OECD

SPOTLIGHT ON PUBLIC SUPPORT TO INDUSTRY



Spotlight on Public Support to Industry

ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

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FOREWORD

The primary objectives of the OECD Industry Committee's "Public Support to Industry" project are to improve international transparency and to compare, OECD-wide, the trends and patterns of public support to manufacturing industry.

This report reviews the overall evolution of support policies in 25 OECD Member countries, in the Slovak Republic and at the level of the Commission of the European Communities over the period 1989-93. The analysis builds on quantitative and qualitative information drawn from 1 479 support programmes and reporting on R&D contracts and intermediary R&D institutions as well as procurement policies.

For Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Hungary, Iceland, Japan, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the Commission of the European Communities, the information was analysed in a country-specific context, in many cases on the basis of more recent data including the years 1994 and 1995.

Moreover, thematic reviews of public support to industrial R&D efforts and public support to physical and intangible investment have widely exploited the analytical potential of the database.

This report was prepared by Udo Pretschker, assisted by Marian Murphy, of the Industry Division of the Directorate for Science, Technology and Industry. The Industry Committee recommended the declassification of the report, which is published on the responsibility of the Secretary-General of the OECD.

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SUMMARY

METHODOLOGY

The Industry Committee's project on "Public Support to Industry" has reached several milestones in its efforts to improve international transparency and compare, OECD-wide, the trends and patterns of national support policies.

First, methodological innovations have contributed greatly to a common understanding of support policies. The questionnaire, *Industrial Subsidies: A Reporting Manual*, published in 1995, has become, both in OECD countries and elsewhere, the international reference for monitoring industrial support practices.

Second, the peer-review procedure for collectively reviewing the information reported has evolved as a valuable confidence-building measure. It has helped complete and consolidate the database and, at the same time, shed light on remaining reporting gaps. The peer-review procedure created for this project might also serve as a model for examining notifications in other international organisations.

Third, the project's strict programme-based bottom-up approach makes it the unique source of actual public support to manufacturing industry, as the respective figures in surveys published by other international organisations are derived either from national accounts or government finance statistics.

LIMITATIONS OF THE DATA

Twenty-five OECD Member countries (not including Greece, Korea, Luxembourg and Poland), the Slovak Republic, which is an observer to the Working Party on Public Support to Industry, and the Commission of the European Communities participated in the third phase of data collection, which covered the period 1989-93. They reported on 1 479 support programmes, R&D contracts and intermediary R&D institutions as well as public procurement.

In the course of 1996, 1997 and 1998, Denmark, Finland, France, Iceland, Norway, Sweden, Switzerland, Turkey, the United Kingdom and the Commission of the European Communities updated their reporting for the years 1994 and 1995.

A unique database was built in the course of this project. Comprehensive country-specific information on public support programmes to manufacturing industry and peer-review documents which contribute significantly to the understanding of national support policies, constitute an enormous potential for analytical exploitation.

In spite of considerable improvements in the reporting, gaps persist in the reporting system *per se* and in those of a few countries, particularly with regard to sub-central support, the reporting on tax concessions and on quantitative information for the years 1992 and 1993.

MAIN FINDINGS OF THE REPORTING EXERCISE

The decline of support in current prices observed in 1986-89 did not continue in the subsequent period 1989-93. Public support which was US$37 billion in 1989, peaked at US$45.7 billion in 1991, then dropped to US$43.7 billion in 1993, thus growing by 24 per cent in nominal terms from 1989 to 1993. A more significant upward trend in public support in the OECD area would be evident if data for the

years 1992-93 had been available. While support increased over the period in approximately two-thirds of participating countries, it decreased in the other third. Reductions in the areas of SMEs, sectoral aid and investment incentives were largely outweighed by stronger support in all other areas.

The number of programmes reported increased by 11 per cent from the beginning to the end of the period under review. Compared with the previous phase, this increase is even more important and is only partly explained by the reporting of four additional countries and the inclusion of two additional policy objectives. The growing number of support programmes is one of the most salient features of national support policies in recent years.

Nominal support was 1.09 per cent of manufacturing GDP in 1989, and 1.10 per cent in 1993. However, the relative stability of support intensities when the first and last year of the period are compared is more likely due to the rise in manufacturing GDP than to collective policy efforts to curb industrial support. In constant dollars, the support level decreased by 4 per cent between the beginning and the end of the period under review.

Only 4.1 per cent of the reported programmes limit public support to national enterprises. The opening of support policies to domestically established, foreign-owned firms or to enterprises from abroad, can be considered a policy response to industrial globalisation. The resulting internationalisation of public support raises new issues and particularly complicates the interpretation of national support figures and rates.

With only 18 per cent of all programmes terminating within a five-year period and 23 per cent classified as new programmes, turnover in the stock of programmes does not appear to be very dynamic. Moreover, almost 60 per cent of the programmes have a duration of five years or more.

Indirect means of support, such as public procurement, R&D contracts, and R&D intermediary institutions, channel far more financial resources to manufacturing industry than does direct support. Even if the support element in indirect measures only represents a very small percentage, it would still be very significant. As there is as yet no agreed methodology for measuring the support element in indirect support, uncertainties remain as to its role as a policy instrument and, more specifically, as a tool of support to manufacturing industry.

Support to regional development, exports and trade, and R&D played a very prominent role in net spending. The still significant amounts of support and the large number of programmes in the areas of sectoral aid, crisis aid, and exports and foreign trade at the end of the period point to a challenge for policy makers. In the spirit of positive adjustment policies and stronger international discipline, a more marked shift from sector-specific, enterprise-specific and product-specific support towards horizontal policy areas would have been expected.

The concentration of more than 50 per cent of sectoral programmes on three ailing industries (steel, shipbuilding and textiles), which together represent only 9 per cent of manufacturing GDP in OECD countries, augments this problem. In terms of combined direct and indirect support, the aircraft and space industry lead other beneficiary sectors.

Under the policy objective of crisis aid, interventions at the level of individual firms (whether publicly owned or large and privately owned) are likely to occupy a lower place on the agenda, while the emphasis under this policy objective is shifting to SMEs in difficulty, with funds increasingly provided by sub-central governments. This is the general trend regarding crisis aid measures. Current figures are strongly biased by the implications of a single important rescue operation in 1993.

In the period from 1989 to 1995, OECD governments continued to play an important role in financing technological progress. In current prices, public support to industrial R&D efforts increased in the OECD area when 1989 and 1993 are compared, and the figures available for 1994 and 1995 point to a continuation of this upward trend. While most OECD governments were operating under severe budgetary restrictions, the share of total public support devoted to industrial research and development and innovation increased even in the few countries which had to public R&D spending. Both increased spending and the focusing of public expenditure on industrial R&D in a deteriorating budgetary environment underline the strong and growing commitment of OECD governments in pushing ahead technological progress of manufacturing industry.

In the area of support to exports and foreign trade, export credits and guarantees appeared as one of the main channels for providing public finance to manufacturing industry. Their financial volume increased from 1989 to 1993. However, the information available for the years 1994 and 1995 points to lower payments on losses and write-offs when compared with the period 1989-93.

Programmes providing support to SMEs as either their primary or secondary policy objective constitute more than one-third of all reported programmes. The greater policy focus on SMEs from the early 1990s appears to reflect the recognition of their contribution to job creation and employment.

The promotion of both physical and intangible investment by means of public support programmes remains a major issue in the investment policies of OECD Member countries. While such support to manufacturing industry declined under general investment schemes, investment promotion in a broader sense, including regional development schemes and schemes to promote the acquisition of intangible assets in the manufacturing sector, emerged as the policy focus of public support to manufacturing industry in the early 1990s. In 1992, these schemes represented more than 60 per cent of the OECD total in terms of net expenditure, and almost 80 per cent in terms of the programmes reported. While the emphasis was on the promotion of physical investment, it appears that public support to intangible investment as a share of total support increased when compared with the figures reported for the period 1986 to 1989.

Under the policy objectives of energy efficiency and environment protection, the new paradigm of sustainable development may have been the driving force behind the shift towards programmes supporting the use of cleaner or renewable energy inputs, more efficient production technologies and more integrated process approaches.

Country-specific analysis reveals the shift from an interventionist to a horizontally oriented industrial policy as the major reason behind the growing focus on support in areas such as regional development, R&D and SMEs. However, non-economic reasons – constitutional reforms in Belgium or the reunification of Germany – have widely determined the development of public support to manufacturing industry in a few countries.

The information available for 1994 and 1995 points to strong reductions in expenditure when compared with 1993 levels. At the same time, spending on horizontal policy issues has expanded in most of the countries under review.

Part I

SCOPE, METHODOLOGY AND PROCEDURES

SCOPE, METHODOLOGY AND PROCEDURES

A. THE POLICY BACKGROUND

Subsidies are associated with economic inefficiency. In economic theory, only in the context of the theories of externalities and market failure have exceptional conditions for the provision of subsidies been identified.

However, as a result of industry policy interventions, support measures became widespread by the end of the 1970s. Support to ailing industries and weak enterprises continued and was complemented by various financial incentives offered to manufacturing industry under the banner of new policies (*e.g.* energy efficiency, protection of the environment). Public support for industrial R&D and innovation also increased strongly. The international "subsidy race" in high-tech industries such as aircraft, space, computers and semiconductors repeatedly attracted public attention.

During the 1980s, policy discussions began to focus on industrial support for several reasons:

- first, many of these support programmes contributed relatively little to structural adjustment;
- second, the burden on public budgets increased; and
- third, although trade policies succeeded in reducing tariffs and other border measures, support measures continued to distort national and international competition and trade, and, as the globalisation of economies and markets accelerated, they became a priority issue on the international agenda.

Because of the multiplicity of measures, both long-standing and newly created, and the variety of incentives and financing mechanisms on which they are built, the opacity of public support to manufacturing industry increased rapidly. Moreover, tied aid, procurement or R&D contracts, which can be used indirectly as a means of public support, indicate the complexity of the situation. In large part, this evolution explains why the project, launched in 1986 under the heading "Subsidies and Structural Adjustment", was renamed "Public Support to Industry" in early 1996. This new title makes clearer the scope of this reporting project, which goes beyond the subsidy notification requirements established in the recent WTO "Agreement on Subsidies and Countervailing Measures", signed in April 1994 in Marrakech. It also makes it possible to retain the reporting of various financial support measures that would not be considered to be subsidies.

B. THE OUTCOME OF PREVIOUS RESEARCH

Pursuant to Article 1 of the OECD Convention, the OECD shall *inter alia* promote policies designed:

- to contribute to the expansion of world trade on a multilateral, non-discriminatory basis in accordance with international obligations.

This mission places the OECD in a good position to analyse and monitor industrial subsidies.

The OECD has undertaken to raise the level of international transparency and to compare, at an international level, the trends and patterns of public support to manufacturing industry. It has become the acknowledged leader in this effort.

This is the Industry Committee's third report on this project to the OECD Council at Ministerial Level. A first report, entitled "Industrial Support Policies in OECD Countries: Evolution by Policy Objectives and Financing Instruments" was presented in 1990. It surveyed gross budget flows benefiting the manufacturing sector in OECD economies, either exclusively or in part, over the period 1982-86.

Then, in response to Ministerial mandates to increase transparency and comparability of national support policies, the Industry Committee and its Working Party continued work on this project for a second period, 1986-89. It achieved two substantial improvements:

– the introduction of the measurement of Net Cost to Government (NCG) for each support programme made it possible to undertake quantitative analysis and comparison of the different financing mechanisms; and

– the implementation of a collective review of the information reported, undertaken by Member countries together with the Secretariat and using a multilateral "peer-review" procedure, was instrumental in building confidence in the OECD's database on industrial support programmes.

As a result of these efforts, detailed information was collected on 879 support programmes[1] and procurement practices in 22 Member countries (Greece and Luxembourg did not participate) and the Commission of the European Communities for the period 1986-89. The resulting report, entitled, "Industrial Support Policies in OECD Countries 1986-1989", was presented in 1992.

Although significant progress was made during the second round of data collection in terms of methodology, coverage and reporting practices, important gaps remained, particularly in the areas of:

– support to manufacturing industry at the sub-central level;

– reporting on tax concessions;

– capital injections to publicly owned manufacturing enterprises; and

– civil and defence procurement.

C. METHODOLOGICAL IMPROVEMENTS IN PHASE III

In order to fill these gaps and to increase transparency, a third phase of reporting on support programmes was launched in 1992. Methodological work in the Industry Committee's Working Party led to five major improvements:

– First, for the purposes of the project, it introduced a new manufacturing definition that went beyond statistical classifications and included the following areas: biotechnology and relevant products; software development and production carried out by manufacturing firms and/or which is part of systems built around manufacturing. Such an approach better reflects structural changes in the manufacturing sectors of OECD economies.

– Second, it extended the scope of the previous questionnaire to include two new policy objectives: support to energy efficiency and support to environmental protection. These areas have evolved over the last decade and the increasing number of support programmes and the amount of funds channelled to manufacturing industry under these headings justified their introduction. Accordingly, support was classified into ten policy areas identified as priority objectives of industrial support policies. These areas are:

  • sectoral policies;
  • crisis aid;
  • R&D and technological innovation;
  • regional development;
  • general investment incentives;
  • support to SMEs;
  • labour and training;[2]
  • exports and foreign trade,
  • energy efficiency,
  • environment protection.

– Third, it developed and refined the concepts for the measurement of tax concessions and capital infusions. As a result, formulae for calculating Gross Government Budget Expenditure (GGBE)[3] and Net Cost to Government (NCG)[4] for each type of financing instrument now exist.

– Fourth, it introduced reporting requirements for indirect public support to R&D and technological innovation, thereby allowing for a better understanding of public support reported under this policy objective.

– Fifth, it developed a sample method with a view to solving the problem of sub-central reporting for one of the two countries (the United States and Canada) having particular difficulties in collecting such information. For the United States, a representative sample of 20 states was proposed as a basis for evaluating the total industrial expenditure of all states. By accepting a sample method for collecting information on support programmes at state level, agreement on sub-central reporting was reached.

The new questionnaire, approved by the Industry Committee in April 1994, was published in 1995 under the title, *Industrial Subsidies: A Reporting Manual*. It has become, both in OECD countries and elsewhere, the international reference for monitoring industrial support practices.

D. THE CONCEPT OF PUBLIC SUPPORT

This project covers all types of selective financial government support to manufacturing industry at the central or sub-central level or, indirectly, through intermediary institutions. As a consequence, non-financial support to manufacturing and assistance to other economic sectors do not fall within the scope of this project (except as noted below).

This definition applies whether or not the funding results in a net cost to government. In the case of loan programmes, venture capital funds and equity capital infusions, funding can at times generate a negative NCG, which means that the revenues exceed the costs of a programme in a given year. However, with regard to venture capital funds and venture capital guarantees, certain countries have reported only such schemes which involved a positive NCG.

The principal government support measures not covered by this definition are:

– Support to consumers, including financial assistance for the purchase of manufacturing goods and services.

– Government support in the form of provision of real estate, goods and services at below-market prices. These ''in-kind subsidies'' do not involve visible financial flows to manufacturing industry. The questionnaire does not generally request reporting of such support. However, as an exception to this rule, the reporting of programmes that provide consultancy and R&D services either free or below market price were included.

– Specific tariff measures which, in economic terms, may have the same effect as concessions on indirect taxes.

– Regulatory measures that alter market prices without implying direct budgetary interventions.

Regarding the selectivity of financial support, the common understanding that has evolved over recent years has resulted in the reporting, first, of support programmes that are exclusively available to manufacturing industry, and second, of those that are also available to non-manufacturing enterprises. Non-selective programmes available to all economic entities are not covered by the project; however, it was agreed to make an exception for programmes that support general or special investment.

The agreed concept of public support goes far beyond the reporting requirements for ''state aids'' or ''subsidies'' established in other international notification and reporting exercises. Many countries reported schemes such as export credits and guarantees, equity capital infusions, basic research, venture capital funds and tax credits which they do not always consider to constitute a subsidy.

E. THE MEASUREMENT OF PUBLIC SUPPORT TO MANUFACTURING INDUSTRY

The figures contained in this report generally refer exclusively to manufacturing. Whenever actual data were not available, the relevant figures were generated from estimations by the agency that manages the programme or from estimations based on calculated manufacturing shares. The OECD's ''Public Support to Industry'' project takes a strict programme-based bottom-up approach to public support to manufacturing industry. Expenditure data reported to the OECD represent actual support, whereas respective figures in the reporting and surveys published by other international organisations such as IMF, UNCTAD and the World Bank are derived either from national accounts or government finance statistics.

The measurement of NCG is applicable to all support programmes using direct financing instruments. Formulae exist for the various grants, interest rate subsidies, loans, guarantees, equity capital infusions and tax concessions. However, a methodology for measuring NCG for indirect financial support measures has not yet been developed. At this stage, it is important to describe civil and defence procurement and R&D contracts as rigorously as possible in terms of the institutions involved and the procedures applied, without attempting to calculate the net cost elements. The resultant bias in the measurement of NCG for direct and indirect financing instruments remains a challenge for future methodological work.

F. A GENERAL ASSESSMENT OF THE REPORTING

All OECD Member countries, except Greece, Korea, Luxembourg and Poland, participated in Phase III of the project. In 1995, the Slovak Republic obtained observer status in the Working Party on Public Support to Industry and joined the exercise. At present, 26 countries and the Commission of the European Communities participate in this project.

Given the reporting on 1 479 programmes for the period 1989-93, compared to 879[1] for the period 1986-89, it is clear that the commitment of participating countries to this project increased significantly. In Phase III, 300 programmes were reported for 1989, in addition to those reported in Phase II – an indication of the progress made in filling reporting gaps identified in the previous round of data collection.

The peer-review procedures greatly contributed to the improved reporting. Following intensive bilateral clarification of the information reported, through discussions between countries and the Secretariat, three peer-review meetings were held on 18-21 September 1995, 4-6 December 1995 and 4-7 March 1996. Owing to the experience, expertise and knowledge of the Delegates to the Working Party on Public Support to Industry, confidence in the completeness and quality of the information reported reached a higher level. In the course of these three meetings, more data and programmes were added. The multilateral peer-review procedure created for this project could serve as a model for examining notifications in other international organisations. The peer-review process helped consolidate the database and, at the same time, shed light on remaining gaps in the participants' reporting.

A substantial majority of countries succeeded in reporting as completely as possible on their national support policies. Australia, Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Iceland, Ireland, Italy,[5] Japan, the Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, the United Kingdom, the Slovak Republic and the Commission appear to have provided quite complete country submissions in terms of both quantitative and qualitative information. Moreover, these countries and the Commission responded satisfactorily to all the questions raised during the peer review and fulfilled all the reporting commitments they agreed on in the course of this procedure. The other countries also made a significant contribution, although a few gaps remain in their reporting. These gaps refer either to information on support programmes and replies to the Complementary Reporting Formats or to the omission of reporting on items of a more general nature, for example certain instruments and/or levels of government. Canada did not report on provincial support and could only provide qualitative information on relevant tax concession programmes; in addition some quantitative programme information was not available for 1992 and 1993. Hungary provided quantitative information in terms of GGBE only. Mexico did not report on equity capital injections into

publicly owned manufacturing enterprises and could not provide quantitative information on a tax concession programme. Portugal could not provide information on tax concessions. The United States faced particular difficulties in collecting quantitative data on sub-central public support programmes for the manufacturing sector. Despite earlier efforts to report programmes on 20 states, the United States was able to report programmes from only 19 states. Information was provided for 115 programmes, but quantitative data was only available for 28 of the sub-central programmes. As a consequence, total US state support could not be extrapolated.

In spite of the considerable improvement in the overall reporting in relation to Phase II, the Working Party decided that, at this stage, the analysis should be focused on overall trends and features in the OECD area. Part II of this publication contains the analysis of overall trends.

