the demand for labour recovers. Owing to high unemployment, wage drift will nevertheless perhaps not be as strong as has historically been the case.

Changes in relative wages will be especially large in the next few years. The main reasons are the divergent trends in profitability and the demand for labour. Since the EEA agreement spurs keener competition in services, the changes in the wage structure may be permanent. On the other hand, Finland has no experience with the changes in the wage structure under sluggish domestic demand and low inflation. For example, the changes in relative wages during the 1970s were realized under conditions of accelerating inflation and rapidly growing domestic demand.

Managing the sheltered sector's price pressures would require a change in the wage structure. This would be facilitated by closer links between wage increases and the wage-paying ability of different branches. This means that earnings guarantees and other linkages between wages in the labour market should not be allowed. Whether the change in relative wages takes place under circumstances of a crisis in the labour market or under more stable conditions will affect the realization of inflationary targets ensuring competitiveness. The risk is that labour disputes will arise in connection with this type of wage structure changes.

The connection between wage differentials and unemployment is of crucial importance. Even though the widening of wage differentials may reduce unemployment, it is not a lasting solution over the long run. This type of policy could lead to a weakening of job commitment and work motivation as well as to low productivity growth in low-paying jobs areas. The result is a large group of working people with low incomes. This kind of situation has emerged in the United States and attempts are being made to alleviate this problem in the 1990s.

In Finland and many other European countries the wage differentials are less than those prevailing in the United States owing to stringent minimum wage and other institutional arrangements in the labour market. This is deemed to have raised the threshold for employing young persons in particular, led to the growth of unemployment and increased public expenditures.

One way out of this dead end is seen to be investing in knowledge-intensive production and knowhow, which requires increased education and on-the-job training. This policy requires long-range thinking and is rather slow to take effect. Even if technical progress reduced the need for labour inputs, this type of production structure would give better possibilities for new solutions related to the redistribution of income and time use in conjunction with the lowering of unemployment.

Preventing an impasse in the labour market will require that long-term unemployment does not stabilize at a high level nor does the adjustment in the labour market occur merely by having more people opt for early

retirement. If inflation is allowed to act as the "market arbitrator", the low-inflation and appreciating-Markka policy will not be realized. The stopping of the ballooning of the public debt does not allow much room for the use of tax deductions to bolster wage policy. On the other hand, there are pressures to reduce the central government's share in the financing of unemployment compensation, which may give rise to conflicts. The diverging wage trends in the labour market may be reflected in the job relations and working conditions, so that there will be plenty of factors spurring instability.

### **Problems In the Financial System**

The problems prevailing in the Finnish financial system constitute a great risk for a return to a balanced growth curve. The liberalization of the financial markets was carried out in a situation where the willingness to take on debt was high. Banks as lenders, on the one hand, and firms, households and municipalities as borrowers, on the other hand, took great risks which led in part to the current imbalances in the economy. The strong contraction of domestic demand has spawned a dangerous decline in asset values, bankruptcies of clients and insolvency. The credit losses of the banks have risen so high that the banking system has not been able to handle the situation alone. In order to safeguard the stability of the banking system the central government has been forced to shore up the banks by offering capital injections equivalent to equity capital as well as direct support to the savings bank group from the Government Guarantee Fund. Nevertheless, the financial system has not been able to carry out satisfactorily its intermediary tasks of transforming short-term deposits and other funding into long-term debt, i.e. spreading out of clients' expenditures by way of credit. The restoration of a healthy financial system is indeed an important prerequisite for growth in the Finnish economy.

The funds allocated for bank support do not represent a sunken cost. As time passes the outlays will gradually generate income flows and part of the capital will come back at some later stage. As the situation is constantly changing it is difficult to estimate when the funds will be repaid and what will be the final cost to the government.

The banking crisis weakens the possibilities to finance investment. The outstanding debt of firms and households still exceeds the desired level of indebtedness so that as earnings improve old debts will be repaid and financial positions strengthened.

The erosion of the banks' equity capital owing to credit write-offs reduces their lending possibilities substantially. Banks can obtain financing from the central government that is treated as equity in the capital adequacy requirements. They can also improve their profitability and lending ability by raising service fees and widening their interest margins. Bank competition will nevertheless limit the widening of bank margins. The streamlining of the banking operations and elimination of excess capacity will take years. From the standpoint of banks lending possibilities the best bank support is the

raising of the banks own equity capital, as the banks' lending ability would according to the current regulations increase by more than ten times the capital injection.

Some firms may face difficulties in obtaining working capital credit, even though they have full order books, since the value of their collateral backing loans has declined in line with the general fall in asset prices. A recovery in investment will not take place until the existing competitive plants and equipment are running at full capacity. Many firms oriented toward the home market will be unable to reach full capacity in the next few years, nor will they be able to cover their operating costs without additional financing.

The bank support has been motivated by the desire to alleviate the current crisis and to forestall the flight of capital. Bank support provides a way of using tax funds to pay interest on riskless deposits. If the financing of risky investments remains at a low level for this reason, this will result in sluggish growth in potential output. The use of bank support may thus hinder long-term growth possibilities.



**Challenges  
and answers**

10

**Driving Forces of Economic Change**

The main forces behind economic change are technical progress and competition. Technical progress facilitates change and competition realizes it. These forces determine to a great extent what is produced, where it is produced, what kind of labour input is needed in the production and what is the sales price of the product.

During the last decade the technological change has affected nearly all the sectors of the economy. Information technology has created completely new product groups, led to new production processes and spawned fundamental changes in the organization of work. The relative price of the basic technology behind the change, microelectronics, has fallen rapidly.

The comparative advantages of economies, branches and firms and thus the locating of production activities are in a constant state of flux. This process has been accelerated by various regional trade organizations. The liberalization of the financial markets has prompted a sharp increase in foreign direct investment. Technology has widened the alternatives for locating production activities by increasing possibilities to monitor operations located afar by using real time systems and by lowering the relative price of transport.

The wealthy industrialized countries are continuously shifting their labour-intensive operations to areas with low labour costs. The East Asian and Eastern European countries pose a greater competitive challenge for the wealthy industrialized countries. For the consumers of wealthy countries this means that the price-quality relation of products will remain favourable. On the other hand, the employment of the unskilled labour force in the OECD countries is threatened by the competition coming from low-cost countries.

**In Global Economy Adaptation Is Key to Success**

The trends in the global economy towards a greater role played either by regional groups or multilateral co-operation will have a great bearing upon the alternatives open also to Finland. Regional integration will perhaps gain greater emphasis in the world economy in the 1990s. This is indicated by the large foreign trade imbalances between the EC countries, the United States and Japan, high unemployment and huge public debts in many countries, technological competition as well as political attempts to form regional trade blocs.

Over the long run the world economy will, however, perhaps be dominated by factors that favour multilateral developments, such as expanding

operations of multinational firms across trade-bloc boundaries, the global spread of technology and most of all the actions necessary to tackle the escalating environmental problems. The liberalization of capital movements will reduce also the significance of regional groups of countries. The forming of blocs is not a viable way of dealing with the permanent changes in the competitive situation. The adjustment will be eased by the growth in the domestic demand of the rapidly industrializing countries, which will facilitate the continued expansion of world trade. Regionalism might also strengthen the internationalization of firms and other microeconomic elements which will promote the driving forces behind multilateralism.