More recent work on the project of "Public Support to Industry" has addressed country-specific analysis of support policies. Between May 1996 and April 1998, 17 Member countries and the Commission of the European Communities requested the elaboration of public support monographs (presented in Part III). In the course of this activity, many of these countries and the Commission updated their reporting by including information for 1994 and 1995. Thematic reviews of public support to industrial R&D efforts (Part IV) and public support to physical and intangible investment (Part V) were also carried out in 1997 and 1998. These country-specific and thematic analyses have proven to be important steps towards the full exploitation of the analytical potential of the database.

G. INTERPHASE COMPARABILITY

For many reasons, the information reported for the period 1989-93 is not strictly comparable with that reported for 1986-89. The main reason for the lack of comparability lies in the fact that, unlike in Phase II, manufacturing shares were, where necessary, strictly and systematically calculated in Phase III. Comparability is also hampered by the considerable reporting gaps in the second round of data collection. In addition, two new policy areas were introduced, one policy area was dropped and four additional participants joined the project in Phase III. Therefore, long-term analysis of specific support features for the years 1986-93 and comparisons between figures for Phase II and Phase III will necessarily be limited.

Comparability between the two phases is limited to selected qualitative criteria such as the number of the programmes reported or the indices of nominal and real support.

Part II

OVERALL TRENDS

OVERALL TRENDS OF PUBLIC SUPPORT

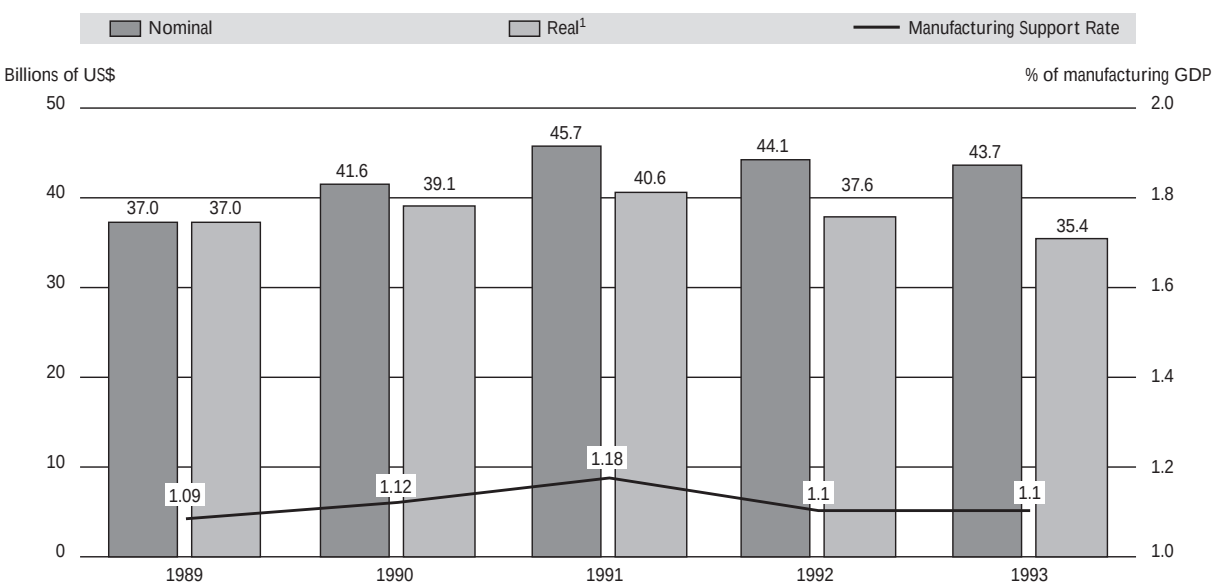
A. QUANTITATIVE FEATURES OF PUBLIC SUPPORT

From 1989 to 1993, OECD-area real GDP and real value added in manufacturing grew at an average annual rate of 2 and 1.4 per cent, respectively. As a share of GDP, value added in manufacturing fell from 22.5 to 20.5 per cent.

While OECD economies generally experienced slow growth during this period and downsizing continued to affect their manufacturing sectors, they recorded an upward trend in the total level of public support to manufacturing. Using the NCG indicator, expressed in current US dollars, the reported data reveal an increase from US$37 billion in 1989 to US$43.7 billion in 1993. Graph 1 shows that nominal support peaked at US$45.7 billion in 1991.

The extraordinary high growth in nominal support in 1991 was more the result of significant increases in specific policy areas such as regional development, exports and foreign trade, R&D and sectoral policies than of strong increases in total public support in certain countries. However, data for a few large support programmes for 1992 and 1993 are not yet available, and this could explain why the rise in overall support for those years is not higher.

Graph 1. ***Nominal and real NCG expenditure and the Manufacturing Support Rate***
1989-93



1. The annual GDP deflator was used in the calculation of the real NCG.
Source: OECD Industrial Support Database, February 1998.

The overall trend masks considerable diversity among individual countries, as developments in 25 OECD Member countries, the Slovak Republic and the Commission, all of which participated in the project, varied considerably. While nominal support rose over the period in approximately two-thirds of the participating countries, it declined in the other third.

Widespread expectations of a continuing phasing-out of public support over 1989-93 were not fulfilled. Reductions in the areas of SMEs, sectoral policies and investment incentives were largely outweighed by stronger support in all other areas.

Despite the deteriorating budgetary situation in almost all participating countries, public support to manufacturing industry remains a non-negligible economic factor.

Real direct support,[6] measured at US$37 billion in 1989, dropped to US$35.4 billion in 1993. Given the above-mentioned data constraints, actual real direct support is most likely to be higher than shown in Graph 1. Extrapolating for the figures missing for 1992 and 1993 would yield totals of US$39.7 billion and US$37.6 billion, respectively, in real terms, resulting in an estimated increase of the order of 2 per cent.

The manufacturing support rate, which is measured as public support to manufacturing industry as a share of manufacturing GDP, was 1.09 per cent in 1989. It increased to 1.18 per cent in 1991 but fell to 1.10 per cent in 1993. The sharp decline from the peak of 1991 is partly explained by the above-mentioned data gaps for the most recent years. However, the trend reflects a relative stability of support intensities in manufacturing when the first and the last year of the reporting period are compared, although this is more likely due to the rise in manufacturing GDP than to collective policy efforts to curb industrial support, which appeared to stagnate in the period under review.

B. QUALITATIVE FEATURES OF PUBLIC SUPPORT

In the period under review, the number of support programmes reported increased significantly. The Phase III database contains 1 479 programmes, of which 315 were introduced between 1990 and 1993. Compared with the previous phase, the increase is even more noteworthy: at the end of the second round of data collection, covering the period 1986-89, 879 programmes had been reported. It should be mentioned that in Phase III, four more countries participated in this project, and reporting on two additional policy objectives was requested, while at the same time labour and training programmes were withdrawn from the database. But this can only partly explain the strong rise in the number of reported support programmes.

Policy makers at all levels of government shifted funds away from sunsetting or ongoing programmes towards new programmes. The strong rise in the number of support programmes is one of the most salient features of national support policies in recent years.

The policy focus for industrial support had changed slightly by the end of the reporting period (Table 1). The relative share of regional support, R&D, crisis aid, energy efficiency and environmental support grew in total expenditure. It declined with regard to sectoral policies, investment incentives, SMEs and trade and export promotion.

Regional development, exports and trade, and R&D played a very prominent role in net spending throughout the reporting period. Support to manufacturing industry under the policy objective of regional development strongly increased between the beginning and the end of the period under review. Particularly dynamic increases were also registered in the areas of crisis aid, energy efficiency and R&D. Support in the area of exports and foreign trade continued to increase. The still significant amounts of support and the large number of programmes in the areas of sectoral aid, crisis aid, and exports and foreign trade at the end of the period need to be highlighted and may be a matter of concern for policy makers. In the spirit of positive adjustment policies and stronger international discipline, a stronger shift from sector-specific, enterprise-specific and product-specific support towards horizontal policy areas would have been expected.

Table 1. **Reported expenditure and programmes by policy objective**

NCG in millions of US$

Policy objective	Programmes (% share)	NCG current US$ million (% share)				
		1989	1990	1991	1992	1993
Sectoral	147 *(10.0%)*	4 448.8 *(12.0%)*	4 922.6 *(11.8%)*	5 812.8 *(12.7%)*	5 193.5 *(11.8%)*	3 390.7 *(7.8%)*
Crisis aid	55 *(3.7%)*	1 625.2 *(4.4%)*	667.8 *(1.6%)*	874.6 *(1.9%)*	585.5 *(1.3%)*	3 188.5 *(7.3%)*
R&D and technological innovation	282 *(19.1%)*	6 368.7 *(17.2%)*	7 404.5 *(17.8%)*	8 665.4 *(19.0%)*	9 197.7 *(20.9%)*	8 283.7 *(18.9%)*
Regional	221 *(14.9%)*	8 513.7 *(23.0%)*	9 807.9 *(23.6%)*	12 122.2 *(26.6%)*	12 986.8 *(29.4%)*	13 438.0 *(30.7%)*
Investment	157 *(10.6%)*	2 953.1 *(8.0%)*	2 805.1 *(6.7%)*	2 767.2 *(6.1%)*	2 396.3 *(5.4%)*	2 594.4 *(5.9%)*
SMEs	364 *(24.6%)*	5 428.7 *(14.7 %)*	6 025.7 *(14.5%)*	4 335.7 *(9.5%)*	4 690.4 *(10.6%)*	3 748.7 *(8.6%)*
Export	120 *(8.1%)*	6 923.1 *(18.7%)*	9 016.9 *(21.7%)*	9 952.1 *(21.8%)*	7 825.9 *(17.7%)*	7 276.6 *(16.6%)*
Energy	64 *(4.3%)*	436.5 *(1.2%)*	620.4 *(1.5%)*	839.8 *(1.8%)*	866.3 *(2.0%)*	1 450.1 *(3.3%)*
Environment	69 *(4.7%)*	257.2 *(0.7%)*	349.1 *(0.8%)*	296.1 *(0.7%)*	365.2 *(0.8%)*	364.8 *(0.8%)*
Total	1 479	36 955.0	41 619.9	45 665.9	44 107.6	43 735.5

Source: OECD Industrial Support Database (February 1998).

In terms of the numbers of actual programmes reported, support to SMEs emerged as the most dynamic policy area, representing almost 25 per cent of all programmes, and programmes having support to SMEs as either their primary or secondary policy objective constitute more than one-third of all programmes reported. The strong policy focus on SMEs beginning in the early 1990s, despite declining expenditure, appears to reflect the recognition of their contribution to job creation and employment.

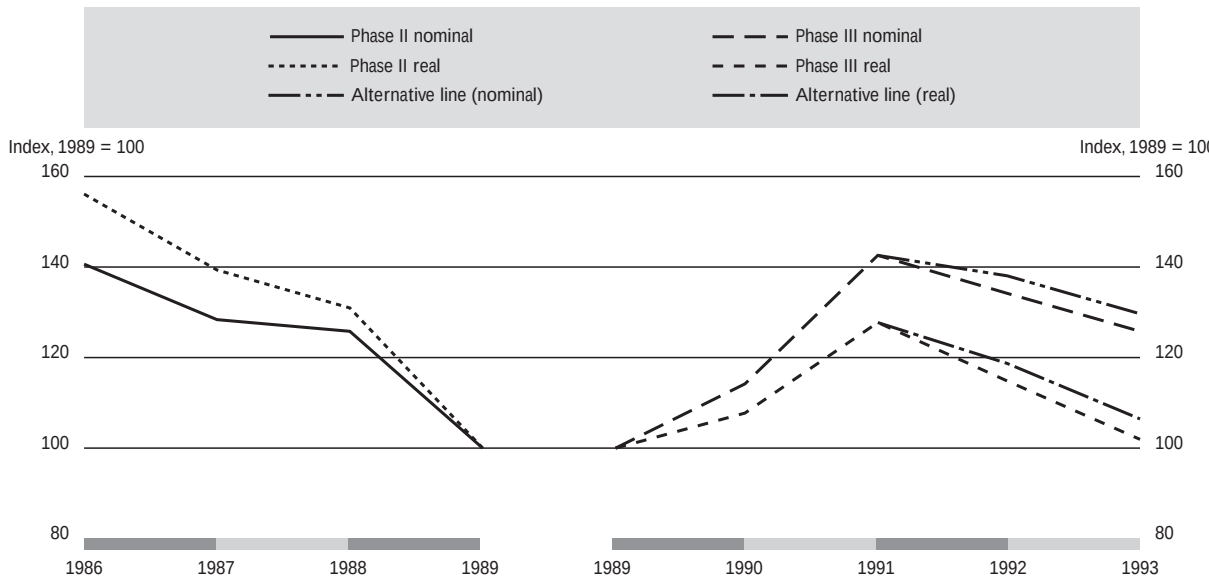
C. LONG-TERM TRENDS

Due to the interphase comparability problems described in Part I, Section G, only limited comparisons of the quantitative information reported for Phase II and Phase III are possible. Despite such limitations and in order to allow at least a rough understanding of trends in nominal and real public support between 1986 and 1993, Graph 2 presents the nominal and the real index of public support: for both exercises, the 1989 figures were taken to be 100.

Graph 2 shows the evolution of the index of support in current and real prices for the years 1986 to 1993. It demonstrates that the nominal support index declined sharply from 1986 to 1989. This trend did not continue in the period from 1989 to 1993. Support increased strongly until 1991 when it reached 118 and fell back to 110 at the end of the period. When reporting gaps for the year 1993 have been filled (see alternative line), an index of 116 may result. In real terms, the decline was sharper in Phase II, while in Phase III, the increase until 1991 was weaker before falling back in 1993 to below the 1989 level.

It is interesting to note that the shift from general policies, such as general investment aids, to more focused support measures such as regional development, R&D, and exports and trade, had already started in 1986-89. In 1986, the share of investment aid in total net expenditure was 55 per cent,

◆ Graph 2. ***Index of public support***
1986-93



Note: Alternative line represents an estimation by the Secretariat.
Source: OECD Industrial Support Database, February 1998.

with tax concessions extensively used as a financing instrument. In 1993, its share had fallen to some 5 per cent, a sign of the extent to which specific funding under micro policies had replaced the large tax concession programmes that were directly under the control of finance ministers.

D. THE DURATION OF SUPPORT PROGRAMMES

Programmes reported to the OECD database include some which date back to the early 1930s, thus having a lifetime of more than 60 years, while others lasted no more than two months. Information provided on the duration of programmes indicates that of 1 350 classified programmes:

– 23 per cent were started in 1990 or later (new programmes);

– 3 per cent were started in 1990 or later and expired by the end of 1993 (new/sunsetting programmes);

– 15 per cent were already in existence in 1989 and expired in the course of the reporting period (sunsetting programmes);

– 59 per cent were active throughout the reporting period and had not expired by the end of 1993 (ongoing programmes).

These figures shed some light on two interesting aspects of national support policies. First, with only 18 per cent of all programmes terminating in a five-year period, turnover in the stock of programmes does not appear to be particularly dynamic. Second, almost 60 per cent of the programmes have a duration of five years or more.

In a dynamically changing economic environment marked by rapidly shortening product life cycles, often closely linked to the lifetime of the investments for their manufacture, the policy rationale for long-lasting programmes is somewhat unclear in some cases. While, given the structural nature of the policy objective, the policy rationale for long-lasting programmes in areas such as regional

development and support to SMEs seems clear, the longevity of operational support schemes established particularly under the policy areas of crisis aid and R&D warrants detailed analysis. Normally, such schemes operate on a short-term basis.

E. NATIONAL TREATMENT CRITERIA APPLIED IN SUPPORT TO MANUFACTURING INDUSTRY

With regard to "national treatment"-related criteria governing access to support programmes, the questionnaire required choosing one of the following three options:

1. all domestically established firms may apply on equal terms;
2. all nationally owned enterprises may apply on equal terms;
3. all manufacturing enterprises, wherever established (including abroad) and whatever their ownership, may apply on equal terms.

In the support policies of participating countries and the Commission, barriers for non-nationally owned enterprises, as a means of limiting access to public support, have declined in importance. Such barriers, which were a source of concern in the reporting period 1986-89 and explain the inclusion of questions related to them in the questionnaire for the current reporting period, concern only 4.1 per cent of all programmes reported for Phase III. In terms of access to programmes, 79 per cent of programmes are also open to domestically established but foreign-owned enterprises, and 8 per cent have no restrictions on the geographical location of firms and provide support even to enterprises from abroad. The openness of support to foreign enterprises in OECD Member countries, in the Slovak Republic and at the level of the Commission is encouraging.

As reporting on the actual beneficiaries of support programmes was optional, and as many countries did not provide this information, systematic information on the share of foreign beneficiaries in total public support is unavailable. However, in almost every participating country, the substantial assistance received by investors from abroad is well documented elsewhere.[7]

The opening of support programmes to domestically established, foreign-owned enterprises or to enterprises from abroad, regardless of their ownership, can be considered a policy response to worldwide industrial globalisation. The internationalisation of public support to manufacturers raises new issues for efforts to make support policies more transparent and comparable. At the same time, the international diffusion of national support complicates the interpretation of national support rates.

F. SUPPORT AT THE CENTRAL AND SUB-CENTRAL LEVELS

The main reason for the improved database, with the number of programmes reported almost double that of the previous phase, lies in the progress made by Member countries in their reporting sub-centrally managed programmes. The number of such programmes was only 260[8] for the period 1986-89, increasing to 535 for the present reporting phase.

In spite of these improvements, gaps still exist, particularly in the reporting of sub-central support. These gaps remain the principal problem for this project, as they hamper comparisons. Canada did not report on provincial support. The United States provided quantitative information for approximately 20 per cent of state support programmes reported, and were unable to forward any information on one of the five largest states, with the result that it is not possible to extrapolate total state support on the basis of the agreed sampling procedure. Mexico and Italy both considered support to manufacturing industry at the sub-central level negligible for their respective cases and did not report on this area.

In general, there is significantly less quantitative information available for sub-central programmes than for support at the central level. In the period under review, 79 per cent of central programmes provided quantitative information on average, whereas the respective share for sub-central programmes averages 67 per cent. A similar situation exists with regard to qualitative information. Therefore actual sub-central support is significantly higher than indicated in Table 2.

Table 2. **Reported expenditure and programmes by managing structure**

NCG in millions of US$

Managing structure	Programmes (% share)	NCG current US$ million (% share)				
		1989	1990	1991	1992	1993
Central	683 *(46.2%)*	31 120.7 *(84.2%)*	33 659.4 *(80.9%)*	37 446.7 *(82.0%)*	34 703.8 *(78.7%)*	29 976.9 *(68.5%)*
Joint central/Sub-central	91 *(6.2%)*	977.2 *(2.6%)*	1 182.0 *(2.8%)*	2 074.8 *(4.5%)*	2 636.5 *(6.0%)*	5 837.6 *(13.4%)*
Sub-central	535 *(36.2%)*	2 220.9 *(6.0%)*	2 709.4 *(6.5%)*	2 657.4 *(5.8%)*	2 897.9 *(6.6%)*	2 531.1 *(5.8%)*
Intermediary institutions	153 *(10.3%)*	2 496.0 *(6.8%)*	3 900.3 *(9.4%)*	3 248.2 *(7.1%)*	3 318.4 *(7.5%)*	5 110.8 *(11.7%)*
Unclassified	17 *(1.2%)*	140.1 *(0.4%)*	168.9 *(0.4%)*	238.8 *(0.5%)*	551.2 *(1.3%)*	279.2 *(0.6%)*
Total	1 479	36 955.0	41 619.9	45 665.9	44 107.6	43 735.5

Source: OECD Industrial Support Database (February 1998).