The growth scenarios for the world economy can be reduced down to two: balanced international growth or a crisis scenario. If the greater regional co-operation does not lead to trade wars between blocs, it is possible that the world economy will experience balanced growth as is the basis for many forecasts. On the other hand, it is not a foregone conclusion that the situation will deteriorate for various reasons into a global crisis. The fastest economic growth in both scenarios is in East Asia. Finland's rate of growth will be determined by international growth trends since long-term aggregate income in our country will not grow appreciably faster than in the competitor countries without the foreign debt eventually becoming a factor limiting growth.

### **Europe is a Whole**

Finland is part of Western Europe. A discernible trait of the continent is that Europe is a whole, even though its political and economic bifurcation lasted for decades. The pressures for broadening economic and political co-operation between East and West are high. Uncertainty about the economic architecture of Europe, most of all the role of the former socialist countries in it, complicates the forecasting of the future of the overall continent. The large gap in the standards of living and the huge amounts of resources required for its reduction as well as the efforts to create a new economic system in Eastern Europe have spurred considerable uncertainty also about developments in Western Europe. One reason for the uncertainty is the threat of uncontrollable immigration. Recent difficulties in the internal integration within Western Europe such as instability in the EMS and the doubts that Europe will not form a common currency area will likewise sustain uncertainty about the situation in Europe.

Owing to the close proximity of Russia to Finland, it is important that Europe be seen as a whole. As a possible member of the European Union, Finland is in a pivotal position if the dividing line between Western and Eastern Europe sharpens. On the other hand, Finland's location offers significant advantages in a situation where, for instance, the development of the St. Petersburg is seen in the EU as in the interest of the entire Europe.

Finland's economy has been rather sheltered until the 1980s compared to most industrialized countries. Competition from imports has been mild, the share of foreigners in the population tiny and foreign productive investment

in Finland modest. The economic structures and decision-making practices have been shaped to a great extent by mode of operation in the sheltered sector. Finland is faced with opening its borders wider and making the consequent adjustment to either the EEA environment or EU membership. EU membership would ease the reorientation toward a more open economy by reducing the uncertainty associated with Finland's development. Remaining outside of the EU would perhaps require greater flexibility than under membership for achieving the same level of welfare.

### **Stability and Flexibility Provide Best Points of Departure**

The continuous opening of the Finnish economy and participation in European integration will necessitate higher production efficiency. Better utilization of human resources than is currently the case and most of all the alleviation of mass unemployment in this environment is a demanding and challenging task. It is nevertheless a must since long-term unemployment causes both harm on a personal scale as well as permanent losses in production potential and slow growth in productivity.

In all integration scenarios the bywords of success are economic stability and flexibility. Stability ensures low interest rates, a favourable investment climate and better growth in income. Stability in a small country is achieved by diversifying the production structure and by following consistent long-range economic policies. Only in this manner can credibility and trust in the management of the economy be manifested.

The economic stability cannot be achieved without appropriate flexibility. This entails the competence of management, upgrading the technology inside the firm and the flexibility of organizations as well as increasing the diversity of the client base. From the standpoint of flexibility it is also important that the labour market functions smoothly, displaying good regional and occupational mobility as well as flexibility in nominal and real wages.

### **Growth Factors Change**

Finland's rapid economic growth during the last few decades was based on many particular factors that cannot be depended upon in the future. Important factors behind the growth were the favourable age structure of the population, the rapid growth in the supply of labour owing to the rising propensity of women to join the labour force and the swift rise in the educational level of the labour force. The basic educational level of Finns is internationally good. The problem is the wide educational gaps between the young and old and the slow accumulation of knowledge under conditions of mass unemployment. The rise in the average age of the labour force will require greater efforts regarding employee training and other forms of adult education.

A new factor in the labour market with an increasingly greater impact will be the foreign population. Immigration can boost the supply of labour and the flexibility of the labour market. At the same time it can hasten the

segmentation of the labour market. A similar effect is felt via the shifting of wage negotiations toward the workplace and the firm level, which is a must for the improvement of the flexibility in the labour market. The unionization rate is very high in Finland and these kinds of changes put the labour market's ground rules and the renewal of the labour market organizations to the test.

Another main factor fostering growth has been the high saving and investment rates. As a result the productive capital stock has widened and renewed and the infrastructure has remained in good shape without developing bottlenecks. The collapse in investment during the last couple of years and the sluggish recovery especially in the sheltered sector in the future will cause a deterioration in the situation. The resources available for expanding the production capacity and the infrastructure are nevertheless limited since a considerable portion of incomes formation is to be used to lower indebtedness.

Foreign investment competes to an increasing extent with domestic investment. The internationalization of firms in Finland, which did not take place until the late 1980s, is an important factor in the change in the production structure. The same factors that affect whether Finnish firms choose to invest at home or abroad also determine to what extent Finland will attract foreign investors. Such factors as a highly qualified labour force, the state of the infrastructure, cost level and quality of the environment should compensate for the drawbacks of the small size and remote location of Finland's markets. The impact of Russia and other neighbouring regions regarding the orientation of investment will remain an open question for a long time.

In the future, economic developments will be based to an increasing extent on the more efficient use of capital and other production inputs as well as flexible shifting from one field to another as the demand outlook changes. This will require growing efforts in R&D, education and marketing in order to develop and sell new products. Under conditions of high unemployment this kind of a shift in the direction of intensive growth will not be easy to bring about.

The developments in Finland's economy are bound more than ever to those in the international economy. Finnish firms' product range, price competitiveness, aggregate growth in the world economy and orientation of exports are decisive factors. The entire economy is opening up to real international competition. The profitability of operations cannot be safeguarded with exchange rate changes, interest rate controls, import ceilings or state aid.

### **Export-Driven Growth Only Safe Alternative**

The needs to balance the Finnish economy dictate the structure of growth. Exports must expand faster than domestic demand. In this way the foreign debt will decline. Alternatively, public revenues or in practice aggregate output should grow considerably faster than public expenditures in order for the public debt to decline to a level the ageing population can bear.

The wider opening of the Finnish economy means increasing import competition, which will of necessity change the production structure of our country. Finland's trump card is still the efficient use of its forest resource base. There are nevertheless such considerable risk factors associated with the forest sector, especially the raw material market, that growth like that experienced during the last decade cannot be depended upon even under conditions of strong competitiveness. Both the growth in the supply of recycled fibres and rapidly growing tropical fibres may undermine the possibilities of the pulp and paper industry based on virgin fibres to expand in Finland. The price level of pulp and paper may remain low for a long time. On the other hand, it is not impossible that recycled paper could be used to a greater extent in the production of energy and that, owing to the paper quality demands and preferences of users, paper made from virgin fibres will retain a significant market share. The exploitation of this alternative would require the upgrading of the environmental friendliness of the entire paper manufacturing chain. The outlook appears to be the brightest in the mechanical forest industry if it is able to revamp its products and find again export markets, from which it withdrew in the 1980s owing to the high domestic demand.

In addition to exploiting the knowhow related to the forest sector, it is necessary to develop other export branches in both goods and service branches. The fostering of competitive production will require not only greater investment activity but also long-range efforts in education, R&D and marketing. The structural change will, in the end, be market-driven. As all industrialized countries are striving to develop information-intensive, knowhow-based production branches, the competition will be especially keen in rapidly growing branches.

Exports have expanded swiftly in those branches which over the long run have invested in new products such as in the electrotechnical, machinery and pharmaceuticals industries. For this reason, exports of high-tech products has risen already to 15 per cent of merchandise exports. The continued growth of exports will require new product innovations by firms and most of all success in gaining a foothold in the export markets. Promoting these aims should be the main task of industrial policy.

It will be impossible to sustain economic growth faster than in other countries unless the structural change in exports brings about a continuous improvement in the terms of trade. The strengthening of domestic demand will otherwise boost imports so much that the current account will start to run a deficit again and the foreign debt rise. If the growth in exports and production is based more than previously on the boosting of the total factor productivity instead of raising capital intensity and making sizeable investments, this will also ease the limit posed by the current account. Better exploitation of the capital stock can be promoted via new modes of production and logistic solutions.

Growth can be increasingly based in the future on utilization of productivity reserves previously engaged in the branches sheltered from international

competition. The factors increasing real competitiveness are in a key position. The change in the modes of production and shift toward a network economy place greater emphasis not only on the efficiency within firms but also on the efficiency of flows of intermediary products and services between firms. These changes are reflected in many ways in the labour market and emphasize the significance of the firm-specific knowhow and personnel training.

The growth in exports will begin to boost domestic demand, which is still a decisive factor from the standpoint of employment. The recovery of domestic demand may not solve the unemployment problem since an improvement in the profitability of domestic branches will require swift growth in productivity. The necessary improvement in profitability cannot be brought about by price rises because of keener import and domestic competition.

Bringing down unemployment will be hampered by the greater prevalence of the long-term unemployed. During the recession there has been a build-up of pent-up supply outside of the labour force which will be unleashed as demand for labour recovers. The well educated labour market entrants will be competing with the unemployed for jobs so that the long-term unemployment will not begin to abate until there is a prolonged strengthening of the demand for labour.

There are no easy solutions to the unemployment problem. The growth in output, change in the production structure into being more labour-intensive, the spawning of new business activities and self employment are prerequisites for a rise in employment. Work-sharing will take place by offering possibilities, not by schematic shortening of work times.

The link between unemployment and wage differentials is very important. The widening of wage differentials may serve to reduce unemployment especially in low-paid industries. This type of policy line can, however, eventually lead to weakening of the dedication to job tasks and work motivation as well as meagre productivity growth in low-wage branches. This may spawn the formation of a new group of working poor. This type of situation has developed in the United States, where efforts are being made to alleviate this dilemma in the 1990s.

In many European countries the wage differentials are relatively small owing to stringent minimum wage and other regulations. This has been deemed to be partly to blame for raising the threshold for hiring of young persons in particular, leading to the rise in unemployment and increasing public expenditures. Finland belongs to this group of countries.

One way out of this dead-end is seen to be greater investment in knowledge-intensive production and knowhow, which will require increased education and on-the-job training. This policy will require long-range action and will be rather slow to take effect. Even though technical progress reduces the need for labour inputs, this kind of production structure would give better possibilities for new solutions related to redistribution of time use and income with a view toward lowering unemployment.

**Balancing of Public Sector Will Take a Long Time**

The public sector must be seen as a vital component of the overall strategy of the economy. The public sector's room to manoeuvre is limited. The public debt relative to GDP must by 2005 be brought down to under 50 per cent in order for the needs created by the ageing of the population to be met satisfactorily. The tax-per-GDP ratio and the tax structure must be kept such that the economy can compete efficiently for the best labour resources and responsible investors.

The public sector must in the future strive to create mechanisms that foster the realization of the goals depicted above and at the same time bring the unemployment rate down considerably from its current level. The government must ensure that both the human capital and physical infrastructure are competitive in the society. This means sustaining sufficient levels of public investment and safeguarding the quality of the main public services, most of all education, research and basic health care. The adjustment of the public sector must take place via policies that bring about a sustainable decline in unemployment.

In the public sector there is a constant need to re-evaluate activities as well as to upgrade internal efficiency. In addition to the fact that the public sector's own service production must support sustainable improvement on the employment front, the incentives related to the public sector must be developed so that they support the activity of the private sector. Key factors in this respect are taxation, purchase of services as well as income transfers and business subsidy solutions. An efficiently managed welfare state constitutes an important competitive advantage for the economy.

**Long, Hard Climb Back to a Growth Path**

There are several factors of uncertainty related to the return of the Finnish economy to a long-term growth path. The most difficult problem in the alleviation of the triple deficits plaguing the economy is high unemployment. The upswing can be slowed down by difficulties in managing the public debt, rigidities in the labour market and problems in solving the banking crisis. The danger is that there will be a divergence of trends in the economy between the exposed and sheltered sector. The current account will have to run a surplus for some time in the 1990s so that the foreign debt can be trimmed. The main precondition for a turnaround in the economy is the lowering of real interest rates, since this would ease several of the factors exacerbating the crisis.

Widespread commitment to the aim of low inflation is one of the basic pillars of the stabilizing of the economy. This will foster the appreciation of the Markka and lowering of interest rates, which will in turn reduce the burden of servicing the foreign and domestic debt, bolster domestic demand and pick-up of productive investment. This will also facilitate the pegging of the Markka at a credible level if Finland joins the EU.

When the achievement of an external balance is ensured, it will be easier to put a stop to the ascent of the public debt in a controlled manner so that

domestic demand, especially investment, does not have to be limited excessively. A pick-up in productive investment is the surest guarantee that the output, revenue and tax base will be wide enough for repaying the public debt and that the level of taxes as a percentage of GDP remains reasonable in the future as well.

In an opening international environment basic concerns for Finland include increasing efficiency and promoting democracy and equality. The challenges posed by Finland's joining the EU are low inflation and increasing the flexibility of the labour market, and along with this the stability of the currency, a considerably better fiscal balance in the public sector, the adjustment of agriculture to the price level in Europe, keener competition in the sheltered sector and harmonization of taxation. The challenges facing Finland in the EEA environment are in some respects even more stringent.

The myriad of alternatives for Finland's economic development and the uncertainty related to this require readiness to react to new situations and flexibility in different levels of the economy. Finland's success will hinge to a considerable extent upon its own actions and reactions to external challenges. Finland's remaining in the ranks of wealthy nations is not a certainty. The power and responsibility for own actions will be more dispersed than at present. In this type of dispersed situation being able to meet challenges and exploit possibilities will require unanimity on the basic issues, the major social and economic policy aims and means. In this way the persistence of economic activity will be augmented.

High unemployment will weaken social cohesion and lead to increased social tensions. The lowering of unemployment and harnessing Finland's human resources will thus be basic issues during the forecast period. When striving in economic policy toward the best sustainable long-term solutions from the standpoint of the whole, it is imperative to take into consideration the socio-economic and socio-cultural institutions of the Finnish economy. These include, for example, the way the labour market functions and the high unionization rate. Well functioning institutions and structures also promote the necessary stability in the economy. The need for change in the institutions and structures in an environment stressing flexibility is clear. If institutions are not renewed along with the environment, they will fade away. Institutions usually correct their own weaknesses and deficiencies. Attempting to topple structures and institutions from the outside leads to instability in the entire economy.

The influx of foreign labour and population into Finland also brings new pressures. The consequent increase in social and cultural pluralism will give a positive impetus, which is an advantage to Finland's fairly closed economy and society. Staying in the technological footrace will require investment in education and research as well as wide-scoped internationalization, which is supported by the managed migration flows.