Of the 1 479 programmes reported, 683 are strictly central and 535 strictly sub-central programmes, including those at regional and local levels. There are also 153 programmes managed by public, private or public/private institutions, which are to a large extent managed centrally. It can therefore be concluded that, in terms of the programmes reported, central support accounts for a significant share.

Regarding the expenditure for central and sub-central programmes, the contrast is sharper. For the reporting period, central support varied between 68.5 and 84.2 per cent of the total, while the figures for combined local, regional and sub-central support varied between 5.8 and 6.0 per cent. It is fair to say that even if all the gaps in sub-central reporting were filled, the dominance of centrally managed support programmes would still persist.

For the reporting period, on average, sub-central support was 7.8 per cent of central support, but this does not say very much about the situation in countries where, for constitutional and budgetary reasons, sub-central governments play a particularly strong role. In Australia, Austria, Belgium, Germany, Japan and Switzerland, countries for which reporting on sub-central support was quite complete, the annual average share by country varied between 5 and 95 per cent.

Table 2 shows trends in current net expenditure for the different groupings of central, sub-central, joint central/sub-central and institutional support. Central and sub-central support peaked in 1991 (central) or 1992 (sub-central). Central support was almost 4 per cent lower in 1993 than in 1989. Sub-central support, comprising the regional and local level, exceeded its 1989 level in 1993 by 14 per cent, whereas net expenditure for intermediary institutions doubled between 1989 and 1993 and joint sub-central/central support increased from US$1 billion to US$5.8 billion.

The explanation for the evolution of joint central/sub-central support may partly lie in the decision-making process for such programmes, including the allocation of finance, which usually involves several government levels and budgets. Thus, once decisions are made, they are difficult to change even under serious budget constraints.

Regarding the rise in net expenditure by intermediary institutions, such off-budget financing is less likely to be affected by budgetary restrictions.

Exports and foreign trade, energy efficiency, crisis aid, sectoral policies and environmental protection are policy objectives that do not play an important role in sub-central support policies (only 108 programmes served these policy objectives), because primary political responsibility for such issues lies with central government.

In terms of the number of programmes actually reported, the focus of sub-central support is SMEs (187), regional policies (98), investment (85) and R&D (57). The policy rationale for the relatively high number of joint central/sub-central programmes for SMEs (37) is not obvious, while the second rank held by regional policies (27) is.

Financing activities are generally the domain of intermediary institutions, which are therefore particularly involved in the financing of export credits, SMEs and R&D.

SUPPORT BY POLICY OBJECTIVE

A. SECTORAL POLICIES

Programmes intended to support one, or selected, manufacturing sectors or industries attract particular policy interest. Ranking as the fifth most important policy area of public support, both at the beginning and at the end of the period under review in terms of levels of support and in terms of the number of programmes reported, sectoral policies still appear to play a dominant role throughout the OECD area. With the exception of Iceland, Ireland, New Zeland and Switzerland, they were applied in all countries and by the Commission. Sectoral support peaked in 1991, with US$5.8 billion of net expenditure in that year. Support in 1993 was 25 per cent lower than the 1989 level (see Table 3).

Most sectoral programmes target the shipbuilding industry. Of the ten industries for which at least three programmes each were reported, shipbuilding, with 32 programmes, ranked in first position. Fish processing (16 programmes), textiles (13) and the steel industry (7) followed. For the aircraft industry (six programmes) and the space industry, analysis is more difficult. Particularly for these two industries, support is also channelled through R&D programmes, through equity capital injections and, more specifically for the space industry, through R&D contracts and intermediary space agencies. Support identified for the aircraft and space industry, reported under this and other sections of the questionnaire, is summarised in Table 4.

When total reported sector-targeted support is examined, the aircraft and the space industry clearly emerge as the sectors which attract the highest actual expenditure.

More than 50 per cent of sectoral programmes designed to benefit a single industry go to the shipbuilding, textile or steel industries, which together represent approximately only 9 per cent of manufacturing GDP in OECD countries. Approximately 20 per cent of sectoral programmes are directed to high-tech industries such as computers, communications, and advanced manufacturing technologies. The remaining 30 per cent cater to all other industries.

The concentration of sectoral support programmes on three ailing industries for which specific agreements on trade protection (the Multifibre Arrangement in the GATT) and supranational subsidy disciplines (shipbuilding, steel at the level of the European Union), already existed points to the potential of sectoral policies to distort competition and trade at firm and product level.

The fact that only one-third of support programmes to ailing industries expired before the end of the period under review demonstrates the difficulties encountered by the countries participating in this exercise in phasing out defensive support policies and in shifting support from sectoral to horizontal policy objectives.

B. CRISIS AID

Government interventions intended to bail out and consolidate individual manufacturing enterprises facing financial difficulties and/or the risk of bankruptcy were reported under the umbrella of crisis aid for enterprises in difficulty. Also included were programmes intended to alleviate the impact of natural disasters, transitional problems in the former socialist economies and trade problems related to currency devaluation, wars and embargoes. For the period under review, 18 governments reported crisis aid measures.

Table 4. **Support to the aircraft and space industry**
Total value in millions of US$, 1989-93

	Aircraft	Space
Sectoral aid[1]	1 846.0	–
R&D programmes[1]	497.2	572.0
R&D contracts[2]/Space agencies[2]	–	29 274.7

1. NCG expenditure.
2. Contract values, procurement values, or contribution to the agencies.
Source: OECD Industrial Support Database (February 1998).

The pattern of support reported under the heading of crisis aid is somewhat erratic, as it essentially reflects individual rescue or consolidation operations, undertaken for both economic and non-economic reasons (Table 5).

In view of the ongoing privatisation of public manufacturing enterprises, crisis aid policies should decline in importance in the future. In the period under review, 25 per cent of all crisis aid programmes were directed towards publicly owned manufacturing enterprises and accounted for up to 15 per cent of net expenditure reported under this policy objective. Two-thirds of these programmes had expired at the end of the reporting period and new privatisation plans had been launched.

It would also appear that governments intervened reluctantly in favour of individual large private enterprises in difficulty. Net expenditure in the order of US$3.2 billion in the OECD area in 1993 is highly biased by a single rescue operation, accounting for US$2.5 billion. In general, it would appear that governments prefer to abstain from playing a major role in the selection process of the market.

Interventions at the level of individual firms, whether publicly owned or large and privately owned, are likely to be ranked lower on the agenda of crisis aid policies. There is some evidence in the programmes reported that the emphasis under this policy objective is shifting towards SMEs in difficulty and that sub-central governments are becoming increasingly involved.

C. SUPPORT TO R&D AND TECHNOLOGICAL INNOVATION[9]

Twenty-three countries and the Commission reported on direct financing measures. Hungary provided qualitative information and quantitative information in terms of GGBE figures only. Neither the Czech Republic, which provided a general overview of its science and technology policy institutions, nor the Slovak Republic, reported under this heading.

There were 282 support programmes reported under the policy objective of R&D and technological innovation, representing 19 per cent of all programmes. Net expenditure increased strongly between 1989 and 1992 from US$6.4 billion to US$9.2 billion but decreased to US$8.3 billion in 1993, perhaps owing to reporting gaps. The share of R&D expenditure in total public support rose from 17 per cent in 1989 to almost 19 per cent in 1993. The average value for the latter year spans country-specific values ranging between 1 and 57 per cent. In terms of both programmes and expenditure reported, public support to R&D and technological innovation ranked as the second most important policy area at the end of the reporting period.

Regarding the design of the programmes, more than half provided general incentives for R&D activities in the manufacturing sector. For 34 programmes, the focus is support to collective R&D efforts of firms, to research associations, and to research co-operation between firms and research institutes. Thirteen programmes provide support for hiring R&D personnel or for temporary employment of R&D personnel from research institutes. Twelve programmes explicitly support international R&D co-operation, and seven provide funds for technology parks or R&D venture capital. As a result, a large majority of R&D programmes are directed towards general R&D objectives.

Almost 90 programmes directly promote selected technologies. In terms of the programmes reported, they focus on: microelectronics/information technology (21), energy saving (18), new materials (7), space and aeronautics (7) and biotechnology (6).

Concentration of support in a few programmes is particularly evident for R&D and technological innovation. The ten largest programmes represented 54 per cent of total R&D support in 1991 and 52 per cent in 1992.

R&D support programmes follow the general trend with regard to programme duration and the use of financing instruments, both differing only slightly from what is reported in Chapter 1.D and in Table 15. As would be expected, they make up a very high share of programmes supporting R&D costs (more than 90 per cent over the reporting period). R&D support is a domain of central governments, which manage more than 70 per cent of total programmes.

D. REGIONAL DEVELOPMENT

In the period under review, regional policies continued to address disparities among regions. Public support to manufacturing industry under the policy objective of regional development remained a cornerstone of regional policy spending, even if it was lower than spending on items such as infrastructural support and regional support to economic sectors other than manufacturing (neither of which fall under the scope of this exercise). In every year of the reporting period, the share of expenditure under this policy objective in total net expenditure was larger than that of any other policy objective. On average, regional development accounted for more than one-quarter of total public expenditure. Starting at US$8.5 billion in 1989, expenditure peaked in 1993 at US$13.4 billion. The strong growth in regional support starting in 1991 when expenditure had increased by 25 per cent, is to a large extent related to the reunification process in one Member country. In terms of programmes reported, regional development ranks as the third most important policy area.

With the exception of Ireland and New Zealand, all other OECD Member countries, as well as the Slovak Republic and the Commission, support regional development through financial assistance to manufacturing industry (Table 7). Reported regional support shows an interesting feature: the highest shares in total expenditure are found in centrally structured countries, while certain federally structured countries spend a minor part of total support on regional development. Almost 75 per cent of total expenditure is divided between grants and tax concessions. There may be some correlation between this and the relatively high share of sub-central support under general investment (see Section E).

On the basis of the information provided, most support covered investment, identified in approximately 70 per cent of regional programmes, with capital investment accounting for the major share. The reporting demonstrates the extent to which manufacturing investment is an engine of regional development and job creation in disadvantaged regions. In an effort to create jobs in a region, many of these programmes aim at encouraging the building of new plants or the acquisition of new equipment. Investment incentives are often linked to the number of jobs saved or created. Almost a quarter of the programmes appear to aim to compensate for regional disadvantages.

The programme descriptions give little information as to eligibility criteria. However, regional development assistance was oriented towards regions facing structural adjustment problems or towards less-developed regions. Much support went to single-industry regions or those highly dependent on defence activities (conversion programmes). In seeking to cushion the socio-economic impacts of disruptive industrial adjustments, governments gave high priority to attracting new firms, stimulating the competitiveness of existing local enterprises, and developing the infrastructure for free-trade zones.

Regional support programmes last much longer than those falling under any other policy objective, with 56 per cent identified as ongoing programmes, *i.e.* having a duration exceeding five years. The longevity of these programmes may be due to the fact that this support is more structural than operational.

E. GENERAL INVESTMENT INCENTIVES

Under the heading of general investment incentives, 157 programmes were reported by 20 Member countries and the Commission. Almost 80 per cent (120 programmes) of these programmes provide support to fixed capital formation in the manufacturing sector. The remaining 20 per cent span a broad variety of aims, such as industrial development, equity capital injection in the publicly owned manufacturing sector and manufacturing activities in enterprise zones, maintaining the image of general investment support as a catch-all category.

General investment support was relatively stable between 1989 and 1993. It dropped from US$3 billion in 1989 to US$2.6 billion in 1993, and the share in total NCG fell from 8 per cent at the beginning of the reporting period to 6 per cent at the end (Table 8). It ranked as the sixth most important policy objective in 1989, seventh in 1993.

Under this heading, there are particularly large gaps in the quantitative information reported, as 25 per cent of all programmes and more than 50 per cent of those using tax concessions as a financing instrument do not provide NCG figures. If these gaps were filled, the amounts reported to date would increase considerably.

In spite of this under-reporting, tax concessions, which serve as a financing instrument for 24 per cent of programmes, channelled almost two-thirds of total support, on average, to manufacturing industry, with a tendency to increase, both in absolute value and in percentage terms.

Investment incentive schemes refer to physical and intangible inward investment and are open to domestic investors and investors from abroad. Only one programme was identified as solely directed towards direct investment from abroad. Four programmes provide support to national manufacturers investing in developing countries or in Eastern Europe.

General investment incentives appear to be a domain of sub-central governments; 54 per cent of the programmes reported were sub-centrally managed. These programmes reflect intensified competition among sub-central governments for creating and recruiting new businesses on their territories.

Net expenditure is concentrated on a small number of programmes. The share of the 12 most support-intensive programmes in total net expenditure on general investment incentives rose steadily from 49 per cent in 1989 to 79 per cent in 1993.

In addition to the 157 investment incentive schemes, 101 other programmes were reported, particularly in the areas of regional policy, environmental protection, exports and foreign trade, and energy efficiency, all of which promote investment as a secondary policy objective. Overall, 796 programmes in the database have investment or specialised investment as an economic cost which is supported; they absorbed 37 per cent of total public support on average in the years from 1989 to 1993.

For these reasons, an analysis of general investment incentives alone does not add much insight into the role of public efforts to promote investment. Viewed more broadly in the light of secondary policy objectives and economic activities supported, physical and intangible investments – which are the major drivers of economic growth and job creation – appear to receive considerable public support (see Part V).

F. SUPPORT PROGRAMMES FOR SMES

The main aim of almost one-quarter of all support programmes reported was assistance to SMEs. Furthermore, when designated secondary policy objectives are examined, an additional 198 programmes support SMEs. Thus, more than one-third of all programmes included in the database have been designed to assist SMEs.

All participating countries reported SME programmes. Two countries reported one programme each, while two others reported a combined total of 234, accounting for two-thirds of all programmes reported in this area.

Of the 364 programmes for SMEs, slightly less than 10 per cent were designed exclusively to finance the provision or acquisition of advisory and consultancy services. The others addressed the area of SME financing, offering soft loans and guarantees for start-ups, equipment modernisation and/or R&D

and technological innovation. Job creation and training, as well as export promotion, are specified in only a small number of programmes. If the 234 programmes reported by two countries (many of which are administered at the sub-central level, see below) are not taken into account, the results are somewhat different. In this case, 14 per cent exclusively support consultancy and advisory services, while an additional 2 per cent support these activities through more general programmes. It is worth noting that four countries dedicated more than 50 per cent of their support programmes to small and medium-sized enterprises.

In terms of NCG, SME support was US$5.4 billion in 1989 and US$6.0 billion in 1990 before dropping back to US$3.7 billion in 1993 (Table 9). The sharp decline of support after 1990 results from the reduction, amounting to US$1.3 billion, in the expenditure of one important SME programme. In terms of expenditure, support to SMEs ranked fourth at the beginning and at the end of the period. Ten programmes account for approximately 50 per cent of the total NCG recorded under this policy objective. The evolution in the expenditure for some of these large programmes can largely explain the overall trend in support to SMEs.

Moreover, the profile of support to SMEs has the following characteristics:

– sub-central levels of government (sub-central, regional and local) administer 51 per cent of SME support programmes reported, and a further 10 per cent are managed jointly by central and sub-central authorities;

– tax concessions, loans and grants are the principal financing instruments for delivering support to SMEs; and

– concerning the specific economic activities supported by SME programmes, investment costs initially attracted a large share of overall support.

G. SUPPORT TO EXPORTS AND FOREIGN TRADE

Programmes intended to promote exports and international trade continued to play a significant role in national support policies of OECD Member countries and the Slovak Republic. Mexico does not provide financial assistance under this policy objective.

Net expenditure started out at US$6.9 billion in 1989, reached a peak in 1991 with US$10.0 billion, and thereafter declined to US$7.3 billion in 1993. Total guarantee and insurance claims paid in 1991 and 1992, and loan write-offs in these years were much higher than in the other years of the reporting period. This is the main reason behind the widely fluctuating figures. Support to exports and foreign trade as a share of total support declined from 18.9 per cent in 1989 to 16.6 per cent in 1993.

After regional policies, support to exports and foreign trade was the second most important area of support to manufacturing industry from 1989 to 1991, and only in 1992 and 1993 conceded second place to R&D and technological innovation. In terms of programmes reported, support to exports and foreign trade stands sixth, with 120 programmes (see Table 10). Average expenditure per programme varied between US$58 million (1989) and US$113 million (1991), higher than the average values for any other policy objective. The profile of support to exports and foreign trade is particularly biased in terms of central programmes (66 per cent*), new and ongoing programmes (77 per cent*), and programmes to support production costs (64 per cent*).

Some 43 per cent of the programmes reported provide indirect assistance to manufacturing industry's export activities in the form of support to:

– export market penetration;

– promotional activities in foreign markets;

– participation of firms at trade fairs abroad; and

– inward and outward trade missions.

* Only programmes with a classified managing structure were taken into account.

Net expenditure on these programmes ranged between US$249 million (1991) and US$532 million (1989) (Table 11).

Table 11. **Main categories of support to exports and foreign trade**

Millions of US$

	1989	1990	1991	1992	1993
Indirect assistance	532	404	249	278	267
Export credits and guarantees	3 983	5 912	6 045	3 872	5 367

Six per cent of programmes focused on export financing and export credit guarantees. With a net expenditure varying between US$3 872 million (1992) and US$6 045 million (1991), such programmes provide considerable support to manufacturers. It should be noted that the figures in Table 11 concerning export credits and guarantees do not include expenditure on such schemes in Canada.

Support to export credits and export credit guarantees appears to be one of the main channels for providing public finance to manufacturing industry. Given the financial volumes involved, and their uneven distribution among OECD Member countries, the issue of export credits and export credit guarantees may merit further attention in post-Uruguay trade policies.

Besides export promotion, export credits and export credit guarantees, a few schemes provide assistance in case of exchange rate problems, for direct promotion of export activities of manufacturing firms, to attract foreign direct investment and to encourage outward economic activities.

By decision of the Working Party, the reporting on tied-aid measures, which link the granting of development aid to exports of (domestically) manufactured goods, was withdrawn in the course of the peer review. Only three countries had reported on this issue.

H. SUPPORT TO ENERGY EFFICIENCY

Nineteen countries and the Commission of the European Communities reported 64 support programmes designed to promote the development of energy-efficient technologies and their diffusion to potential users in industry and to encourage the use of renewable and/or cleaner energy sources. With regard to the programmes reported, support for energy efficiency ranked eighth out of nine policy objectives. After a steady upward trend in net expenditure from 1989 to 1993, this policy area represented 3.3 per cent of total public support in 1993, corresponding to the eighth position.

Strong links between energy efficiency measures, on the one hand, and environmental protection measures on the other, along with the new policy paradigm of sustainable development, which entered the scene during the period under review, may have been the driving forces behind the increase in support to energy efficiency. It should be emphasized that, with regard to tax concessions, the reporting requirements only referred to concessions relating to the corporate and income taxation system. This decision, taken because of large differences in energy taxation in OECD Member countries, explains the considerable under-reporting of support in this policy area.

A particular feature of public support for energy efficiency is the very high concentration of programmes that support investment costs, so that support to energy efficiency might qualify as a special investment aid.

Almost one-third of the programmes reported aim at improving energy efficiency through more efficient production technologies and the use of cleaner or renewable energy inputs.

I. SUPPORT TO ENVIRONMENTAL PROTECTION

Public support programmes, aimed at lowering harmful environmental effects as a result of certain industrial activities, were applied in 16 countries and also at the level of the Commission of the European Communities.

Support under the policy objective of environment protection stood in ninth place with less than 1 per cent of total NCG in each year of the reporting period. It grew from US$257 million in 1989 to US$365 million in 1993. In terms of the programmes reported (69), it was the seventh most important area of public support (Table 13).

Of the 69 programmes reported, ten dealt with cleaning air, eight with waste treatment problems, including recycling, four with wastewater problems and one with soil contamination.