## Bibliography

- ADB (1990): Asian Development Outlook 1990. Asian Development Bank. Hong Kong.
- Abde, P. - Rajasalu, T. (1992): On the Economic Structure of Estonia and Finland before the 1990's. ETLA Discussion Papers No. 422. Helsinki.
- Alho, K. - Kotilainen, M. - Widgren, M. (1992): Suomi Euroopan Yhteisössä - arvio taloudellisista vaikutuksista. ETLA, Sarja B 81. Helsinki.
- Anderson, K. - Tyers, R. (1993): Implications of EC Expansion for European Agricultural Policies, Trade and Welfare. CEPR/Yrjö Jahnsson Foundation Conference 'The European Community's New Entrants: Shifting Weights in Europe', 13-15 May. Sannäs, Finland.
- Anderstig, C. (1992): Infrastructure and Regional Competitiveness - an explorative study of Swedish regions 1970 - 1985. Paper presented at the 39th North American Meeting of the RSAI, November 13 - 15, 1992. Chicago.
- APEC (1992): Vision for the Economy of the Asia-Pacific Region in the Year 2000 and Tasks Ahead. APEC Ad Hoc Economic Group Meeting, 10 - 11 August, 1992. Tokyo.
- Astika: Astika-tietokanta. Helsinki.
- Ayres, R. U. - Kneese, A. V. (1969): Production, Consumption and Externalities. The American Economic Review, June, s. 282 - 297.
- Baldwin, R. (1992): An Eastern Enlargement of EFTA. Why the East Europeans Should Join and the EFTAns Should Want Them. CEPR Occasional Paper No. 10. London.
- Bassani, A. (1993): Steppes to a Market Economy. The OECD Observer 180, February/March, s. 15 - 18.
- Bayoumi, T. - Eichengreen, B. (1992): Is There a Conflict Between EC Enlargement and European Monetary Unification? NBER Working Paper No. 3950. Cambridge.
- Belousov, A. - Abramova, E. - Klepatch, A. (1992): Russian Economy: Tendencies of Production and Inflation. Russian Academy of Sciences. Department of Economics. Institute of Economic Forecasting. December. Moscow.
- Berndt, E. R. - Hansson, B. (1991): Measuring the Contribution of Public Infrastructure Capital in Sweden. NBER Working Paper No. 3842. Cambridge.
- Bhagwati, J. (1991): The World Trading System at Risk. Harvester Wheatsheaf. New York.
- Buigues, P. - Ilzkovitz, F. - Lebrun, J.-F. (1990): The impact of the internal market by industrial sector: the challenge for the Member States. European Economy, Social Europe. Commission of the European Communities. Brussels.
- CEPR (1992): Is Bigger Better? The Economics of EC Enlargement. Monitoring European Integration 3. A CEPR Annual Report. London.
- China (1991): Statistical Yearbook of the Republic of China 1991. The Republic of China. Taiwan.
- China Daily (1993): China Daily, March 26, 1993.
- CPB (1992): Scanning the Future: A Long-term Scenario Study of the World Economy 1990 - 2015. Central Planning Bureau. The Hague.
- Commission of the European Communities (1991a): Europe 2000; Outlook for the development of the community's territory. Office for Official Publications of the European Communities. Luxembourg.
- Commission of the European Communities (1991b): The Regions in the 1990s. Office for Official Publications of the European Communities. Luxembourg.
- Commission of the European Communities (1992a): The climate challenge. European Economy No. 51. Luxembourg.
- Commission of the European Communities (1992b): Community Structural Policies Assessment and Outlook. COM(92) final. Brussels.
- Conrad, K. - Seitz, H. (1992): The Economic Benefits of Public Infrastructure. Mannheim University, Discussion-Paper 469-92. Mannheim.

- Dean, A. - Hoeller, P. (1992):* Costs of Reducing CO<sub>2</sub> Emissions: Evidence from Six Global Models. OECD Economic Studies No. 19, Winter 1992. Paris.
- Dicken, P. (1987):* Global Shift, Industrial Change in a Turbulent World. Harper & Row. London.
- Dorian, J. P. - Borisovich, V. T. (1992):* Energy and Minerals in the Former Soviet Republics; Distribution, development potential and policy issues. Resources Policy, Vol. 18 No 3.
- Dornbusch, R. (1989):* Ireland's disinflation. Economic Policy, April, s. 173-209.
- Dunkel, A. (ed.) (1992):* World Trade and Investment; Emerging Blocs and Opportunities for Global Growth. Le Grand Hotel, 2-3 April. Paris.
- Dunning, J. (1991):* International Direct Investment Patterns in the 1990s. Gothenburg Studies in Financial Economics, Working Paper 1991:1. Gothenburg.
- EC (1990):* Enterprises in the European Community. EC Commission. Brussels.
- ECE (1988):* Overall Economic Perspective to the year 2000. Economic Commission for Europe. United Nations. New York.
- EFTA (1992):* European Economic Integration; Effects of '1992' on the Manufacturing Industries of the EFTA Countries. Occasional Paper No. 38. April 1992. Geneva.
- EFTA (1993):* EFTA Trade in 1991. Economic Affairs Department. European Free Trade Association. Geneva.
- Eichengreen, B. (1991):* Is Europe an Optimum Currency Area? NBER Working Paper No. 3579. Cambridge.
- Emmerij, L. (1992):* The Developing Countries; in Proceedings of the International Conference 'Scanning the Future; Perspectives for the World Economy up to 2015'. Central Planning Bureau, Working Paper No. 48. The Hague.
- Eriksson, T. - Fellman, S. (1991):* Työajat yritysten näkökulmasta. ETLA, Sarja B 72. Helsinki.
- FAO (1992):* Pulp, Paper and Paperboard Capacity Survey 1991-1996. Food and Agriculture Organization of the United Nations. Roma.
- Feldstein, M. (1992):* The Case Against EMU. The Economist, 13.-19.6.1992, s. 19-22.
- Financial Times (1992):* Latin American Debt Crisis. 30.7.1992.
- Financial Times (1993):* China's potential emerging from behind the figures. 26.4.1993.
- Finansdepartementet (1992):* Frihandeln ett hot mot miljöpolitiken - eller tvärtom? DS 1992:12. Stockholm.
- Fischer, P. A. (1992):* Labour Migration Policies and Economic Integration. VATT-Discussion Papers No. 26. Helsinki.
- Forsman, P. - Haaparanta, P. - Heinonen, T. (1993):* Waste Paper Recycling and the Structure of Forest Industry. Bank of Finland Discussion Paper No. 3/93. Helsinki.
- Freeman, C. (1992):* Technical Change and Future Trends in the World Economy. Työpäperi. MERIT, University of Limburg. Maastricht.
- Freemantle, B. (1986):* The Steal, Counterfeiting and Industrial Espionage. London.
- Frenkel, J. A. - Goldstein, M. (1988):* The International Monetary System; Developments and Prospects. NBER Working Paper No. 2648. Cambridge.
- GATT (1992):* International Trade 90 - 91. Volume II. Geneva.
- Gaudin, T. (toim.) (1990):* 2100, récit du prochain siècle. Editions Payot. Paris.
- Giavazzi, F. - Pagano, M. (1990):* Can Severe Fiscal Contractions Be Expansionary? Tales of Two Small European Countries, in Blanchard, O. J. - Fischer, S. (ed.) NBER Macroeconomics Annual 1990, s. 73-121.
- Giovannini, A. (1992):* Bretton Woods and its Precursors; Rules versus Discretion in the History of International Monetary Regimes. CEPR Discussion Paper No. 661. London.
- Greenway, D. - Sapir, A. (1992):* New Issues in the Uruguay Round. European Economic Review 36, s. 509 - 518.

- Haaland, J. I. - Norman, V. D. (1993):* Regional Effects of European Integration. CEPR/Yrjö Jahnsson Foundation Conference 'The European Community's New Entrants: Shifting Weights in Europe', 13-15 May. Sannäs, Finland.
- von Hagen J. - Neumann, M. (1992):* Real Exchange Rates Within and Between Currency Areas: How Far Away is EMU? CEPR Discussion Paper No. 660. London.
- Hamilton, C. - Winters, A. (1992):* Opening up International Trade with Eastern Europe. *Economy Policy* 14, 77-116.
- Handler, H. - Steinherr, A. (1992):* Capital Needs and Investment Financing in Eastern Countries. WIFO Working Papers 55. Austria.
- Hetemäki, M. - Kaski, E.-L. (1992):* Kessu IV - An Econometric Model of the Finnish Economy. Ministry of Finance. Helsinki.
- Hietala, K. (1992):* Työttömyyden kustannukset. Työpoliittinen tutkimus No. 24. Valtion painatuskeskus. Helsinki.
- Hjerpe, Riitta (1988):* Suomen talous 1860 - 1985. Kasvu ja rakennemuutos. Suomen Pankin julkaisuja, Kasvututkimuksia XIII. Helsinki.
- IAEEA (1988):* Science Achievement in Seventeen Countries; A Preliminary Report. International Association for the Evaluation of Educational Achievement. Pergamon Press. Oxford.
- IBD (1991):* Progreso Económico y Social en América Latina, Informe 1991. Interamerican Bank of Development. Washington, D.C.
- IMF (1992):* Direction of Trade Statistics Yearbook. International Monetary Fund. Washington D.C.
- Italianer, A. - Vanheukelen, M. (1992):* Proposals for Community Stabilisation Mechanisms; Some Historical Applications, in *The Economics of Community Public Finance, European Economy, Special issue*. Commission of the European Communities.
- Jacquemin, A. - Wright, D. (ed.) (1993):* The European Challenges Post - 1992: Shaping Factors, Shaping Actors. Cambridge.
- Johansson, B. (1992):* Infrastructure, Accessibility and Economic Growth. Paper presented at the 39th North American Meeting of the RSAI, November 13 - 15 1992. Chicago.
- Jokelainen, M. (1991):* Eläkeläisten osuus 55-64 -vuotiaasta väestöstä kymmenessä OECD-maassa vuonna 1989. Kansaneläkelaitoksen julkaisuja T9:42. Helsinki.
- Jones, R. - King, R. - Klein, M. (1992):* The Chinese Economic Area; Economic Integration without a Free Trade Agreement. OECD Economics Department, Working Papers No. 124. Paris.
- Jägerhorn, M. (1989):* Aasian vastateollistuneet maat kansainvälisessä taloudessa. Selvitys 34. Taloudellinen suunnittelukeskus. Helsinki.
- Järviö, M.-L. - Luoma, K. (1992):* Health Centre Productivity in Finland: Productivity change from 1980 to 1990 and productivity differences in 1990. VATT-Discussion Papers No. 42. Helsinki.
- Kajaste, I. (1990):* The Impact of 1992 on Finnish Industry, Part 2. The analysis of competitive performance. Ministry of Finance, Economics Department, Discussion Paper No. 28. Helsinki.
- Kajaste, I. (1991):* Suomi Euroopan työnjaossa. Kansantaloudellinen aikakauskirja No. 4.
- Kajaste, I. (1992):* Suomen teollisuus, takaisin puuhunko? Kansantaloudellinen aikakauskirja No. 2.
- Kajaste, I. (1993a):* Integraatio, kilpailu ja hinnanmuodostus. TTT Katsaus 1/1993. Helsinki.
- Kajaste, I. (1993b):* Suhdanneherkkyys, häiriöalttius ja ulkomaankaupan rakenne. Kansallis-Osake-Pankki. Taloudellinen katsaus 1993:1. Helsinki.
- Kangasniemi, E. (1991):* Suomalainen matematiikan opetus kansainvälisessä vertailussa. Koulutus ja tutkimus 1991:11. Tilastokeskus. Helsinki.

- Kanninen, M. (toim.) (1992):* Muuttuva ilmakehä; Ilmasto, luonto ja ihminen. Silmu, Suomalainen Ilmakehänmuutosten Tutkimusohjelma. Helsinki.
- Karppinen, A. (1991):* Suomalaisen yritysten suorien sijoitusten määräytyminen. Jyväskylän yliopisto, Keski-Suomen taloudellinen tutkimuskeskus, Julkaisuja No. 110. Jyväskylä.
- Kelly, M. - Kirmani, N. - Xafa, M. - Boonekamp, C. - Winglee, P. (1988):* Issues and Developments in International Trading Policy. International Monetary Fund. Occasional Paper No.63. Washington D.C.
- Kero, J. (1992):* Neuvostoliiton ja Venäjän ulkomaankauppa. Idäntalouksien katsauksia 2/1992. Suomen Pankki. Helsinki.
- Kinnunen, J. (1992):* Ilmastonmuutoksen taloudelliset vaikutukset. Elinkeinoelämän tutkimuslaitos, Sarja B 77. Helsinki.
- Kirjavainen, T. - Loikkanen, H. A. (1992):* Ollin oppivuosi 13 000 - 56 000. VATT-tutkimuksia 11. Helsinki.
- Kiviranta, S. (1992):* KEVSOS-edut markoiksi; Suomen KEVSOS-etujen hyödyntäminen Itäisessä Keski-Euroopassa. Yritystoiminnan tutkimuskeskus ja Itäkaupan tutkimus- ja koulutusyksikkö. Turun kauppakorkeakoulu. Turku.
- Kosonen, K. (1992):* Asuntopolitiikka ja asuntorahoitus Suomessa ja Länsi-Euroopassa; vertaileva tarkastelu. TTT Katsaus 3/1992. Helsinki.
- Krugman, P. (1987):* Is Free Trade Passé? Journal of Economic Perspectives, Vol. 1 No. 2, s. 131 - 144.
- Krugman, P. (1989):* Differences in Income Elasticities and Trends in Real Exchange Rates. European Economic Review, 1989:4.
- Krugman, P. (1992):* Lessons of Massachusetts for EMU. CEPR/Banco de Portugal Conference: The Transition to Economic and Monetary Union in Europe, 16.-18.1.1992. Estoril.
- Kupari, P. (1993):* Laskutaidotko kadonneet? teoksessa Linnankylä, P. - Saari, H. (toim.): Oppiiko oppilas peruskoulussa? Kasvatustieteiden tutkimuslaitos. Jyväskylän yliopisto. Jyväskylä.
- KTM (1993a):* Kansallinen teollisuusstrategia. Kauppa- ja teollisuusministeriön julkaisuja 1/1993. Helsinki.
- KTM (1993b):* Sähkön kysynnän ja hankinnan näkymiä. Kauppa- ja teollisuusministeriön selvitys perusvoimavaihtoehdoista. Luonnos 10.2.1993. Kauppa- ja teollisuusministeriö. Helsinki.
- Lammi, M. (1992):* Paino- ja kirjoituspapereiden tuotanto ja markkinat. ETLA, Sarja C 62. Helsinki.
- Laurén, J. (1990):* Suomalainen luonnontieteiden kouluopetus ja oppiminen kansainvälisessä valossa. Arkhimedes 1, s. 26-30.
- Laurén, J. (1993):* Osaavatko peruskoululaiset luonnontietoa? teoksessa Linnankylä, P. - Saari, H. (toim.): Oppiiko oppilas peruskoulussa? Kasvatustieteiden tutkimuslaitos. Jyväskylän yliopisto. Jyväskylä.
- Layard, R. - Blanchard, O. - Dornbusch, R. - Krugman, P. (1992):* East-West Migration: the alternatives. The MIT Press. Cambridge, Mass.
- Lloyd, P. J. (1992):* Regionalisation and World Trade. OECD Economic Studies No. 18, Spring 1992. Paris.
- Lovio, R. (1990):* Innovaatiotoiminnan muuttuvat ehdot; teoksessa Innovaation onnistuminen. Sähkö- ja elektroniikkateollisuusliitto, U'TILISE-projekti. Helsinki.
- Lundberg, L. (1992):* European Economic Integration and the Nordic Countries' Trade. Journal of Common Market Studies vol XXX No. 2, s. 157-173.
- Martin, P. J. - Burniaux, J.-M. - Nicoletti, G. - Oliveira-Martins, J. (1992):* The Costs of International Agreements to Reduce CO<sub>2</sub> Emissions: Evidence from GREEN. OECD Economic Studies No 19, Winter 1992. Paris.
- Martin, P. J. - Rogers, C. A. (1993):* Trade Effects of Regional Aid. CEPR/Yrjö Jahnsson Foundation Conference 'The European Community's New Entrants: Shifting Weights in Europe', 13-15 May, Sannäs, Finland.