Among these 69 programmes, 12 could be identified as programmes supporting clean technologies, while six clearly supported ''end-of-the-pipe'' technologies. Among the first group, eight were new programmes, a clear sign that environmental policies are shifting towards more integrated process approaches.

THE MONITORING OF FINANCIAL ISSUES

A. ECONOMIC ACTIVITIES SUPPORTED

The monitoring of industrial support policies calls for a precise understanding of the different economic activities supported. For this purpose, total public support was grouped into six categories. Table 14 presents an aggregate picture of the distribution of support among these six categories of economic activities.

Investment support represents the bulk of total reported expenditure (34.1 per cent in 1993) and programmes (34 per cent). As the 1992 and 1993 figures for certain large-expenditure programmes are not available, it is likely that, in this category, the increasing high-level trends of 1990 and 1991 would have been maintained in the subsequent years. The share in total programmes reported compared with the share in total expenditure points to a high average level of support for investment support programmes.

Support to non-profit organisations (*e.g.* chambers of commerce, trade associations, professional technical centres) gravitated around US$300 million per year between 1989 and 1993. Representing on average only 0.6 per cent of total support, this remains a low-level category of support. Support to R&D through non-profit organisations was also reported in the Complementary Reporting Format II under intermediary R&D institutions.

Table 14. **Reported expenditure and programmes by economic activities supported**

NCG in millions of US$

	Programmes (% share)	NCG current US$ million (% share)				
		1989	1990	1991	1992	1993
Economic activities supported						
Investment	498 *(33.7%)*	11 265.9 *(30.5%)*	12 916.6 *(31.0%)*	15 295.4 *(33.5%)*	15 301.6 *(34.7%)*	14 912.1 *(34.1%)*
Specialised investment	288 *(19.5%)*	1 960.0 *(5.3%)*	2 692.0 *(6.5%)*	2 854.5 *(6.3%)*	2 727.8 *(6.2%)*	2 232.8 *(5.1%)*
Production	272 *(18.4%)*	8 452.8 *(22.9%)*	9 165.1 *(22.0%)*	10 417.7 *(22.8%)*	7 889.9 *(17.9%)*	10 811.0 *(24.7%)*
R&D	288 *(19.5%)*	6 538.2 *(17.7%)*	7 744.7 *(18.6%)*	8 551.9 *(18.7%)*	9 201.7 *(20.9%)*	7 939.5 *(18.2%)*
Non-profit institutions	39 *(2.6%)*	266.9 *(0.7%)*	326.1 *(0.8%)*	221.3 *(0.5%)*	278.3 *(0.6%)*	259.7 *(0.6%)*
Transportation	3 *(0.2%)*	145.3 *(0.4%)*	154.6 *(0.4%)*	155.4 *(0.3%)*	125.7 *(0.3%)*	87.2 *(0.2%)*
Unclassified	91 *(6.2%)*	8 325.7 *(22.5%)*	8 620.9 *(20.7%)*	8 169.7 *(17.9%)*	8 582.7 *(19.5%)*	7 493.3 *(17.1%)*
Total	1 479	36 955.0	41 619.9	45 665.9	44 107.6	43 735.5

Source: OECD Industrial Support Database (February 1998).

Support to production (including export promotion, working capital and labour costs) plays an increasingly important role in OECD support programmes. Total reported expenditure for this category rose from US$8.5 billion in 1989 to US$10.8 billion in 1993, while its relative share remained stable at just under 25 per cent.

Support to R&D activities peaked at US$9.2 billion in 1992, then dropped to US$7.9 billion in 1993. Between 1989 and 1993 the annual average of their relative share was 18.8 per cent. Support to R&D activities was the third most important category of economic activities supported in each year of the reporting period, ranking behind investment support and support to production. In 1992, support to R&D activities exceeded, exceptionally, support to production.

Support to specialised investment (costs of purchase of automation equipment, engineering studies, advertising costs, etc.) gravitated around US$2.7 billion a year in the period under review, with the exception of 1989 and 1993 when expenditure was US$2.0 billion and US$2.2 billion respectively. While it is neither a high-profile nor a low-profile support activity, representing a relative share of almost 6 per cent on average, support to specialised investment is nevertheless an important category, as reflected in the large number of support programmes (288).

Support to transportation, finally, is a negligible category, representing only three programmes and a net expenditure that varied between US$87 million and US$155 million in the period from 1989 to 1993.

Programmes to support firms with weak past performance were classified by reporting countries under the heading of support to production. This grouping is now considered to be inaccurate, as support to production is normally related to current activities and does not cover debt forgiveness or public support to compensate for firms' losses. The latter applies particularly to countries in transition, and in particular to state-owned enterprises in former communist countries.

This breakdown helps show that supported economic activities have three temporal aspects:

i) support of past performance, which does not appear as a separate category in the reporting;

ii) support of current activities, *i.e.* production, non-profit institutions and transportation; and

iii) support of future performance, *i.e.* R&D, investment and specialised investment.

The figures suggest that governments are focusing on strengthening the future competitiveness of firms rather than on overcoming their present or past competition problems. In 1993, the latter category represented 70 per cent of support and the former only 30 per cent of classified programmes.

Supporting economic activities may alter market signals. Support to production changes the operating profits of the respective manufacturing sector; support to investment reduces general capital costs; support to specialised investment reduces costs of acquisition of special types of assets; R&D support and support from non-profit organisations may have various short- and long-term effects, on the technical strength and competitiveness of companies; and support to transportation aims to counterbalance the handicap of long-distance transportation. Support programmes in the areas of sectoral policies, crisis aid, and export and trade which provide support to production costs, are very likely to have direct and immediate trade- or competition-distorting impacts. One hundred and sixty programmes were reported under these three policy objective areas, representing net expenditure of US$9.8 billion in 1993.

B. FINANCING INSTRUMENTS OF PUBLIC SUPPORT

The financing instrument chosen strongly depends on the purpose of support and the nature of the programmes. In some cases, the inherent logic of a measure may exclude financing through certain instruments, while in other cases, certain instruments are not suitable. However, for a wide range of applications, financing instruments are substitutable. Governments' choices in the manner of financing their support programmes are shown in Table 15.

Table 15. **Reported expenditure and programmes by financing instrument**

NCG in millions of US$

	Programmes (% share)	NCG current US$ million (% share)				
		1989	1990	1991	1992	1993
Financing instrument						
Regular grant	640 *(43.3%)*	9 097.2 *(24.6%)*	10 045.8 *(24.1%)*	13 232.4 *(29.0%)*	14 857.4 *(33.7%)*	16 554.8 *(37.9%)*
Reimbursable grant	51 *(3.5%)*	1 471.4 *(4.0%)*	1 766.6 *(4.2%)*	1 244.7 *(2.7%)*	1 300.4 *(3.0%)*	1 097.9 *(2.5%)*
Interest rate subsidy	78 *(5.3%)*	1 845.6 *(5.0%)*	1 959.9 *(4.7%)*	1 628.4 *(3.6%)*	1 638.2 *(3.7%)*	1 016.6 *(2.3%)*
Regular loan	233 *(15.8%)*	1 118.4 *(3.0%)*	2 150.8 *(5.2%)*	1 695.2 *(3.7%)*	1 524.6 *(3.5%)*	2 288.5 *(5.2%)*
Conditional loan	35 *(2.4%)*	89.6 *(0.2%)*	150.4 *(0.4%)*	135.5 *(0.3%)*	436.3 *(1.0%)*	93.2 *(0.2%)*
Guarantee	88 *(6.0%)*	3 767.3 *(10.2%)*	5 132.6 *(12.3%)*	5 818.7 *(12.7%)*	3 700.3 *(8.4%)*	4 361.9 *(10.0%)*
Equity capital	21 *(1.4%)*	564.4 *(1.5%)*	624.3 *(1.5%)*	1 361.7 *(3.0%)*	1 401.4 *(3.2%)*	519.2 *(1.2%)*
Tax concession	148 *(10.0%)*	13 076.6 *(35.4%)*	13 879.4 *(33.4%)*	14 673.6 *(32.1%)*	13 421.6 *(30.4%)*	11 924.4 *(27.3%)*
Mixed	169 *(11.4%)*	5 826.3 *(15.8%)*	5 658.4 *(13.6%)*	5 686.7 *(12.5%)*	5 597.9 *(12.7%)*	5 646.2 *(12.9%)*
Unclassified	16 *(1.1%)*	98.3 *(0.3%)*	251.8 *(0.6%)*	188.9 *(0.4%)*	229.4 *(0.5%)*	232.7 *(0.5%)*
Total	1 479	36 955.0	41 619.9	45 665.9	44 107.6	43 735.5

Source: OECD Industrial Support Database (February 1998).

Table 15 should be interpreted with particular care. In many instances, sub-central reporting contains information on the financing instrument, but not on the expenditure. Tax concession programmes, at the central and sub-central level, often do not provide expenditure figures. Countries differed with respect to the reporting of equity capital; often, government interventions at the level of the single publicly owned firm were not shown.

Grants, tax concessions and guarantees were the major financial instruments used to channel support to manufacturing industry and account for 74 per cent of expenditures reported for 1993. Equity capital, an important financing channel in terms of expenditure at the beginning of the reporting period, and interest rate subsidies, play a smaller role in terms of programmes and expenditures. Loans are the second most important financing instrument in terms of programmes even though expenditure through this instrument was only 5 per cent in 1993 The high rank held by programmes using more than one financing instrument is mainly due to large consolidated programmes.

A striking feature of the manner of financing public support is the predominance of grants, although this is somewhat exaggerated, owing to the relative under-reporting of NCG figures concerning all other instruments. As grant schemes normally have the highest NCG/GGBE ratio, this situation merits further consideration.

Regarding overall trends in programme financing, two developments should be highlighted, only one of which is apparent from the table:

– the growing importance of grants;

– the upward trend, in both relative and absolute terms, of tax concessions as financing instruments (the 1992 and 1993 figures do not fully reflect actual support).

The 691 grant programmes reported are composed of 640 regular grants and 51 reimbursable grants. The latter are generally government grants for R&D and product innovation, to be reimbursed by the beneficiaries if the project is commercially successful.

Given the number of programmes for which such reimbursements were reported and the respective amounts, more balanced risk- and cost-sharing between governments and manufacturing industry does not appear to have materialised through the reporting period (see Table 15). In 1993, grants representing 47 per cent of programmes reported and 40 per cent of net expenditure were given, especially for support schemes that target selected sectors, enterprises or projects for which government departments make eligibility decisions. A large number of sectoral, crisis aid, R&D and regional schemes are supported on this basis.

The 268 loan programmes comprise 233 regular and 35 conditional loan programmes. While regular loans are to be reimbursed according to a pre-defined schedule, conditional loans are to be reimbursed only if the project financed with the loan is commercially successful. If the project fails, the loan becomes a grant.

In terms of the programmes financed, loans are the second most important financing instrument with 18 per cent of all programmes. Their net cost to government increased from US$1.2 billion in 1989 to US$2.4 billion in 1993. The funds raised with such net expenditure remain a major economic factor (Table 16).

Table 16. **Reported new and outstanding official loans**

Billions of US$

	1989	1990	1991	1992	1993
New loans	33.48	34.10	38.58	48.99	59.97
Outstanding loans[1]	86.7	93.7	106.1	123.8	151.4

1. At year end.

Loans play a particular role in the short-term financing of export credits and in the long-term financing of investment projects. Extended by government agencies and other intermediary institutions, they serve as a financing instrument for public support in almost every country.

The 148 tax concession programmes involve a variety of measures that reduce the tax burden of firms. Under this heading, tax allowance schemes, special depreciation schemes and tax deferral schemes were reported most frequently.

Despite sizeable under-reporting, it appears that tax expenditures are a major channel for financing support in all OECD countries. Support increased from US$13.1 billion in 1989 to US$14.7 billion in 1991, then fell to US$11.9 billion in 1993, although the decline is attributable to reporting gaps. These figures correspond to a decline in percentage share in total financing from 35 per cent in 1989 to 27 per cent in 1993. This evolution was not affected by major changes in tax systems, which had been implemented in most countries in the 1980s. Only the Czech Republic, Mexico, Norway and the Slovak Republic had tax reforms on the agenda in the course of this reporting period, while Ireland and Spain introduced tariff changes.

The reporting gives no clear answer to the question of whether tax concessions play a particularly significant role in countries with high business tax rates. Tax concessions are used in all policy areas.

OECD countries reported 88 programmes using government credit guarantees as financing instruments; these represented almost 6 per cent of total financing instruments. Net expenditure for government credit guarantees increased from US$3.8 billion in 1989 to US$4.4 billion in 1993 and peaked strongly in 1991, when reported NCG reached US$5.8 billion. As mentioned above, this was due to extraordinary guarantee and insurance claims paid on export credit guarantees and loan-write offs for export credits in this year. The NCG share of guarantees in total financing instruments remained at 10 per cent both in 1989 and 1993. Managed almost solely by public or even private intermediary institutions, government credit guarantees are widely used to cover export credit risk, SME credit programmes, technology-related loans and loans for restructuring former socialist enterprises. Most countries use this financing instrument.

Guarantees result in an NCG only if a guaranteed loan defaults. Many guarantee-financed support programmes showed negative NCG values; this means that the fees and recoveries received more than outweighed the claims paid in a given year of the reporting period. The volume of economic activities supported through guarantees are a multiple of the NCG involved. The average share of NCG in outstanding guarantees was around 2 per cent over the period under review.

Table 17. **New guarantees and outstanding guarantees**

Billions of US$

	1989	1990	1991	1992	1993
New guarantees	192	216	239	241	256
Outstanding guarantees	211	236	261	274	301

Twenty-one programmes were reported for equity capital infusions to government-owned manufacturing enterprises. In the past, such capital infusions served as a principal direct financing instrument. In the period under review, the NCG values of publicly owned equity capital infusions fell from US$564 million in 1989 to US$519 million in 1993. As a result, the relative share of this financing instrument in total financing decreased slightly from 1.5 to 1.2 per cent. The status of new equity capital infusions and nominal value of equity capital is shown in Table 18.

Table 18. **New equity capital infusions and nominal value of equity capital,[1] 1989-93**

Billions of US$

	1989	1990	1991	1992	1993
New equity capital infusion	2.3	1.2	3.0	0.6	3.2
Nominal values	3.8	4.4	4.6	4.1	5.7

1. At year end.

The fact that almost 25 per cent of the programmes reported expired in the course of the reporting period underlines the declining role of equity capital infusions.

As a result of continuing privatisation policies in OECD Member countries, the number of governments owning manufacturing firms or majority shares in such firms continued to decline. Only 13 of 26 participating countries channelled public flows into manufacturing firms by means of equity capital infusions.

Certain Member countries, in their reporting, stressed the ambiguous nature of publicly owned equity capital. They specifically mentioned that governments' attitudes do not differ from those of private shareholders. In some programmes, the dividends received and the impact of obviously successful share-selling operations, which resulted in negative NCG values in some years reported, point in this direction. In contrast, the monitoring of some equity capital operations shows the mere supportive purpose of such interventions.

For 78 programmes, interest rate subsidies were used as financing instruments. Financing via interest rate subsidies decreased from US$1.8 billion in 1989 to US$1.0 billion in 1993, with a peak of US$1.9 billion in 1990. The relative share of this financing instrument fell from 5.0 per cent in 1989 to 2.3 per cent in 1993. Interest rate subsidies were identified separately from grants, although there is a grant element inherent in them, in order to show the funding they raise through the related loans. Only 11 programmes provided information in a way that would have allowed for a separate presentation of these two elements, showing that the funds raised are a multiple of the NCG reported. Interest rate subsidies are used mainly in the financing of SME programmes (24), followed by programmes in the areas of investment (13), and exports and trade (10).

The policy implications inherent in the selection of a financing instrument for a support programme are far-reaching. By choosing a financing instrument, governments largely determine:

– the incentives for the beneficiaries;

– the gross and net expenditure involved for public budgets; and

– the funds raised, directly or collectively, with private co-financing.

From the perspective of governments, it is very important either to raise a maximum of gross expenditure for a given net expenditure or to minimise the net expenditure for a given gross expenditure by simultaneously placing incentives for beneficiaries at a level high enough to trigger the private sector response necessary to pursue the programme's policy objective.

PUBLIC AND DEFENCE-RELATED PROCUREMENT

A. PUBLIC PROCUREMENT

There is as yet no agreed methodology for measuring the support element in public and defence procurement. Uncertainties remain as to the role of procurement as an instrument of industrial policy and, more specifically, as a tool of support to manufacturing industry.

In response to the qualitative and quantitative information requested in Complementary Reporting Format III, Public Procurement, of the questionnaire, 23 Member countries and the Commission reported on established procurement practices. Because procurement regulations were implemented at the very end of the reporting period in the Czech Republic and the Slovak Republic and only became effective in 1994, there is no reporting for these countries.

Analysis of the qualitative replies demonstrates that the principles of open and fair competition for the award of public contracts for manufacturing products, including non-discrimination with respect to foreign suppliers and products, are reasonably well established throughout the OECD area. With respect to supranational regulations for public procurement, in particular the new Government Procurement Code in the WTO and the relevant EEC directives, the legal basis of public procurement procedures converged considerably towards the end of the reporting period. In the regulations of almost all Member countries, disparities have disappeared with respect to public notice of future procurement, minimum time for submission of bids, limits for sole sourcing, limits for listing qualified suppliers, and communication of the reasons for non-selection. Due to differing philosophies regarding *ex post* transparency on market conduct, practices for making public the prices included in winning bids vary. Some countries publish such prices regularly, some only by request, and some do not provide such information at all.

Only two countries reported regulations allowing discrimination against foreign suppliers under special conditions (absence of bilateral market access agreements; special laws determining the allowable level of discrimination), and one noted that the law in question had never been applied. Preferential treatment schemes appear to exist only in two countries: one country prefers suppliers from disadvantaged regions but only gives preference over other domestic bidders; the other applies preferential set-aside schemes for SMEs, small disadvantaged businesses, women-owned small businesses, blind or severely handicapped people and prisoners. Concerning the procurement of goods falling under national security regulations, the situation is reversed: only one Member country has no special provisions; all others have less open procedures and restrict bidding invitations to selected suppliers.

Technical standards requested in procurement notices or tender documents are international standards, and specifications are defined in terms of performance rather than of design or descriptive characteristics. This underlines the fact that the principles of open and fair competition are also established for the technical aspects of procurement regulations.

It is difficult to know to what extent all of these regulations are respected in day-to-day procurement procedures and decisions and how large the support element for procurement deviating from such rules may be.

Given the economic importance of public procurement, it is evident that, whatever the order of magnitude of this support element, the resulting amounts may easily be a sizeable percentage of total government support.

At this stage, the quantitative information on the volumes of procurement at the central and sub-central levels of Member countries is difficult to analyse. The nature of the quantitative information requested would not have allowed verification of the qualitative information reported. Moreover, the figures collected are so disparate – in terms of years covered, government levels, contracts and products procured – that it is impossible to elicit even some general trends from this information. In addition to the countries that did not submit quantitative information (Iceland, Mexico), some countries provided figures for only one or two years; certain countries had no data for 1993, and others did not report on sub-central procurement. Many countries appear to have reported on defence procurement, for which specific reporting requirements exist, and the procurement of services and buildings, while others only reported on the procurement contracts falling under the reporting requirements of the GATT Procurement Code.

It was not possible to overcome these difficulties during the peer review and it would only have been possible to make country-specific presentations of the quantitative information and its coverage.