- Meadows, D. H. - Meadows, D. L. - Randers, J. - Behrens III, W. (1972):* The Limits to Growth. Universe Books. New York.
- Meadows, D. H. - Meadows, D. L. - Randers, J. (1992):* Beyond the Limits. Earthscan publications Limited. London.
- Metals & Minerals (1992):* Metals & Minerals. Annual Review. The Mining Journal Limited. London.
- Metsä 2000 (1991):* Metsä 2000 -ohjelman tarkistustoimikunta; Metsäteollisuuden jaoston muistio. Maa- ja metsätalousministeriö. Helsinki.
- Metsäntutkimuslaitos:* Metsäntutkimuslaitoksen sarjat. Helsinki.
- Michalski, W. (1992):* The Changing World Economy; A long-term international perspective. A paper prepared for the Australia - New Zealand Business Council Conference, 7th - 8th October 1992. Wellington.
- Millan, B. (1993):* The European Community's Regional Policy After 1995; The Nordic countries as a part of the EC's regional policy. 19.2.1993. Helsinki.
- Minford, P. - Rastogi, A. - Hallett, A. H. (1992):* The Price of EMU Revisited. CEPR Discussion Paper No. 656. London.
- Mining (1992):* Mining. Annual Review. The Mining Journal Limited. London.
- Moriguchi, C. (1992):* Western Europe, the USA and Japan, Comments; in Proceedings of the International Conference 'Scanning the Future; Perspectives for the World Economy up to 2015'. Central Planning Bureau, Working Paper No.48. The Hague.
- Morrison, A. J. - Roth, K. (1992):* The Regional Solution, an Alternative to Globalization. Transnational Corporations, Vol. 1 No. 2.
- Myrreen, B. - Anhava, J. (1992):* Suomen metsäteollisuuden tila vuonna 1995. Vesi- ja ympäristöhallitus, SYTYKE-ohjelma. Helsinki.
- Mäenpää, I. (1993):* FMS: Suomen talouden pitkän ajan simulointimalli. Artikkelitulevaisuuden tutkimuksen menetelmäkirjassa. Tulevaisuuden tutkimuksen seura. Helsinki. Ilmestyy elokuussa 1993.
- Mäkelä, P. (1992):* Espanjan ja Portugalin ensimmäiset vuodet EY:n jäsenenä. VATT-keskustelualoitteita No. 37. Helsinki.
- Neifer-Dichman, E. (1991):* Working time reductions in the former Federal Republic of Germany: A dead end for employment policy. International Labour Review, Vol. 130, No. 4. Geneva.
- Nelson, R. R. - Wright, G. (1992):* The Rise and Fall of American Technological Leadership. Journal of Economic Literature, December.
- Nordhaus, W. (1991):* To Slow or Not to Slow; The Economics of Greenhouse Effect. The Economic Journal 101, July, s. 920 - 937.
- Nordhaus, W. (1992):* Lethal Model 2: The Limits to Growth Revisited. Brookings Papers of Economic Activity 2, s. 1 - 60.
- OECD/EO:* Economic Outlook. Paris.
- OECD/FTC:* Foreign Trade by Commodities. Paris.
- OECD/LF:* Labour Force Statistics. Paris.
- OECD/MEI:* Main Economic Indicators. Paris.
- OECD/MFT:* Monthly Statistics of Foreign Trade. Paris.
- OECD/NA:* National Accounts. Paris.
- OECD/RS:* Revenue Statistics of OECD Member Countries. Paris.
- OECD/STI:* Main Science and Technology Indicators. Paris.
- OECD (1988a):* Ageing Populations. The Social Policy Implications. Paris.
- OECD (1988b):* Measures to Assist the Long-term Unemployed; Recent experience in some OECD countries. Paris.
- OECD (1989):* OECD Science and Technology Indicators. Report No. 3. Paris.
- OECD (1991a):* Employment Outlook 1991. July 1991. Paris.
- OECD (1991b):* Taxing Profits in a Global Economy; Domestic and International Issues. Paris.

- OECD (1991c)*: The Applicability of the GATT to Trade and Environment Concerns. Joint session of trade and environment experts. COM/ENV/EC/TD(91)66. Paris.
- OECD (1992a)*: Economic Surveys 1991/1992 - Belgium - Luxembourg. Paris.
- OECD (1992b)*: Education at a Glance. OECD Indicators. Paris.
- OECD (1992c)*: Employment Outlook 1992. July 1992. Paris.
- OECD (1992d)*: Industrial Policy in OECD Countries. Annual Review 1992. Paris.
- OECD (1992e)*: International Direct Investment, Policies and Trends in the 1980s. Paris.
- OECD (1992f)*: Long-term Prospects for the World Economy. Paris.
- OECD (1992g)*: Progress in Structural Reform. Economic Policy Committee, Economic and Development Review Committee. ESD/CPE/EDR (92)1. Paris.
- OECD (1992h)*: Structural Change and Industrial Performance; A seven country growth decomposition study. Paris.
- OECD (1992i)*: The International Sourcing of Manufactured Intermediate Inputs. DSTI/STII/IND/92(1)/REV(1). Paris.
- OECD (1993a)*: Economic Surveys 1992/1993 - Denmark. Paris.
- OECD (1993b)*: High and Persistent Unemployment. Assessment of the Problem and its Causes. ECO/CPE/WP1(93)1. Paris.
- OECD (1993c)*: The Outlook to End - 1994. Summary and Cross-Country Detail of the Projections. Working group on short-term economic prospects. ECO/CPE/STEP(93)1. Paris.
- Oksanen, H. - Pihkala, E. (1975)*: Suomen ulkomaankauppa 1917 - 1949. Suomen Pankin julkaisuja, Kasvututkimuksia VI. Helsinki.
- Opetusministeriö (1993)*: Koulutuksella 2000-luvulle. Opetusministeriön työryhmien muistioita 1993:16. Helsinki.
- Paloniemi, J. (1991)*: Raportti Oulun alueen huipputekniikan yritystoiminnasta. Oulun yliopiston täydennyskoulutuskeskus. Oulu.
- Parjanne, M-L. (1992)*: Econometric Analyses of Intra-Industry Trade; evidence from Finnish cross-sectional data. ACTA A:86. The Helsinki school of economics and business administration. Helsinki.
- Parkkinen, P. (1990)*: Asuntovarallisuus vuosina 1900 - 2030. Taloudellinen suunnittelukeskus. Helsinki.
- Parkkinen, P. (1992a)*: Koulutusmenojen kehityspiirteitä vuoteen 2030. VATT-tutkimuksia No. 9. Helsinki.
- Parkkinen, P. (1992b)*: Alueellinen muuttoliike ja väestön ikääntyminen. VATT-keskustelualoitteita No. 40. Helsinki.
- Pihkala, E. (1969)*: Suomen ulkomaankauppa 1860-1917. Suomen Pankin julkaisuja, Kasvututkimuksia II. Helsinki.
- PlanEcon*: PlanEcon Report; Developments in the Economies of Eastern Europe and the Former USSR. PlanEcon Inc. Washington D.C. Eri numeroita.
- Polt, W. (1992)*: Technology Development and Technology Programmes in Austria, Finland and Other Small Open Economies, in Vuori, S. - Ylä-Anttila, P. (ed.): Mastering Technology Diffusion - The Finnish Experience. ETLA, Series B 82. Helsinki.
- Reati, A. (1991)*: Are we at the beginning of a new long term expansion induced by technological change? Commission of the European Communities. Economic Papers, No 85, August 1991. Brussels.
- Reinikainen, V. (1991)*: Yritysten kansainvälistymisen teoria ja syvenevän integraation haaste. ETLA, Sarja B 70. Helsinki.
- Repo, P. (1992)*: Verkostomalli ja joustava tuotantomalli työvoiman käytössä. Työpoliittinen tutkimus No 28. Helsinki.
- Rikkitoimikunta 2 (1993)*: Rikkitoimikunta 2:n mietintö. Kauppa- ja teollisuusministeriö. Komiteamietintö 1993:6. Helsinki.
- Romppanen, A. (1980)*: Työaika ja työllisyys. Taloudellinen suunnittelukeskus. Helsinki.

- Roobeek, A. (1992):* Technology, Internationalization and Market Structures. Scanning the Future; International Conference on Perspectives for the World Economy up to 2015. June 4-5. The Hague.
- Sala-i-Martin, X. - Sachs, J. (1991):* Fiscal Federalism and Optimum Currency Areas; Evidence for Europe from the United States. NBER Working Paper No. 3855. Cambridge.
- Sandnes, H. - Styve, H. (1992):* Calculated Budgets for Airborne Acidifying Components in Europe, 1985, 1987, 1988, 1990 and 1991. EMEP/MSC-W Report 1/92. Norway.
- Salonen, H. J. W. (1991):* Fibre Furnish and Pulp Business. CTS Consulting Oy. Strategic Study. Helsinki.
- Seppänen, P. (1967):* Näkökohtia työ- ja vapaa-ajan jakautumisesta modernissa yhteiskunnassa. Mimeo. Helsinki.
- Sohlman, A. (1992):* Hur bra är vi? Den svenska arbetskraftens kompetens i internationell belysning. Rapport till ESO. Finansdepartementet. DS 1992:83. Stockholm.
- Sopemi (1974):* Sopemi. Continuous Reporting System on Migration. OECD. Paris.
- Sopemi (1992):* Sopemi. Trends in International Migration. Continuous Reporting System on Migration. Paris.
- SOU (1992):* Långtidsutredningen 1992. Statens offentliga utredningar 1992:19. Finansdepartementet. Stockholm.
- SOU (1993):* Nya villkor för ekonomi och politik. Ekonomikommisionens förslag. Finansdepartementet. SOU 1993:16. Stockholm.
- Sutela, P. (1993):* Itäinen Eurooppa integraatiossa: ottopoika, sisarpuoli vai ... . TTT Katsaus 1/1993. Helsinki.
- Tarkka, J. - Åkerholm, J. (1991):* Fiscal Federalism and European Monetary Integration. Bank of Finland Discussion Paper 2/92. Helsinki.
- TASKU (1990):* Suomi 1990 - 2005 - Haasteiden ja varautumisen aikaa. Taloudellinen suunnittelukeskus. Helsinki.
- Teknistieteelliset Akatemit (1990):* Kasvihuoneilmiö, ilmastonmuutos ja Suomi. Teknistieteelliset Akatemit 1990:1. Helsinki.
- The Economist (1992):* A Survey of China. 28.11.1992.
- The Economist (1993):* Chinese Puzzles. 15.5.1993.
- Tilastokeskus/KT:* Kansantalouden tilinpito. Eri vuosilta. Helsinki.
- Tilastokeskus/TT:* Teollisuustilastot. Eri vuosilta. Helsinki.
- Tilastokeskus/Tut:* Tutkimustoiminta. SVT XXVIII: 1-6, vuosilta 1974 - 1983. Helsinki.
- Tilastokeskus/TY:* Työvoimatilastot. Eri vuosilta. Helsinki.
- Tilastokeskus/VÄ:* Väestötilastot. Eri vuosilta. Helsinki.
- Tilastokeskus (1988):* Yritys- ja toimipaikkarekisteri 1986. Yritykset 1988:8. Helsinki.
- Tilastokeskus (1991):* Tutkimus- ja kehittämistoiminta 1989. Koulutus ja tutkimus 1991:3. Helsinki.
- Tilastokeskus (1992a):* Suomen yritykset 1990. Yritykset 1992:9. Helsinki.
- Tilastokeskus (1992b):* Teollisuuden innovaatiotoiminta 1991. Koulutus ja tutkimus 1992:9. Helsinki.
- Tilastollinen vuosikirja:* Suomen tilastollinen vuosikirja. Eri vuosilta. Tilastokeskus. Helsinki.
- Toffler, A. (1991):* Powershift. Pantam Books. New York.
- Tullihallitus:* Ulkomaankauppa. Tullihallituksen ulkomaankauppatilastot. Eri vuosilta. Helsinki.
- Tyrväinen, T. (1993):* Wage Determination, Unions and Employment: Evidence from Finland. Bank of Finland. Helsinki.
- Törmä, H. - Rutherford, T. (1993):* Integrating Finnish Agriculture into EC's Common Agricultural Policy. VATT-Research Report No.13. Helsinki.