B. DEFENCE-RELATED PROCUREMENT

The reporting on defence-related procurement is clearer and more homogenous. Table 19 confirms the economic importance of defence-related procurement in OECD Member countries. The figures, which are only available for 17 countries, carry some interesting messages. First, the expenditure reported over the period under review never dropped below US$207.3 billion in any year. It is estimated that the actual defence procurement expenditures are of the order of US$250 billion a year. Despite the historic geopolitical changes that occurred during the period under review, defence procurement expenditure, contrary to expectations, remained almost stable in the OECD area. Second, one component of defence procurement expenditure, defence R&D, even shows a slight increase in current values.

Table 19. **Defence procurement expenditure**[1]

Billions of US$

	1989	1990	1991	1992	1993
Goods	169.1	178.2	188.7	168.9	166.9
R&D	28.9	30.0	28.4	29.0	29.5
Total[2, 3]	209.7	221.4	234.3	210.2	207.3

1. The reporting covers defence procurement expenditure reported by Australia, Austria, Belgium, Canada (for 1991 only), Denmark, Finland, Germany, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States.
2. Total also includes reported expenditure from countries that did not provide a breakdown by Goods and R&D.
3. Figures for Turkey could not be included as only shares as a percentage of Ministry of Defence Budget were reported.

In the breakdown of procurement of defence equipment by beneficiary sectors, which was provided by only a few countries, military hardware such as aerospace equipment, electronics and telecommunications equipment, weapons and explosives, and shipbuilding, account for the largest share of total equipment expenditure.

Regarding the breakdown of defence-related R&D contracts, aerospace, electronics and telecommunications play an even more important relative role than in equipment procurement.

Defence equipment and defence R&D contracts can give supplying firms a competitive advantage in various ways. In particular, spillover effects of defence research and dual-use possibilities of some equipment procured for defence purposes can strengthen the competitiveness of supplying firms in technological, financial and commercial terms.

The magnitude of the support channelled through defence procurement to manufacturing industry, given the figures in Table 20, may be large even if the support element only represents a very small percentage. Moreover, the strong concentration of such support in a few selected industries remains an issue for competition, trade and industrial policy.

Table 20. **Contracts awarded by and procurement of space agencies**

Millions of US$

	1989[1]	1990	1991	1992	1993
Contribution	4 885.4	5 883.7	5 624.6	6 497.5	6 383.5

1. The figures for Denmark were not available for 1989.

C. SPACE AGENCIES

During the peer review, a discussion took place on the nature of financial contributions to the European Space Agency (ESA). Certain countries made it very clear that they do not regard such contributions as a subsidy, but would, in the spirit of co-operation and transparency, report quantitative and qualitative information regarding ESA and national space agencies.

The ESA statutes guarantee, at least in terms of overall return coefficients, that a sum equivalent to national contributions to its Scientific Programme will be contracted out to national manufacturers or R&D institutions. Thus, the return coefficient is, in effect, an instrument for supporting national manufacturers. As it would be misleading to classify ESA contributions as grants or to include them under sectoral policy, it was decided to report on the values contracted by the ESA under a special section of the procurement chapter. R&D contracts awarded to the space industry have also been included here.

Table 20 shows the reported total amounts which were contracted out by: *i)* European space agencies; and *ii)* those procured and contracted by agencies in Australia, Canada, Japan and the United States under national space programmes.

Part III

COUNTRY-SPECIFIC ANALYSIS OF THE DATABASE

This part contains the analysis of support policies in 17 OECD Member countries and at the level of the Commission of the European Communities. Each monograph follows a common structure agreed by the Working Party on Public Support to Industry.

All the monographs were approved by the respective Member country or in the case of the monograph for the European Communities, by the Commission. They were presented to the Working Party on Public Support to Industry for information prior to their publication.

As participation in this activity on country-specific analysis was voluntary, a complete set of monographs for all the countries which participated in Phase III of the reporting project, is not provided.

AUSTRIA

AUSTRIA 1993

GDP: million Sch (current prices)	1 897 146
Manufacturing GDP: million Sch (current prices)	498 523
Unemployment rate (standardised rate)	6.8%
Corporate tax rate	30%
Government borrowing rate	6.64%
Civil procurement: million Sch	262.6
Military procurement: million Sch	6.599
Support to labour and training: million Sch	292.95
R&D contracts: million Sch	116
Financial support to R&D institutions: million Sch	266.6
Public space programmes: million Sch	191
– *of which:* Austrian contribution to the European Space Agency (ESA): million Sch	191

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN AUSTRIA

During the period from 1989 to 1993 policies in Austria were largely determined by its envisaged accession to the European Economic Area (EEA), candidacy for EU membership, rapidly growing globalisation of economic activities, and, more specifically, the intensified competitive pressure on Austrian industry from the central and eastern European countries. Policies were adapted to EEA and EC competition rules and to the requirements of future co-operation in the context of EC structural funds, and a horizontal policy was pursued, aiming at the improvement of the business environment and the competitiveness of Austrian firms.

Concerning the improvement of the business environment, a general "fitness" programme for Austrian businesses was launched to assist the private sector in its strategic orientation towards the new European challenge. The tax reform of 1989 significantly reduced corporate tax rates, which are now among the lowest within the OECD. Regulatory reforms were introduced with the aim of simplifying and accelerating approval procedures for new industrial sites. Finally, efforts to attract foreign direct investment were intensified.

In the industry area, focused attention on structural adjustment issues has mainly concentrated on shifting investment promotion towards innovation and intangibles, and attempting to direct assistance towards strengthening the international capabilities of small firms. Several aid schemes for the promotion of the internationalisation of SMEs supported foreign investment projects, joint ventures, and other such relevant expenditures on the part of Austrian SMEs for projects abroad which contribute to improving the competitive position of SMEs in Austria.

Due to the federal structure of the Austrian State, public support is provided both at the federal and the *Länder* level. Even the communes play a role in the promotion of economic activities in the business sector. Therefore, the national support system in Austria is particularly complex, requiring considerable co-ordination efforts between and within the various levels, in order to ensure a consistent functioning of all the elements of the system.

II. THE STRUCTURE OF PUBLIC SUPPORT IN AUSTRIA

In Austria, public support to manufacturing industry in current prices consistently increased in the 1989-93 period. Public support which was Sch 6 billion in 1989 more than doubled in 1993, resulting in a net expenditure of Sch 12.2 billion. This strong increase in nominal terms is mainly due to the sharp upward trend of crisis aid from Sch 300 million in 1991 to Sch 3 billion in 1993. Without crisis aid the rise of public support would have been in the order of 50 per cent. It should be stressed that the figures reported under crisis aid do not reflect any active support to state-owned enterprises in the period under review. They largely represent financing costs of support to these enterprises in the years before this period. In real terms, public support grew by 77 per cent from 1989 to 1993. In all, 96 programmes were reported by the Austrian Government (Annex 1).

Austria is one of 15 OECD Member countries in which public support increased when 1989 and 1993 levels are compared. The manufacturing support rate which measures public support to manufacturing as a share of manufacturing GDP was above the OECD average in every year of the reporting period (Table 21). However, when drawing conclusions from these figures, Austria's very complete reporting on public support to manufacturing industry both at the federal and sub-central level should be borne in mind, as well as the above-mentioned problems of calculating expenditure to industry under the policy objective of crisis aid.

Table 21. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million Sch				
	1989	1990	1991	1992	1993
Nominal NCG	6 017	8 131	10 001	10 700	12 243
Real NCG	6 017	7 871	9 312	9 562	10 554
Manufacturing support rate (%)	1.39	1.75	2.05	2.12	2.46
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*

Source: OECD Industrial Support Database (February 1998).

The strong increase in public support is the result of enhanced spending particularly under the policy objectives of crisis aid, R&D, investment promotion, and exports and foreign trade. These policy areas, at the same time, took the lion's share of net expenditure, representing 77.5 per cent of total support in 1989 and 87.3 per cent in 1993. The priorities of national support policies lay in investment promotion, exports and foreign trade, and R&D. While the overall analysis of public support in the OECD area points to a very prominent role for regional development in net spending throughout the reporting period; this was not the case in federally structured Austria, where such support declined, amounting to only 3.9 per cent of total support in 1993. This apparent disparity can be attributed to the definition of ''regional development'' schemes in Austria. In fact, only a small number of programmes are explicitly termed ''regional development'' schemes. In reality, many environmental or investment aid schemes can be regarded as regional development aid schemes.

The high levels of support shown under the policy objective of crisis aid in 1991 to 1993 were a result of financial support provided in the years prior to 1989-93 and do not correspond to actual payments to state-owned enterprises in this period. As privatisation remains a priority of industrial policy in Austria, financial support to state-owned manufacturing companies should in the future – if it exists at all – be low and decreasing.

Under the policy objective of R&D and technological innovation the focus clearly lies in the acquisition of R&D equipment and the appropriation of new technologies; their share in direct R&D support accounted for more than 90 per cent throughout the reporting period. The direct promotion of specific technologies has not been an issue in Austria's support to industrial R&D efforts.

Table 22. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: Million Sch				
		1989	1990	1991	1992	1993
Sectoral	2	126.2	98.7	110.7	160	164
% share	*2%*	*2.1*	*1.2*	*1.1*	*1.5*	*1.3*
Crisis aid	4	9	11.2	291.5[1]	999.2[1]	3 004.6[1]
% share	*4%*	*0.1*	*0.1*	*2.9*	*9.3*	*24.5*
R&D	18	1 069	1 448	1 468	1 509	1 668
% share	*19%*	*17.8*	*17.8*	*14.7*	*14.1*	*13.6*
Regional	18	540	560	561	568	479
% share	*19%*	*9.0*	*6.9*	*5.6*	*5.3*	*3.9*
Investment	22	3 264	3 592	3 857	3 863	4 362
% share	*23%*	*54.2*	*44.2*	*38.6*	*36.1*	*35.6*
SMEs	21	404.3	414.2	399.1	376.6	244.7
% share	*22%*	*6.7*	*5.1*	*4.0*	*3.5*	*2.0*
Export	2	322	1 602	2 634	2 563	1 666
% share	*2%*	*5.4*	*19.7*	*26.3*	*24.0*	*13.6*
Energy	1	0	0	0.4	1.4	1.1
% share	*1%*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Environment	8	283.1	405.1	680.1	660.0	654.3
% share	*8%*	*4.7*	*5.0*	*6.8*	*6.2*	*5.3*
Total	96	6 017	8 131	1 0001	1 0700	1 2243

1. Of which support to state-owned manufacturers in million Sch:
1991 : 279
1992 : 981
1993 : 2 987

As in other OECD countries, the net cost of export credit and export credit guarantee schemes diminished after 1992 due to a better overall performance of such schemes.

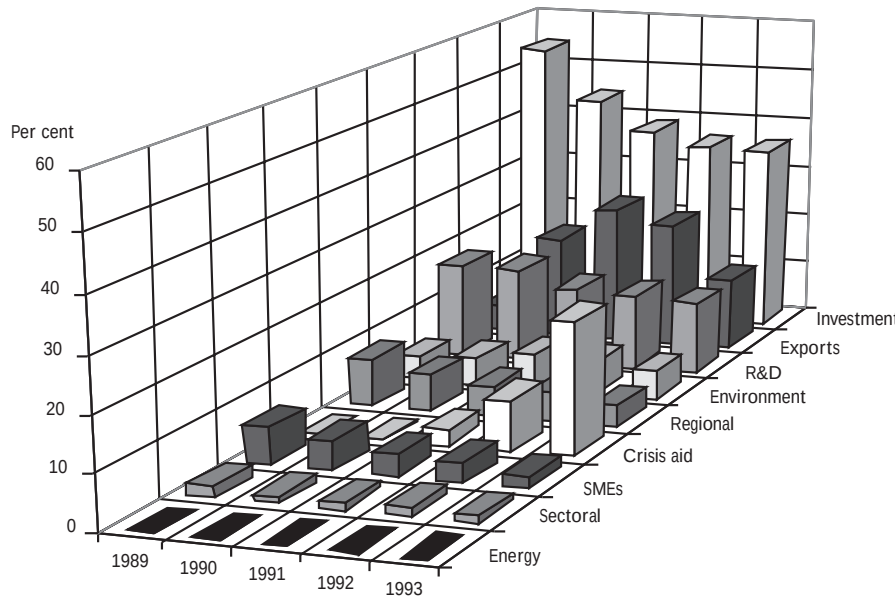
With only 20 per cent of all programmes terminating within the five-year period, and approximately 60 per cent having a duration of five years or more, turnover in the stock of programmes is close to the OECD average. As was stated in the report to Ministers in 1996, programme turnover does not appear to be very dynamic.

On the basis of a *de jure* consideration, 2 per cent of the programmes reported limit access to public support to national enterprises. In this respect, the opening of support policies to domestically established, foreign-owned firms in Austria is more advanced than the OECD average.

Mixed instrument financing of support programmes emerged as the most important category of financing in Austria over the period 1989-93. In contrast to most other OECD countries, financing through tax concessions involved, on average, more than twice the expenditure of programmes financed by grants. Moreover, the significance of guarantee schemes in Austria is clearly above the OECD average.

More than half of the programmes reported are managed and financed by the governments of the nine *Länder*. Combined with the ten schemes that are jointly managed by federal and sub-central authorities, these programmes represent two-thirds of the total. However, in expenditure terms, they represent, on average, only 9 per cent of total support to manufacturing industry in Austria. The share of sub-central support declined towards the end of the period under review. Centrally managed programmes and programmes managed by public or private institutions, which to a large extent are also managed centrally, accounted for almost 80 per cent of total support.

◆ Graph 3. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 23. **Reported expenditure by financing instrument**

Instrument	Nominal NCG: million Sch				
	1989	1990	1991	1992	1993
Regular grant	790	925	1 116	965	1 500
% share	*13*	*11*	*11*	*9*	*12*
Interest rate subsidy	743	714	733	687	619
% share	*12*	*9*	*7*	*6*	*5*
Regular loan	627	768	721	776	436
% share	*10*	*9*	*7*	*7*	*4*
Guarantee	14	1 232	2 284	2 317	1 418
% share	*0*	*15*	*23*	*22*	*12*
Equity capital	0	0	0	1.2	22
% share	*0*	*0*	*0*	*0*	*0*
Tax concession	2 974	3 312	3 503	3 461	3 766
% share	*49*	*41*	*35*	*32*	*31*
Mixed	869	1 180	1 644	2 493	4 481
% share	*14*	*15*	*16*	*23*	*37*

Table 24. **Public support by managing structure**

Instrument	Nominal NCG: million Sch				
	1989	1990	1991	1992	1993
Central	3 248	4 772	6 256	6 869	8 430
% share	*54*	*59*	*63*	*64*	*69*
Sub-central	521	619	711	674	829
% share	*9*	*8*	*7*	*6*	*7*
Joint central/Sub-central	179	208	222	224	138
% share	*3*	*3*	*2*	*2*	*1*
Public institution	997	1 246	1 498	1 556	1 803
% share	*17*	*15*	*15*	*15*	*15*
Private institution	404	402	402	401	401
% share	*7*	*5*	*4*	*4*	*3*
Not classified	668	883	912	976	642
% share	*11*	*11*	*9*	*9*	*5*

Graph 4 provides an overview of the levels of public support in each *Land*, including expenditure on jointly financed and managed programmes. Differences in expenditure are largely determined by the size of the *Land* and the importance of its manufacturing sector. An upward trend in expenditure reported can be observed in most of the *Länder*. Lower Austria and Styria provide the higest levels of support.

In addition to the 96 programmes, eleven others were applied at the federal and *Länder* level under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of programmes and assigned to an annex (Annex 2).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN AUSTRIA

Support policies in Austria since 1993 were further developed in the light of existing legislation and new directives at the level of the European Community, as a consequence both of the accession to the EEA in 1994, and membership in the EU in early 1995. This had a particular bearing on regional policies. Here, the promotion was focused and concentrated on certain regions defined according to Community law.

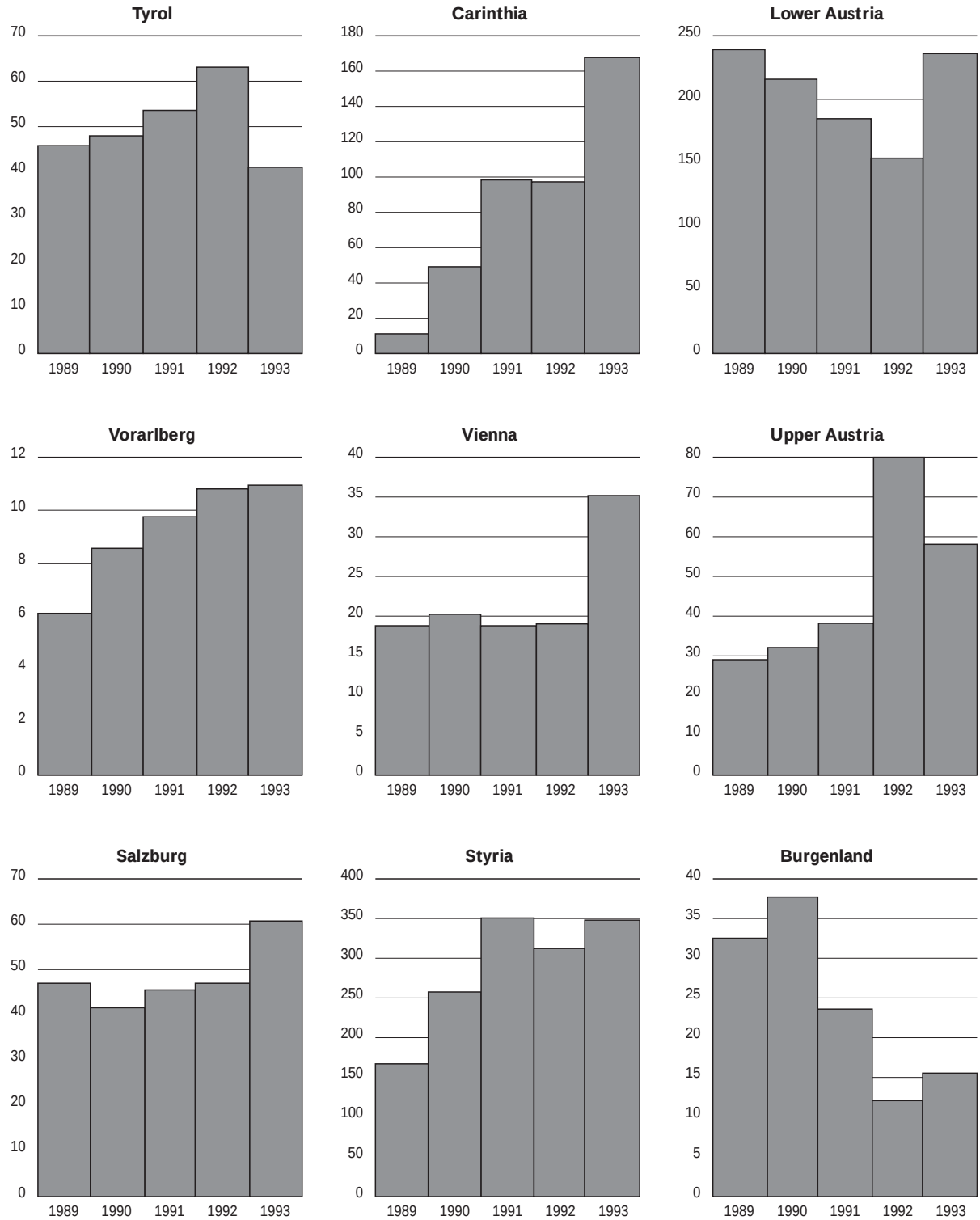
Budgetary stringency at all levels of government will require a rigid spending policy in the years to come. Consequently, no increases are planned in the expenditure of public support programmes in Austria. Concerning taxation, the government will pursue its restrictive policy on exemptions and special tax regulations in favour of specific businesses and individuals.

Industrial policy in Austria will continue to focus on the improvement of the framework conditions for business. Deregulation of state monopolies in the service and utility sectors, greater flexibility in labour markets, and modernisation of public administration will rank high among the priorities for creating a favourable environment for industry and job creation.

Public support to industry will focus on the promotion of intangible investment by giving priority to training and consultancy programmes. Support to R&D and technological innovation will be further intensified. This refocusing of expenditure, linked with more efficient management of public support programmes and the establishment of coherent evaluation practices, is expected to improve the policy effectiveness of future public support to manufacturing industry in Austria.

❖ Graph 4. ***Public support to manufacturing industry by Land***

Million Sch



Source: OECD Industrial Support Database, February 1998.

Annex 1: **List of industrial support programmes reported by Austria**

Programme code	Programme title
1001001	Investment Scheme for the Pulp and Paper Industry
1001002	Support Programme for the Press and Publishing Industry
1002001	Support for Restructuring Under the Guarantee Act
1002002	OIAG – Financing Acts
1002003	Restructuring of Enterprises and R&D firms – Carinthia
1002004	Special Rescue Programme – Lower Austria
1003001	R&D Fund for the Manufacturing Sector
1003002	Innovation and Technology Fund, ITF (Section R&D)
1003003	Innovation and Technology Fund (Section Innovation)
1003005	Innovation Agency
1003006	Scientists for the Business Sector
1003007	Promotion of R&D – Vorarlberg
1003008	Promotion of innovation – Vienna
1003009	Promotion of innovation – Upper Austria
1003010	Promotion of Technology and Marketing – Upper Austria
1003011	Promotion of R&D – Carinthia
1003012	Promotion of Innovation – Carinthia
1003013	Promotion of R&D + Innovation and Flexible Automation – Tyrol
1003014	Promotion of Innovation – Salzburg
1003015	Technology and Innovation Consulting – Salzburg
1003016	Promotion of Innovation – Lower Austria
1003017	ERP – Recovery Fund Loans
1003018	Promotion of Innovation – Styria
1003019	Special Allowance for R&D Expenditures
1004001	ERP – Recovery Fund Loans (ERP Fund)
1004002	Regional Investment Premium (RIP)
1004003	Joint Special Regional Support Scheme of the Federal and State Governments
1004004	Promotion of Disadvantaged Regions – Vorarlberg *(Bergregionenförderung)*
1004005	Joint Regional Innovation Scheme of the Federal and the State government of Tyrol
1004006	Regional Promotion Scheme – Tyrol
1004007	Tyrolian Interest Rate Subsidy Programme
1004008	Joint Regional Promotion Scheme with the Federal Government Programme for SMEs – Tyrol
1004009	Regional Promotion Scheme – Salzburg
1004010	Joint Regional Innovation Scheme of the Federal and State Government – Lower Austria
1004011	Joint Regional Innovation Scheme of the Federal and State Government – Upper Austria
1004012	Regional Interest Rate Subsidy Scheme – Carinthia
1004013	Regional Promotion Scheme – Carinthia
1004014	Joint Regional Promotion Scheme with the Federal Government Programme for SMEs – Salzburg
1004015	Joint Regional Promotion Scheme of the Federal Government and the State Government of Burgenland for SMEs and Regional Development
1004016	Joint Regional Scheme for the Federal & the State Government – Carinthia
1004017	Regionalisation Scheme – Lower Austria
1004018	Joint Regional Promotion Scheme with the Federal Government + SME Programmes – Styria
1005001	TOP Scheme
1005002	Interest Rate Subsidy Scheme
1005003	Grants for New Enterprises under the Financial Guarantee Act
1005004	Guarantees under the Guarantee Act
1005005	Aid for Structural Strengthening – Vorarlberg
1005006	General Investment Promotion Scheme – Carinthia
1005007	Interest Rate Investment Scheme – Carinthia
1005008	Promotion according to the *Landeswirtschaftsgesetz* – Carinthia
1005009	Structural Improvement Scheme – Salzburg
1005010	Promotion of the Establishment of New and Innovative Enterprises – Salzburg
1005011	General Project Investment Scheme – Salzburg
1005012	Promotion of Structural Improvement – Upper Austria
1005013	Promotion of the Establishment of New Industrial Sites – Upper Austria
1005014	Promotion of Structural Improvement – Tyrol
1005015	Investment Support Scheme – Salzburg
1005016	Promotion of Investment – Lower Austria
1005017	Promotion of SMEs – Styria
1005018	Promotion of Structural Improvement – Styria
1005019	Equity Capital Co-financing Scheme – Styria
1005020	Special Allowance for Investment
1005021	Tax Deferral for Investment
1005022	ERP – Recovery Fund Loans (ERP Fund)
1006001	Promotion of the Internationalisation of SMEs with Guarantees

Annex 1: **List of industrial support programmes reported by Austria** *(cont.)*

Programme code	Programme title
1006002	Investment Support Scheme under the "Act for Structural Improvement of SMEs"
1006003	Support Scheme for New SMEs
1006004	Small-firm Development Scheme
1006005	Joint Credit Support Scheme of the Federal and the State Government
1006006	Aid for Young Entrepreneurs – Vorarlberg
1006007	Guarantees of the Tyrolian Guarantee Association
1006008	Fund for the Promotion of Economic Improvements – Tyrol
1006009	Promotion of new enterprises – Salzburg
1006010	Interest Rate Subsidy for SMEs – Burgenland
1006011	Promotion of Computer Technology – Vienna
1006012	Joint Support Scheme for new SMEs of the Federal Government and the State Government – Vienna
1006013	Regional SME Support Scheme -Vienna
1006014	SME – Eurofit Scheme – Upper Austria
1006015	Interest Rate Subsidy Scheme for Small Enterprises – Salzburg
1006016	Promotion of SMEs – Lower Austria
1006017	Interest rate Subsidy Scheme for the Establishment of New SMEs – Lower Austria
1006018	Joint Loan Scheme for SMEs of the Federal Government and the State Government – Lower Austria
1006019	Guarantees for SMEs – Lower Austria
1006020	ERP-Recovery Fund Loans (ERP Fund)
1006021	Fund for the Promotion of SMEs – Styria
1008001	Tax Deferral for Export Claims (Lump Sum)
1008002	Guarantee Scheme for Export Financing
1009001	Promotion of District Heating *(Fernwarme)* – Lower Austria
1010001	Support of De-contamination Measures
1010002	Support of Environmental Protection Measures
1010003	Fund for Water Supply and Sewage Systems (WWF)
1010004	Environmental Protection Measures – Tyrol
1010005	Environmental Protection Measures – Vienna
1010006	FCCH (FCKW) – Avoiding Measures in SMEs – Vienna
1010007	Environmental Protection Measures – Carinthia
1010008	Interest Rate Subsidy for Environmental Improvements – Salzburg

Annex 2: **List of labour and training programmes reported by Austria**

Programme code	Programme title
1007001	Compensation for Short-term Working Under Sect. 27(1)d of Labour Market Promotion Act
1007002	Subsidies to Employers for Training Measures Under Sect. 19(1)b i.c.w. Sect. 21(1) of Labour Market Promotion Act
1007003	Subsidies to Employers for Training Measures Under Sect. 19(1)b i.c.w. Sect. 21(2) of Labour Market Promotion Act
1007004	Subsidies to Employers for Training Measures Under Sect. 19(1)b i.c.w. Sect. 21(2) of Labour Market Promotion Act
1007005	Regional Employment Support Scheme for SMEs – Vienna
1007006	Job Creation Programme – Carinthia
1007007	Employment Programme by the Labour Market Administration (27 and 35)
1007008	Support by the Labour Market Administration (39)
1007009	Joint Programme of the Federal and State Government of Salzburg for the Compensation of Short-time Working
1007010	Employment Support Scheme – Lower Austria
1007011	Job Creation Scheme – Lower Austria

BELGIUM

BELGIUM 1993

GDP: billion BF (current prices)	7 268.6
Manufacturing GDP: billion BF (current prices)	1 050.8[1]
Unemployment rate	12.1
Corporate tax rate	39%
Government borrowing rate	7.22%
Civil procurement: billion BF	81.6
Military procurement: billion BF	4.8[2]
Support to labour and training: million BF	6 796
R&D contracts: million BF	2 170
– *of which:* Manufacturing	1 374
Financial support to R&D institutions: million BF	516.2
Public space programmes: million BF	5 750.4
– *of which:* Belgian contribution to ESA: million BF	5 642.7

1. Secretariat estimate.
2. 1992 data.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN BELGIUM

Public support to manufacturing industry in Belgium, in the period 1989 to 1993, was principally determined by the efforts, at all levels of government, to improve the international competitiveness of Belgian manufacturers in the context of a deteriorating budgetary situation and diverging structural conditions at the regional level. Against this background, the policy focus changed from a growth-oriented general approach to a more targeted adjustment policy, providing scarce public funds to policy objectives such as regional development, R&D and SMEs.

Moreover, the legal basis for existing programmes had to be adapted to the changing policy framework of state aid policies in the European Community, which imposed, step-by-step, stronger discipline on national support policies in Member States. In Belgium, the 1959 legislation on economic growth was abandoned towards the end of the reporting period, with financial support to private investment decreasing in parallel.

During the period under review, both the level and the structure of public support to manufacturing industry in Belgium were determined by two action plans launched by the federal government. The first, aiming at fiscal consolidation in order to meet the Maastricht criteria and to participate in the Economic and Monetary Union (EMU) from its inception, was formalised in the 1992 Convergence Plan. This plan fixed annual targets for the reduction of the general government deficit from around 7 per cent in 1992 to 3 per cent in 1996. The other plan, in execution of the 1989 "Law to Safeguard Competitiveness", important broad measures for employment, competitiveness, and the social security system such as the change in the wage indexation system, the reduction of the employer's social charges, an alternative financing of a portion of non-wage labour costs, and costs on social security spending. With this law the Belgian Government addressed the problems of sectors particularly exposed to international competition. The law applied to a large extent to low-skilled and unskilled workers in manufacturing industry.

As a result of the constitutional reforms in 1980, 1988 and 1993, Belgium became a federal country. The political, institutional and administrative structures of policies directed towards manufacturing firms reflect this new system. Responsibility for such policies has, in the period from 1989 to 1993 been shared increasingly by the Federal Government, the Regions and the Communities (Flemish, French and German).

Belgium is composed of three Regions – the Flemish Region, the Walloon Region and the Brussels Region. Each is responsible for policy in all the areas under its control such as economics, energy, public works, environment and transport. Accordingly, financial support to manufacturing industry is provided both by the Federal Government and the Regions. In terms of financial support provided, and since the recent constitutional reform in 1993, the Regions are the major players in Belgian support policies (Table 27).

As is the case for the other EU Member States, manufacturing firms established in Belgium are eligible for Community funds and programmes. Such support is channelled directly or indirectly to manufacturing firms. An estimation by the Commission of the European Communities indicates that the manufacturing sector in Belgium received, on average, ECU 32.8 million from the regional fund in each year of the period under review.

II. THE STRUCTURE OF PUBLIC SUPPORT IN BELGIUM

In Belgium, public support to manufacturing industry in current prices consistently declined in the period from 1989 to 1992, before slightly increasing in 1993. Public support, which was BF 35.3 billion in 1989, dropped to BF 26.5 billion in 1993. This reduction in nominal terms amounting to 25 per cent of the 1989 level underlines the successful efforts, in particular at the level of the federal government, to curb financial assistance to manufacturers, thereby contributing to the fiscal policy objective of bringing down the budget deficit.

The strongest annual reductions materialised in 1991 and 1992 (Table 25). This decline can be traced to diminished spending in policy areas such as general investment incentives and sectoral policies.

Table 25. **Nominal and real NCG expenditure and the manufacturing support rate**

	Billion BF				
	1989	1990	1991	1992	1993
Total nominal NCG reported	35.30	34.20	30.40	25.60	26.50
Total real NCG reported	35.30	33.20	28.60	23.30	23.30
Manufacturing support rate (%)	2.59	2.37	2.07	1.69	1.76
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*

Source: OECD Industrial Support Database (February 1998).

In real terms the decline was even stronger, resulting in a fall of approximately 34 per cent. The manufacturing support rate came down from 2.59 per cent in 1989 to 1.76 per cent in 1993. Despite the considerable decrease in public support in the period under review, the Belgian manufacturing support rate still lies above the OECD average. However, bearing in mind that the OECD manufacturing support rate is biased by reporting gaps, particularly in the area of sub-central support, and that such gaps were not identified in the case of Belgium, this comparison should be interpreted with caution.

The emphasis of public support in Belgium lay in the areas of general investment incentives, regional development and SMEs, which together accounted for 85 per cent of total public support to manufacturing industry in 1989. In 1993, regional development, general investment incentives, and R&D played a prominent role in net spending, representing together 81 per cent of total support in that year. A remarkable shift in spending under the policy objectives of R&D and regional development occurred

in the period under review: this increased spending, despite a considerable overall reduction in public support, reflects the new focus in government policies. No financial assistance was provided under the policy objectives of crisis aid, energy efficiency[10] and environment protection (Table 26).

Table 26. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million BF				
	Number	1989	1990	1991	1992	1993
Sectoral	3	2 709	4 042	5 423	724	1 339
R&D	7	1 813	1 749	2 867	2 780	3 896
Regional	6	7 031	8 188	6 650	9 447	9 297
Investment	5	17 881	16 185	11 573	8 716	8 312
SMEs	9	5 135	2 972	2 888	3 243	2 852
Exports	5	765	1 091	959	724	833
Total	35	35 334	34 227	30 360	25 633	26 527

Source: OECD Industrial Support Database (February 1998).

Of the 35 programmes reported (Annex 1), one was classified as sunsetting and only two were new programmes. This points to a relatively high stability in the stock of programmes, with a duration of five years or more for almost all support programmes. It appears that financial flows in existing programmes were adapted in response to the changing policy focus. The absence of any formalised procedure for the assessment or evaluation of support programmes should be mentioned at this point.

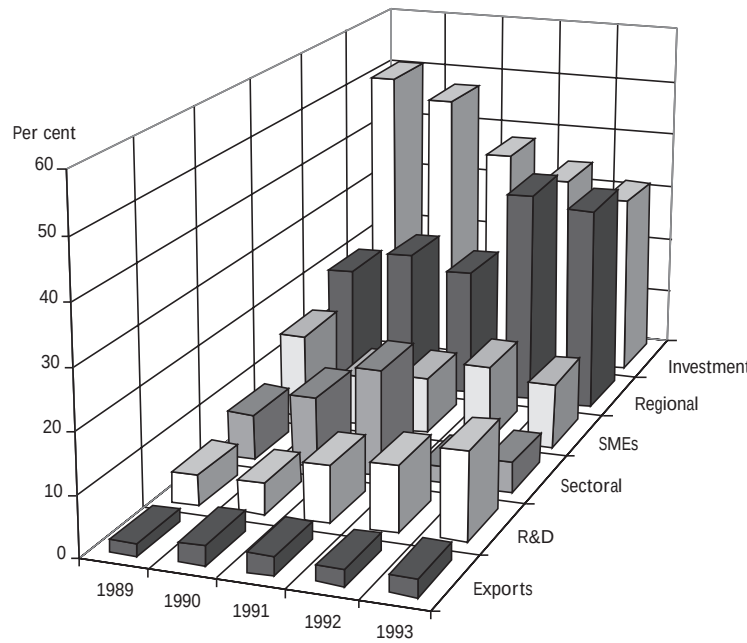
Among the programmes reported, none was identified which limits the access to public support to national enterprises only. In this respect, Belgian support policies appear to be more advanced than the OECD average.

The high concentration of public support in a few specific programmes is remarkable: the largest programme absorbed 45 per cent of total public support in 1989 and approximately 25 per cent in 1993.

With regard to the financing instruments used, two findings may be particularly relevant. First, due to the full or partial privatisation of publicly owned manufacturing enterprises before the beginning of the reporting period, capital injections were not subsequently used as a financing instrument in Belgium. Second, tax concessions appear to be used as a financing instrument only at the federal level. In the case of four tax concession programmes, representing in 1993 a NCG of the order of BF 10.5 billion, decision making lies with regional governments, but it was not possible to estimate individually the respective shares of expenditure for the three regions. These programmes are presented under the heading of sub-central support. In addition, actual expenditure on tax concessions is likely to be considerably higher than that reported, as quantitative information for three tax concession programmes is not yet available.

Belgium is a unique case in that public support at the level of the regions is much higher than that at the central level. Table 27 demonstrates that the growing importance of regional and sub-central spending is merely the result of reductions in support at the federal level. It is particularly interesting to see the extent to which the relative importance of funding allocated to the different policy objectives varies among the regions. In the Flemish and Walloon Regions, regional development is the priority issue for public expenditure, whereas in the Brussels Region, for obvious reasons, there was no expenditure under this policy objective, while general investment incentives ranks in first position. When support to economic activities is examined, it becomes evident that support to general and specialised investment are the predominant targets of public support. Moreover, support to R&D or to SMEs ranks either as the second or third most important policy objective in each of the regions (Graph 6).

✦ Graph 5. ***Percentage distributions of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

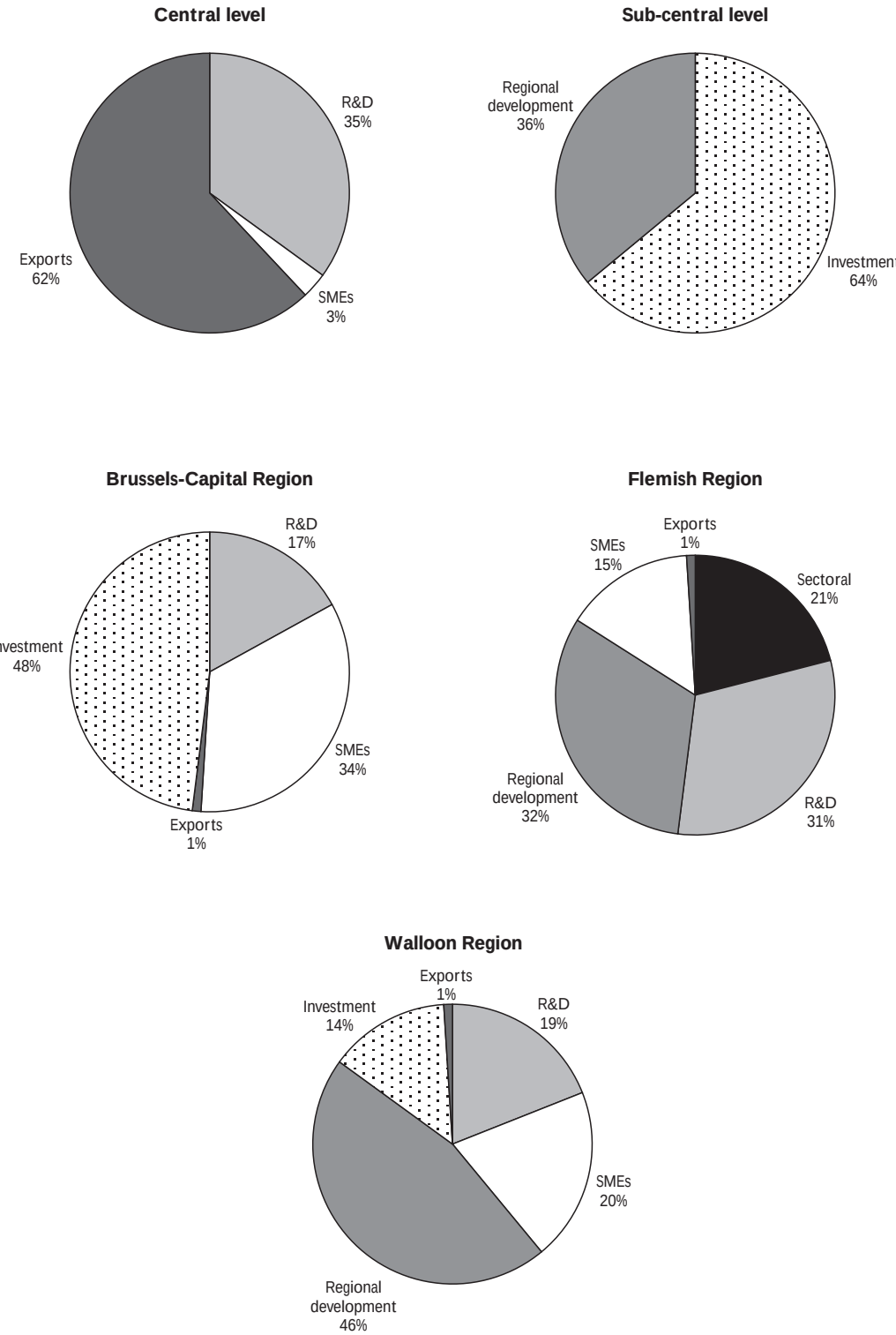
Table 27. **Federal and regional support**

	Programmes	Nominal NCG: million BF				
		1989	1990	1991	1992	1993
Central	5	3 242	1 548	1 323	1 037	1 074
% share	*14.7*	*9.2*	*4.5*	*4.4*	*4.0*	*4.1*
Sub-central[1]	4	18 500	17 725	13 978	11 090	10 546
% share	*11.8*	*52.4*	*51.8*	*46.0*	*43.3*	*39.8*
Brussels-Capital Region	9	1 549	1 521	1 424	1 414	1 267
% share	*26.5*	*4.4*	*4.4*	*4.7*	*5.5*	*4.8*
Flemish Region	8	7 443	8 611	9 087	4 260	6 319
% share	*23.5*	*21.1*	*25.2*	*29.9*	*16.6*	*23.9*
Walloon Region	9	4 601	4 821	4 548	7 834	7 321
% share	*23.5*	*13.0*	*14.1*	*15.0*	*30.6*	*27.6*
Total	35	35 334	34 227	30 360	25 633	26 527

1. In the case of certain tax concession programmes, decision-making lies with regional governments. Therefore, as the regional share in such programmes could not be differentiated, they were classified as sub-central programmes.