- Työministeriö (1991)*: Työvoima 2000; Työvoiman kysynnän ja tarjonnan kehitys vuoteen 2000 ja arvioita vuoteen 2030. Helsinki.
- Työministeriö (1993a)*: Integraatio ja työmarkkinat. Työhallinnon julkaisu No 21. Työministeriö. Helsinki.
- Työministeriö (1993b)*: Osa-aikatyötoimikunnan mietintö. Komiteamietintö 1993:22. Helsinki.
- UN (1990)*: International Trade Statistics Yearbook. United Nations. New York.
- UN (1992a)*: Trade and Development Report, 1992. United Nations Conference on Trade and Development. United Nations. New York.
- UN (1992b)*: World Investment Directory. Transnational Corporations and Management Division. United Nations. New York
- UN (1992c)*: World Investment Report 1992. Transnational corporations as engines of growth. United Nations. New York.
- UN (1993)*: Monthly Commodity Price Bulletin, Vol XIII, No 3, March 1993. United Nations. Geneva.
- Uusivuori, J. (1992)*: Metsäsektorin tulevaisuudenkuva. A Future Vision of the Forest Sector. PTT Raportteja ja artikkeleita No. 105. Espoo.
- Vartia, P. - Ylä-Anttila, P. (1992)*: Kansantalous 2017. ETLA, Sarja B 80. Helsinki.
- VATT (1992)*: Suomi Euroopan Yhteisön jäseneksi? Taloudelliset vaikutukset. Helsinki.
- VATT (1993)*: YRI-ryhmän muistio. Julkaisematon.
- Virtanen, Y. - Nilsson, S. (1992)*: Some Environmental Policy Implications of Recycling Paper Products in Western Europe. IIASA. Executive Report. 22 July.
- VM (1992)*: Teollisuuden ulkomaansijoitukset ja investointien riittävyys kotimaassa. Kansainvälistymistyöryhmän raportti. Valtiovarainministeriö. Helsinki.
- Vuori, S. - Ylä-Anttila, P. (1992)*: Introduction; in Vuori, S. - Ylä-Anttila, P. (ed.): Mastering Technology Diffusion - The Finnish Experience. ETLA, Series B 82. Helsinki.
- World Bank (1991)*: World Development Report 1991. The challenge of development. Oxford University Press. New York.
- World Bank (1992a)*: The World Bank Atlas. Washington, D.C.
- World Bank (1992b)*: World Development Report 1992. Development and the Environment. Oxford University Press. New York.

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**Abstract:** Current problems in the world economy will spur deeper regional integration during this decade. Factors promoting multilateral cooperation are, however, gathering strength all the time. This has consequences for Finland's position in the international division of labour. In this decade the changing internal division of labour of Europe will direct developments in Finland.

Finland's competitive environment is very demanding. Deepening integration in Western Europe and the low cost level in the Eastern Europe change Europe's internal division of labour. Economic growth in Europe may remain slower than in North America and especially in South-East Asia.

Finland's escape from the trap of a high foreign debt, growing public indebtedness and record high unemployment and return to a path of balanced growth is clouded by several factors of uncertainty. In addition to the slow growth in the main export countries, a problem is to maintain competitiveness in circumstances where the opening up of the economy requires structural and behavioral changes.

Growth should be based on the rapid expansion of the production in innovative firms and on the efficient use of production factors. The reduction of unemployment would require that in the labour market the wage formation and other working conditions reflect more clearly than before the profitability and other special features of different branches. If the economy adapts itself flexibly to the new competitive environment and if the pace of international economic growth does not slow down permanently, unemployment may decline to the half of the present level by the year 2005.

**Key words:** economy: Finland, economic integration, EC, world economy.

GOVERNMENT INSTITUTE FOR ECONOMIC RESEARCH: **Opening Finland - Challenges for the Future**. Helsinki, VATT, Government Institute for Economic Research, 1993, 311 s. (A, ISSN 0788-4990; No 13) ISBN 951-561-081-8.

**Tiivistelmä:** Ajankohtaiset ongelmat korostavat alueellista integroitumista maailmantaloudessa tällä vuosikymmenellä. Monenkeskeistä yhteistyötä edistävät tekijät saavat kuitenkin koko ajan lisää painoa. Tämä heijastuu myös Suomen asemaan kansainvälisessä työnjaossa. Kuluvalla vuosikymmenellä Euroopan muuttuva sisäinen työnjako on maamme kehitystä ohjaava tekijä.

Suomen kilpailuympäristö on erittäin vaativa. Länsi-Euroopan syvenevä integraatio ja Itä-Euroopan maiden matala kustannustaso muokkaavat Euroopan sisäistä työnjakoa. Euroopan talouskehitys jäänee hitaammaksi kuin Pohjois-Amerikan ja erityisesti Kaakkois-Aasian kehitys.

Suomen talouden pääsemistä korkean ulkomaisen velkaantumisen, kasvavan julkisen velkaantumisen ja ennätystyöttömyyden loukusta uudelle tasapainoisen kasvun uralle varjostavat monet epävarmuustekijät. Päämarkkina-alueiden hitaan kasvun ohella ongelmana on kilpailukyvyyn säilyttäminen oloissa, missä talouden avautuminen edellyttää rakenteiden ja käyttäytymismallien muuttumista.

Kasvun tulisi perustua innovatiivisten vientiyritysten tuotannon nopeaan laajentamiseen ja tuotantopanosten tehokkaampaan hyväksikäyttöön. Työttömyyden alentaminen edellyttäisi, että työmarkkinoilla palkanmuodostus ja muut työolot heijastaisivat entistä selvemmin eri alojen palkanmaksuvaraa ja toiminnan ominaispiirteitä. Mikäli talous sopeutuu joustavasti uuteen kilpailuympäristöön eikä kansainvälisen talouden kasvu hidastu pysyvästi, työttömyys voi puolittua vuoteen 2005 mennessä. Hitaan kasvun oloissa työttömyyttä ei perinteisin keinoin voida alentaa.

**Avainsanat:** kansantalous: Suomi, taloudellinen integraatio, EY, maailmantalous.

## **VATT-julkaisuja / VATT-publications**

### **VATT-julkaisuja sarjassa aiemmin ilmestyneet julkaisut**

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- 1.** Finland 1990 - 2005. A time of challenge and preparation. Helsinki 1991.
- 2.** Neuvostoliitto, itäinen Eurooppa ja Suomi. Toimittaneet Pekka Sinko ja Pekka Sutela. Helsinki 1991.
- 3.** Proceedings of the Workshop on Economic Instruments in Environmental Policy. Edited by Seppo Leppänen and Pirkko Valppu. Helsinki 1991.
- 4.** Vuosikirja 1991. Toimittaneet Seppo Leppänen ja Leena Saarinen. Helsinki 1991 .
- 5.** Suomi Euroopan Yhteisön jäseneksi? Taloudelliset vaikutukset. Helsinki 1992.
- 6.** Proceedings of the Workshop on Economic Policy in European Integration. Edited by Pekka Alajääskö and Seppo Leppänen. Helsinki 1992.
- 7.** Proceedings of the Workshop on the Evaluation of Public Sector Performance. Edited by Seppo Leppänen and Heikki A. Loikkanen. Helsinki 1992.
- 8.** ECU Euroopan raha ja Suomi. Reino Hjerppe, Matti Korhonen, Sixten Korkman ja Markku Puntila. Helsinki 1992.
- 9.** Vuosikirja 1992. Toimittaneet Reino Hjerppe ja Leena Saarinen. Helsinki 1993.
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**A**

*t the turn of the millennium will the world continue to be dominated by the mature economies of Western Europe, North America and Japan or will new powers of equal stature arise? What will Europe be like outside of the EU? Where is Finland situated on the European economic map? Can Finland solve its debt and unemployment problems even by the year 2005? Will a new base for sustained, export-driven growth be found? Will the forest industry continue to set the pace for Finland's development or will high-tech industries become the new foundation for our economy?*

These and numerous other questions regarding Finland's future are addressed in this new long-term forecast "Opening Finland - Challenges for the Future" compiled by the Government Institute for Economic Research. The main theme of the book is the opening of the economy and the changes this will entail.



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HÄMEENTIE 3 • PL / P.O.B. 269 • 00531 HELSINKI, FINLAND

*Government Institute for Economic Research*



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