Source: OECD Industrial Support Database (February 1998).

❖ Graph 6. ***Patterns of regional support***
Share of policy objectives in NCG – 1993



Source: OECD Industrial Support Database, February 1998.

Eleven programmes were applied at the central and regional levels under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of public support programmes (Annex 1) and assigned to a second annex (Annex 2).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN BELGIUM

National support policies in Belgium from 1994 onwards were driven by the overriding priorities of fiscal consolidation and the reinforcement of industrial competitiveness. Moreover, due to the WTO Agreement on Subsidies and Countervailing Measures, signed in April 1994 in Marrakech, as well as an extended state aid discipline by the Commission of the European Communities, the international limitations for national support policies were reinforced.

While for budgetary reasons and stronger international subsidy discipline, public support is likely to decline, nevertheless net spending should be particularly dynamic in such areas as support to SMEs and specialised investment. Regarding financial assistance to SMEs, it should be stressed that the emphasis lies in the provision of risk capital. More specifically, the Walloon Government has launched several activities under the policy objectives of investment incentives, environment protection and energy efficiency.

Annex 1: **List of industrial support programmes reported by Belgium**

Federal Government

Exemption for Supplementary Staff Allocated to Scientific Research
Export Credit Scheme
Promotion of Innovating Capital
Share Participation Fund
Tax Exemption for Additional Staff Recruited by SMEs

Sub-Central

Companies Established in a Conversion Zone
Measures Promoting Economic Growth
State Guarantee for Investment Credits
Tax Credit on Investment

Brussels-Capital Region

Aid for Production Costs, Capital Costs, R&D Costs and Specialised Investment Costs
European Programmes
External Trade Fund
Investment Aid
Loans for Investment
Measures Promoting Economic Growth and the Creation of New Industries
Provision of Financial Aid for Participation in General and Specialised Trade Fairs Abroad
Support to Basic Industrial Research
Technological Promotion Contracts: Advances for the Development of Prototypes

Flemish Region

Aid for Regional Development
Aid for Shipbuilding in the Flemish Region
Economic Expansion Aid for Large Enterprises in the Opinion Press Sector (Newspapers and News Magazines)
Financial Interventions for Export-oriented Initiatives of Enterprises and Export Promotion Programmes of Professional Federations
Fonds Flamand de Garantie
Promotion of Industrial Scientific and Technological Research in Flanders
Sectoral Policy – Economic Expansion Aid for Large (until 31 July 1991) and Large and Medium-sized Enterprises (from 1 August 1991)
Sectoral Policy – Economic Expansion Aid for SMEs

Walloon Region

Aid to SMEs
Aid to SMEs (Expansion of SMEs)
Measures for Promoting Economic Growth and the Creation of New Industries (1)
Measures for Promoting Economic Growth and the Creation of New Industries (2)
Measures for Promoting Economic Growth and the Creation of New Industries (3)
Measures for Promoting Economic Growth and the Creation of New Industries (4)
Support to Investment (Act of 31 December 1970 and Decree of 25 June 1992)
Technological Promotion Contracts: Advances for the Development of Prototypes
External Trade Fund – Walloon Region

Annex 2: **List of labour and training programmes reported by Belgium**

Early Retirement Scheme (Federal)
Provisions for Social Liabilities (Federal)
Tax Exemption as a Result of Further Staff Recruitment (Federal)
Aid for Temporary Unemployment (Federal)
Employment Zones (Sub-Central)
Recruitment of Unemployed Persons for Specific Economic Expansion Projects of SMEs (RO 123) and Assistance to SMEs (RO 258) (Brussels-Capital Region)
Training of Employees (Flemish Region)
Aid for the Creation, Extension and Conversion of Enterprises (Walloon Region)
Creation of Training Centres in Enterprises (Walloon Region)
Creation of Vocational Training Centres (Walloon Region)
Development of Economic Growth Projects within SMEs (Walloon Region)

CZECH REPUBLIC

CZECH REPUBLIC 1993

GDP: million CzK (current prices)	1 002 300
Manufacturing GDP: million CzK (current prices)	253 272
Unemployment rate (standardised rate)	2.95%
Corporate tax rate	45%
Government borrowing rate	8.73%[1]
Civil procurement	
Military procurement: million CzK	250[2]
Support to labour and training: million CzK	6.24
R&D contracts: million CzK	4 243
– *of which:* Manufacturing	
Financial support to R&D institutions	
Public space programmes	

1. Average interest rate of Treasury Bills.
2. Qualified estimate.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN THE CZECH REPUBLIC

During the period from 1990 to 1993, the Czech Republic (and prior to 1993 the Czechoslovak Federal Republic) undertook far-reaching reforms aimed at creating the basis for a market economy. Moreover, the partition of the Czech and Slovak Republic into two independent republics on 1 January 1993 precipitated major legislative, institutional and political adjustments.

The economic reforms launched in 1991 were directed towards:

– the creation of a competitive industrial structure through privatisation, the liberalisation of foreign trade and prices and the international convertibility of currency;

– the break-up of monopolies and the elimination of direct state control on the management of firms;

– new price structures re-establishing the role of prices as resource allocation signals by sharply curtailing subsidies;

– openness to foreign investment; and

– the adoption of an exchange rate policy that creates a clear link between domestic and world prices.

These reforms were accompanied by an extensive adaptation process in the economy marked by decreasing domestic demand and the strong impact of external factors such as the accelerating recession in important market economies, the disintegration of the COMECON market and the embargoes in Kuwait and Yugoslavia.

In the interest of macroeconomic stability, the government applied a restrictive financial, monetary and wage policy. The success of the macroeconomic stabilisation policies put in place was a strategic element in the realisation of the structural reform programmes, and, at the same time, a confidence-building signal for the business sector.

While industrial policies primarily aimed at prompt privatisation, with further development of companies and business restructuring the domain of the new owners, large businesses such as metallurgy, chemical and aircraft industries and branches with a natural monopoly, such as mining, continued to remain under public ownership and governance in the initial phases of the transformation process. As these businesses were sensitively linked with employment and social issues in certain regions, their privatisation was pursued, case-by-case, in line with the interest of the state.

Extensive subsidies from the state budget, and cross-subsidisation between individual companies and branches were discontinued at the beginning of the transformation process. Public support, in this period, was focused on new activities which had been previously suppressed or which had not existed. Support to small and medium-sized enterprises to accelerate the creation of a dynamic and competitive new firm structure is one example, as well as export promotion and the attraction of foreign direct investment.

The Czech Government believed that there was a need to pursue some larger conversion and phasing-out programmes to alleviate the social impacts of the transformation process.

Since the partition of the former Czechoslovak Federal Republic, public support to industry is provided at the central level only. Figures on public support in the era of the Czechoslovak Federal Republic refer to the share of total support benefiting manufacturers established in the Czech Republic.

The Czech Republic has not yet ratified the WTO Agreement on Subsidies and Countervailing Measures. New legislation on public procurement aims to transpose into national law the procurement agreement concluded in the Uruguay Round. Moreover, the Czech Republic became a Member of the OECD on 21 December 1995.

II. THE STRUCTURE OF PUBLIC SUPPORT IN THE CZECH REPUBLIC

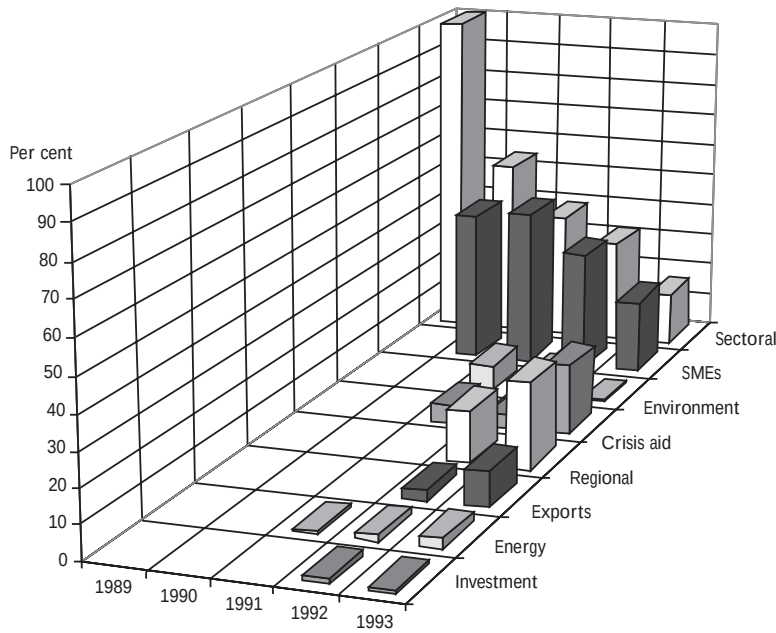
Public support to manufacturing industry in the Czech Republic did not play an important role in 1989 and 1990, when totals represented 137 million 440 million of national currency, respectively. The figures reported for these years refer to a programme which provided financial assistance to firms affected by the conversion of military production, and a tax incentive programme for SMEs which became operational in the course of 1990. During the first years of the transformation process public support increased sharply in 1991 and 1992, peaking at the level of 2 167 million crowns in the latter year. All eleven programmes reported by the Czech authorities were applied in these years. In 1993, the first year of independence, support declined to CzK 1 188 million as a result of the phasing out of two large programmes.

Table 28 shows that there is no clear trend in the development of public support to manufacturing industry over the period 1989-93, and that the figures reported reflect in particular the changing political and institutional settings. However, the manufacturing support rate, which measures public support to manufacturing as a share of manufacturing GDP, was below the OECD average in each year of the period under review, which points to a comparatively low level of public support in the Czech Republic.

Sectoral support and support to SMEs were the main building blocks of public support until 1991. Table 29 shows that public support to manufacturing became more diversified only after 1991, when regional development aid, crisis aid and export promotion emerged as new policy areas of public support. It appears that financial support in an economy in transition focuses particularly on product-specific, enterprise-specific and sector-specific issues, whereas the overall analysis of public support in the OECD area demonstrates a clear shift towards policy objectives of a more horizontal nature, such as regional development, R&D and SMEs in the period from 1989 to 1993.

The absence of any programme providing support to manufacturing industry under the policy objective of R&D and technological innovation does not mean that the state did not contribute to the financing of the science and technology system. Such financing amounted to CzK 4.2 billion in 1993, but it was not possible to identify, under rapidly changing budgetary procedures and the re-organisation of public R&D institutions, the share of funding in support of the manufacturing sector.

◆ Graph 7. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Of the 11 Czech programmes reported (Annex 1), one was identified which limits *de jure* the access to public support to national enterprises only. As the programme in question was a privatisation programme in the food-processing industry, its limitation to nationally owned enterprises is self-evident, and is not a question of discrimination.

Of the eleven programmes reported, ten were implemented in 1990 or later; of these, four expired during the reporting period. Only one programme was applied throughout the reporting period. Such a dynamic turnover in the stock of programmes differs significantly from the OECD average, and may be interpreted as a specific characteristic of support policies in economies in transition.

Interest rate subsidies, which also represented the lion's share of mixed instrument financing, were the dominant financing instrument in the years 1991-93, while grants were the main source of public funding at the beginning of the reporting period. Tax concessions, which ranked as an important financing instrument from 1990 to 1992, had been abandoned by that time.

Table 28. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million Czk				
	1989	1990	1991	1992	1993
Nominal NCG	137	440	2 010	2 167	1 188
Real NCG	137	402	1 247	1 140	538
Manufacturing support rate (%)	0.1	0.3	0.5	1.0	1.1
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*

Source: OECD Industrial Support Database (February 1998).

Table 29. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million Czk				
		1989	1990	1991	1992	1993
Sectoral	3	137	240	775	685.2	190
% share	*27.3*	*100.0*	*54.5*	*38.6*	*31.6*	*16.0*
Crisis aid	1	0	0	103.7	91	252.4
% share	*9.1*	*0.0*	*0.0*	*5.2*	*4.2*	*21.2*
Regional	1	0	0	0	333.3	308
% share	*9.1*	*0.0*	*0.0*	*0.0*	*15.4*	*25.9*
Investment	1	0	0	0	35.7	11.3
% share	*9.1*	*0.0*	*0.0*	*0.0*	*1.6*	*1.0*
SMEs	2	0	200	959.1	777.8	266.2
% share	*18.2*	*0.0*	*45.5*	*47.7*	*35.9*	*22.4*
Export	1	0	0	0	64	123
% share	*9.1*	*0.0*	*0.0*	*0.0*	*3.0*	*10.4*
Energy	1	0	0	14	37	32
% share	*9.1*	*0.0*	*0.0*	*0.7*	*1.7*	*2.7*
Environment	1	0	0	158.4	143	5.5
% share	*9.1*	*0.0*	*0.0*	*7.9*	*6.6*	*0.5*
Total	11	137	440	2 010.13	2 166.92	1 188.34

Source: OECD Industrial Support Database (February 1998).

Table 30. **Reported expenditure by financing instrument**

	Programmes	Million Czk				
		1989	1990	1991	1992	1993
Regular grant	3	137	240	458	345	196
Interest rate subsidy	2	0	0	489	520	32
Equity capital	1	0	0	0	36	11
Tax concession	1	0	200	700	500	0
Mixed	4	0	0	363	766	950
Total	11	137	440	2 010	2 167	1 188

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN THE CZECH REPUBLIC

The main principles of economic policy and the Czech Government's general policy of creating a favourable business climate are likely to remain unchanged. Further steps to lower the tax burden by reducing the corporate income tax rate from 39 to 35 per cent are scheduled to be implemented in 1998.

With the transition process from the communist system now largely completed, the focus of Czech support policies will be shifted more clearly to the policy areas of SMEs, R&D and export promotion.

As the government aims to achieve membership of the European Union, and seeks to make its legislation compatible with existing EU requirements, the principles of Czech support policies will be increasingly determined by EU regulations on state aid policy.

Annex 1: **List of industrial support programmes reported by the Czech Republic**

Programme code	Programme title
1201001	Conversion of Military Production
1201002	Privatisation Programme – Support to Private Activities in the Food-processing Industry and Related Services
1201003	Programme for the Restructuring of Production and Transformation of Companies to the Market Economy
1202001	Compensation for Disadvantages from the Impacts of the Embargoes on Iraq and Yugoslavia
1204001	Programme for Regional Development
1205001	Equity Divestment: Cokoladovny a.s. (BDS 91-69)
1206001	Support to Small and Medium-sized Enterprises
1206002	SMEs Tax Exemption and Relief
1208001	Support to Exports (Guarantees and Insurance)
1209001	Support to Implementation of Technical Equipment and Materials for Reducing Fuel and Energy Consumption in Housing and Flats
1210001	Improvement of the Environment

Annex 2: **List of labour and training programmes reported by the Czech Republic**

Programme code	Programme title
1207001	Subsidies in Cases of Reduced Operating Activity
1207002	State Retraining Programmes

DENMARK

DENMARK 1993

GDP: million DKr (current prices)	874 394
Manufacturing GDP: million DKr (current prices)	143 583
Unemployment rate	12.3%
Corporate tax rate	34%
Government borrowing rate	7.19%
Civil procurement: million DKr	105 128
Military procurement: million DKr	2 106
Support to labour and training: million DKr	643
R&D contracts	–
Financial support to R&D institutions: million DKr	564
Public space programmes: million DKr	131

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN DENMARK

During the 1980s and the beginning of the 1990s, industrial policy in Denmark was dominated by a substantial number of industrial programmes based on subsidies. Moreover, policies affecting business conditions were carried out in a rather unco-ordinated manner. Education policy, research policy, industrial policy and sector policies (*i.e.* energy policy and health-care policy) each had separate strategies with little attention paid to the interdependency between them. New industrial policy measures were in most cases carried out on an *ad hoc* basis, targeted at barriers in areas such as technology, entrepreneurship, exports etc.

While macroeconomic and labour market policies in the period from 1989 to 1995 continued to constitute the foundation for long-term planning within enterprises, industrial policy was increasingly targeted at improving framework conditions in individual industries and sectors of crucial importance for the performance of the business sector. Framework conditions, in this context, are defined as policies affecting the ability of firms to innovate, adopt global strategies, and continuously deploy and renew their physical and intangible assets

At the macroeconomic level, the focus was on balancing the public budget and securing economic stability in terms of low inflation and interest rate levels.

In 1993, confronted with high unemployment, increased globalisation and increasing competition from low-wage countries, one of the priorities of the new Danish Government was to formulate and implement a new business strategy.

This business strategy had three major goals: better co-ordination between the policies and public actors (ministries, regional bodies and local bodies) influencing business performance; increased transparency of subsidy measures through a reduction in the number of measures and ensuring a high degree of uniformity in the remaining measures; and rising to the major challenges facing the Danish business sector and creating better framework conditions.

Therefore, in recent years, Denmark has attached higher priority to industrial policy instruments to strengthen the business community's competitiveness and its ability to adapt. Such instruments were particularly applied and implemented under the policy areas of SMEs, innovation, training and organisational change and export promotion.

Denmark ratified the WTO Agreement on Subsidies and Countervailing Measures in 1994, and approved, at the same time, new legislation which aims to transpose into national law the procurement agreement concluded in the Uruguay Round.

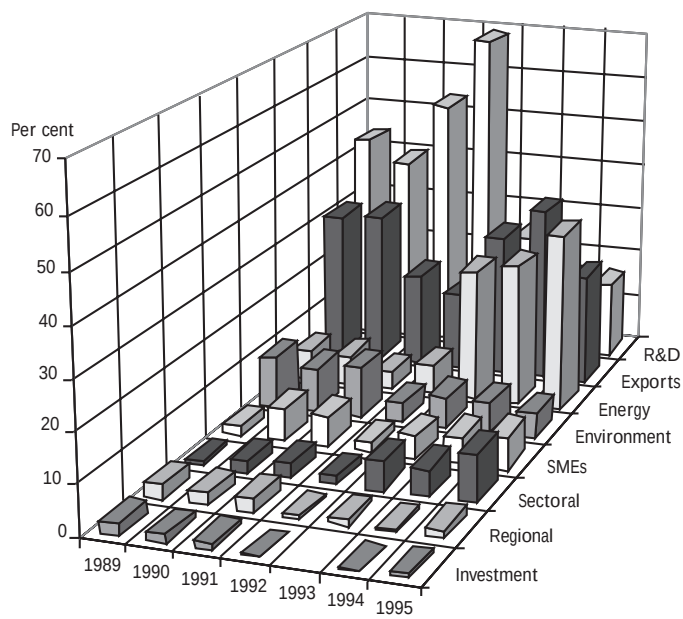
II. THE STRUCTURE OF PUBLIC SUPPORT IN DENMARK

In Denmark, public support to manufacturing industry in current prices consistently increased in the period from 1989 to 1995. Public support, which was DKr 855 million in 1989, increased two-and-a-half-fold by 1995, resulting in net expenditure of DKr 2.2 billion. Expenditure peaked at DKr 3.4 billion in 1992 when a new and important R&D fund was launched. Starting from a relatively low level in 1989, the strong upward trend underlines the growing importance of public support as a policy instrument in Denmark in the period under review. Even in real terms, public support grew by 231 per cent from 1989 to 1995.

Denmark is one of the 15 OECD Member countries in which net expenditure increased when 1989 and 1993 levels are compared. However, the manufacturing support rate which measures public support to manufacturing as a share of manufacturing GDP was above the OECD average only in 1992 and only very slightly in 1993. In the absence of OECD averages for 1994 and 1995, an assessment in the international context of the expanding net expenditure in Denmark is not possible at this point.

The strong increase in public support originates from enhanced spending particularly under the policy objectives of energy efficiency, exports and foreign trade, sectoral aid and SMEs. Moreover, only in the case of R&D did cuts occur when the beginning and the end of the reporting period are compared.

◆ Graph 8. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 31. **Nominal and real NCG expenditure and the manufacturing support rate**

	1989	1990	1991	1992[1]	1993	1994	1995
Nominal NCG	855	993	1 043	3 415	1 704	2 016	2 207
Real NCG	855	967	994	3 191	1 574	1 834	1 977
Manufacturing support rate (%)	0.7	0.8	0.8	2.4	1.2	1.3	1.3
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

1. Includes an expenditure of DKr 2 000 million allocated to the Growth Fund. The interest revenue generated by this Fund was used for the financing of loans in subsequent years.
Source: OECD Industrial Support Database (February 1998).

In 1989, more than 75 per cent of total support to manufacturing industry was spent under the policy objectives of R&D and exports and foreign trade. These areas represented only 38.9 per cent of total expenditure in 1995; the new focus was on energy efficiency which accounted for 37.2 per cent of total support. While the overall analysis of public support in the OECD area points to a very prominent role in net spending of regional development, and a low significance of energy efficiency and environment protection, this pattern is very different in Denmark. Here, the share of regional development in total support declined from 2.9 per cent in 1989 to 1.7 per cent in 1995 – OECD average figures were 23.1 per cent in 1989 and 33.4 per cent in 1993 – and the combined share of energy efficiency and environment protection reached 42.1 per cent in 1995 (OECD average in 1993: 3.8 per cent).

Shipyards were the exclusive beneficiaries of sectoral programmes. The increased spending under this policy objective runs against the OECD trend. However, sectoral support and enterprise-specific support under the policy objective of crisis aid were not significant in Danish support policies throughout the reporting period. Under the policy objective of crisis aid, no measures were taken by the government between 1989 and 1995.

Table 32. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million DKr						
		1989	1990	1991	1992[1]	1993	1994	1995
Sectoral	2	10	23	32	57	98	108	216
% share	*4.9*	*1.2*	*2.3*	*3.0*	*1.7*	*5.8*	*5.4*	*9.8*
R&D	13	376	396	556	2 339	427	328	350
% share	*31.7*	*44.0*	*39.9*	*53.3*	*68.5*	*25.1*	*16.3*	*15.9*
Regional	1	25	27	29	22	19	10	38
% share	*2.4*	*2.9*	*2.7*	*2.7*	*0.6*	*1.1*	*0.5*	*1.7*
Investment	3	20	15	12	3	0	2	20
% share	*7.3*	*2.3*	*1.5*	*1.2*	*0.1*	*0.0*	*0.1*	*0.9*
SMEs	4	17	64	65	72	78	107	145
% share	*9.8*	*2.0*	*6.4*	*6.2*	*2.1*	*4.6*	*5.3*	*6.6*
Exports	9	266	319	203	562	509	737	508
% share	*21.4*	*31.1*	*32.1*	*19.5*	*16.5*	*29.9*	*36.6*	*23.0*
Energy	5	53	59	38	216	468	595	821
% share	*12.2*	*6.2*	*5.9*	*3.6*	*6.3*	*27.5*	*29.5*	*37.2*
Environment	4	88	91	110	144	105	128	109
% share	*9.5*	*10.3*	*9.1*	*10.5*	*4.2*	*6.2*	*6.4*	*4.9*
Total	41	855	993	1 043	3 415	1 704	2 016	2 207

1. See note in Table 31.

Financial support to risky and long-term industrial research projects constitutes the focus of public expenditure under the policy objective of R&D and technological innovation. Direct support to specific technologies such as biotechnology, space and food-processing emerged as a second priority of R&D funding.

Under the policy objective of exports and foreign trade, export promotion activities absorb the bulk of the net expenditure. Unlike many other OECD Member countries, the impact of export credit and export credit guarantee schemes on total support to exports and foreign trade in Denmark is limited.

Financial incentives for the generation of electricity in the manufacturing sector account for the largest part of expenditure reported under the policy objective of energy efficiency. Moreover, in 1995, this scheme channelled more than 28 per cent of total Danish support to the manufacturing sector.

The promotion of physical investment did not rank as a high priority in Danish support policies in the period under review. The share of net expenditure in general investment schemes dropped from 2.3 per cent in 1989 to 0.9 per cent in 1995. However, at the end of the period expenditure on programmes having investment as the economic activity supported equalled 12.5 per cent of total support.

Fourty-nine per cent of Danish support programmes have a life-span of seven years or more. Thirty-eight per cent were new programmes, implemented during the course of the reporting period. The remaining 10 per cent expired between 1989 and 1995. This points to a comparatively dynamic turnover in the stock of programmes, and underlines the temporary nature of public support measures.

One programme reported limits access to public support to national enterprises. On the basis of such *de jure* considerations, the opening of support policies to domestically established, foreign-owned firms or to enterprises from abroad appears to be more advanced than the OECD average.

Grants, including reimbursable grants, were the dominant financing instrument used, followed by guarantees. These instruments channelled, on average, almost 70 per cent of total expenditure to manufacturing industry. On the other hand, it is interesting to note that tax concessions (which OECD-wide ranked as the second important financing instrument) play an insignificant role in the financing of Danish support programmes.

Only one programme under the policy objective of regional development involves co-financing by sub-central authorities. Central financing and management of programmes either at the level of the Danish Government or by specialised institutions represented almost 98 per cent of total expenditure.

In addition to the 41 support programmes (Annex 1), two programmes were applied under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of programmes and assigned to a second annex (Annex 2).

Table 33. **Reported expenditure by financing instrument**

	Programmes	Million DKr						
		1989	1990	1991	1992	1993	1994	1995
Regular grant	21	370	504	514	721	949	1 124	1 480
Reimbursable grant	2	21	30	45	48	96	43	31
Regular loan	3	37	57	19	5	0	0	10
Conditional loan	2	94	116	169	2 000[1]	54	0	40
Guarantee	5	177	125	36	218	162	302	54
Tax concession	1	0	0	0	0	30	30	30
Mixed	4	67	54	43	57	62	126	151
Total	41	855	993	1 043	3 415	1 704	2 016	2 207

1. See note in Table 31.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN DENMARK

In the future, the focus will increasingly be on structural competitiveness. Public support to industry will be devoted increasingly towards improving the quality of the framework for trade and industry. This industrial framework comprises elements such as the quality and flexibility of labour, the range of finance provided on the capital market – especially for SMEs and the development of knowledge and competence in business.

Moreover, considerable efforts will continue to be made in promoting initiatives for the development and use of energy-efficient technologies and their diffusion to potential users in industry, as well as environmental protection.

Annex 1: **List of industrial support programmes reported by Denmark**

Programme code	Programme title
1301001	Interest Subsidy against Inflation (Shipbuilding only)
1301002	Guarantee Fund for Shipbuilding
1303001	Development of New Technological Opportunities concerning the Use of Materials (MUP)
1303002	Research on Biotechnology
1303003	R&D Activities Relating to Food Articles (FOTEK)
1303004	Public Participation in R&D Activities: Development Contracts (IRDF)
1303005	Development of Agricultural and Fishery Products
1303007	Development Programmes
1303008	Co-financing of Various Development Projects
1303009	Technology and Product Development: Industrial Research and Development Fund (IRDF)
1303010	Technology and Product Development: Grants for Product and Process Development
1303011	Technology and Product Development: Consultancy Scheme for Urban Trade and Industry
1303012	Growth Fund
1303013	125% Rule for Participation in Certain International R&D Programmes
1303014	CFC Programme
1304001	Regional Development
1305001	Guarantee Fund for Investments in Developing Countries
1305002	EM Credit Facility (E = Energy, M = Environment)
1305003	Guarantee Fund for Investments in Eastern Europe
1306001	Activities for Entrepreneurs
1306002	Knowledge and Quality Promotion Programme for Smaller Companies
1306003	Guarantee Arrangement for New Activities in Smaller Companies
1306004	HMI Credit Facility (HMI: Handicraft and Small Industry)
1308001	Export Promotion
1308002	The Investment Fund for Central and Eastern Europe, Denmark
1308003	Medium and Long-term Financing of Exports of Capital Goods and Services
1308004	Export-promoting Arrangements
1308005	Export Promotion
1308006	Support to Tenders and Systems Export
1308007	The Trade Fund of Denmark
1308008	Export Network Programme
1308009	Industrial Utilisation of Environmental Technology
1309001	Support to Research on Energy
1309002	Development of Renewable Energy, etc
1309003	Support to Production of Electricity
1309004	Support to Reductions in the Use of Energy in the Business Sector
1309005	Combined Heat and Power Programme
1310001	Repayment of Taxes on Waste
1310002	Cleaner Technology Development Programme
1310003	Environmental Support to the Eastern Block
1310004	Programme on Waste and Re-use/Recycling

Annex 2: **List of labour and training programmes reported by Denmark**

Programme code	Programme title
1307001	Training for Employed Adults
1307002	Subsidies to Regular Employment in the Private Sector (Job Offers)

FINLAND

FINLAND 1993

GDP: million Mk (current prices)	456 571
Manufacturing GDP: million Mk (current prices)	101 816
Unemployment rate (standardised rate)	17.7%
Corporate tax rate	25%
Government borrowing rate	8.2%
Civil procurement: million Mk	72 309
Military procurement: million Mk	3 141
Support to labour and training: million Mk	358.7
R&D contracts	
Financial support to R&D institutions: million Mk	324.5
Public space programmes: million Mk	145

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN FINLAND

By the end of the 1980s, Finland's industrial policy generally followed a sector-specific approach: government subsidies were used to support industrial investment and to bail out large corporations in financial crisis; regulation of economic activity was tight and many industries were sheltered from domestic and foreign competition. As the economic environment changed rapidly in the turn of the decade, this strategy of sector-specific interventions created widespread inefficiencies in the Finnish economy. It became clear that industrial policy required a fundamental re-orientation.

The *National Industrial Strategy for Finland* developed by the Ministry of Trade and Industry (MTI) and published in 1993, marked a clear shift away from the traditional approach towards horizontal policy measures related to a sound macroeconomic environment and the creation of favourable conditions for business, in particular by improving the functioning of financial and labour markets, lowering the tax burden and enhancing technology development, SME policies and international agreements. The Strategy also identified the most important industrial clusters and emphasized their crucial role in the creation of national competitive advantages.

In the spring of 1996, the MTI published *A New Outlook on Industrial Policies* which may be considered as a continuation of the *Strategy*, defining more carefully the role of government. This document promotes "an efficiency-driven growth strategy", whereby industrial policy focuses on the reduction of market failures. In response to increased global competition, the *New Outlook* also addressed the major economic and social adjustment challenges stemming from the deep technological and structural changes taking place in the world economy.

Industrial support policies were undergoing considerable changes in the context of these new policy approaches. Moreover, driven by weakening state finances, total support was reduced starting in the early 1990s, and national support to manufacturing industry was re-oriented according to the new focus of Finnish industrial policies. However, the exceptionally deep recession of 1991 and 1992 had strong repercussions on national support policies and the level of support in these years.

Finland ratified the WTO Agreement on Subsidies and Countervailing Measures in 1994, and approved, at the same time, new legislation which aims to transpose into national law the procurement agreement concluded in the Uruguay Round.

Finland joined the European Economic Area in 1994 and became a Member of the European Union in 1995, and consequently adopted the EU rules for governmental support aid down in Articles 92-94 of the Treaty of Rome. Thus, membership of the EU also was a driving force behind the re-focusing of national support policies.

In Finland, the budget of the central government is the only source of public support to industry. However, the administration of programmes funded by the central government may take place at the regional or local level.

II. THE STRUCTURE OF PUBLIC SUPPORT IN FINLAND

The data provided by the Finnish Government cover the period from 1989 to 1996. However, to keep this monograph in the perspective of other monographs, for which figures are only available until 1995, the analysis will not be extended to 1996.

No clear trend in the development of public support in Finland over the 1989-95 period is apparent. When the beginning and the end of the reporting period are compared, public support in current prices declined by 6 per cent. Net expenditure reached its lowest level in 1990, when nominal NCG equalled Mk 2.13 billion, and peaked in 1992 at Mk 5.03 billion. The erratic development in expenditure can be attributed to very high NCG of a single sectoral scheme, which resulted from the method of calculating the net cost to government of equity capital injections. In fact, new capital injections in these years represented only a small fraction of the NCG calculated. If the impact of this scheme was isolated, both the 1991 and 1992 levels and the erratic development in expenditure would be considerably lower. In real terms, public support declined by 18 per cent between 1989 and 1995.

Table 34. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million Mk							
	1989	1990	1991	1992	1993	1994	1995	1996
Nominal NCG	2 428	2 126	4 783	5 032	2 911	3 079	2 294	3 071
Real NCG	2 428	2 007	4 412	4 612	2 611	2 732	1 988	2 632
Manufacturing support rate (%)	2.3	2.0	5.3	5.4	2.9	2.7	1.8	2.3
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*			

Source: OECD Industrial Support Database (February 1998).

Finland is one of 15 OECD Member countries in which public support increased, when 1989 and 1993 levels are compared. The decline of support in 1995 to below the 1989 level is the result of curbed expenditure on sectoral programmes which outweighed enhanced spending on industrial R&D support.

The manufacturing support rate, which measures public support to manufacturing as a share of manufacturing GDP, was above the OECD average in every year of the reporting period. For 1995, when the Finnish rate was reduced to 1.8 per cent – the lowest level reached between 1989 and 1996 – an OECD average is not available.

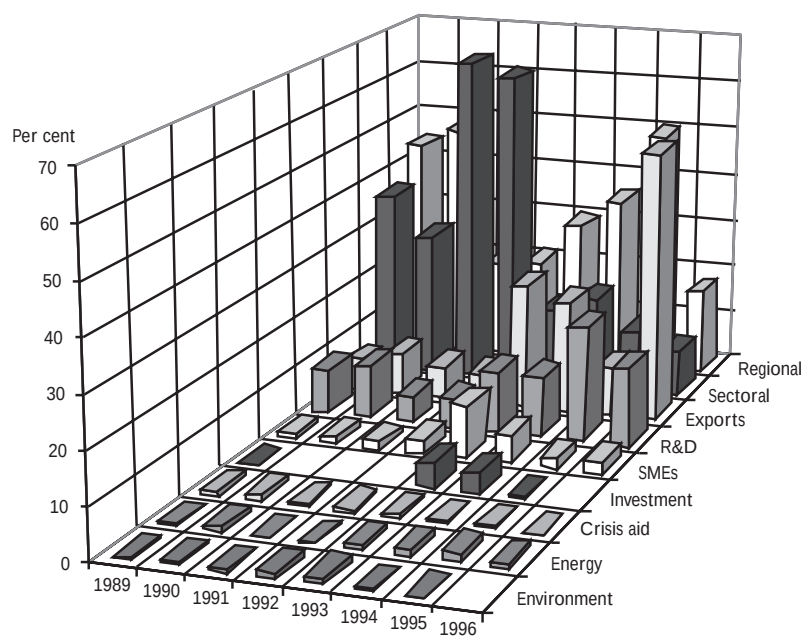
The focus of public support was on regional development and sectoral aid at the beginning of the reporting period which accounted for 81.5 per cent of total expenditure. In 1995, support to regional development and R&D represented 73.1 per cent of total spending. The shift away from sector- and enterprise-specific support towards horizontal policy areas was particularly marked in Finland: while

Table 35. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million Mk							
		1989	1990	1991	1992	1993	1994	1995	1996
Sectoral	7	904	618	3 170	3 218	449	579	287	281
% share	*16.7*	*37.2*	*29.1*	*66.3*	*63.9*	*15.4*	*18.8*	*12.5*	*9.1*
Crisis aid	*2*	27	25	24	32	19	11	10	5
% share	*4.8*	*1.1*	*1.2*	*0.5*	*0.6*	*0.7*	*0.3*	*0.4*	*0.2*
R&D	5	225	232	256	276	351	364	530	483
% share	*11.9*	*9.2*	*10.9*	*5.3*	*5.5*	*12.1*	*11.8*	*23.1*	*15.7*
Regional	9	1 074	1 022	941	1 038	856	1 088	1 147	537
% share	*21.4*	*44.3*	*48.1*	*19.7*	*20.6*	*29.4*	*35.3*	*50.0*	*17.5*
Investment	2	6	0	0	0	130	120	10	0
% share	*4.8*	*0.2*	*0.0*	*0.0*	*0.0*	*4.5*	*3.9*	*0.4*	*0.0*
SMEs	6	24	27	61	131	311	173	47	64
% share	*14.3*	*1.0*	*1.3*	*1.3*	*2.6*	*10.7*	*5.6*	*2.0*	*2.1*
Export	5	149	172	316	287	735	698	227	1 673
% share	*21.4*	*6.2*	*8.1*	*6.6*	*5.7*	*25.2*	*22.7*	*9.9*	*54.5*
Energy	2	10	19	4	6	21	38	34	28
% share	*4.8*	*0.4*	*0.9*	*0.1*	*0.1*	*0.7*	*1.2*	*1.5*	*0.9*
Environment	4	8	10	11	44	40	9	3	0
% share	*9.5*	*0.3*	*0.5*	*0.2*	*0.9*	*1.4*	*0.3*	*0.1*	*0.0*
Total	42	2 428	2 126	4 783	5 032	2 911	3 079	2 294	3 071

Source: OECD Industrial Support Database (February 1998).

◆ Graph 9. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

support under the former category declined from 38.3 per cent in 1989 to 12.3 per cent in 1995, the share of horizontal support, such as regional development, R&D, SMEs, energy efficiency, environmental protection and investment incentives, expanded from 55.4 to 77.1 per cent.

Shipyards, press and state-owned manufacturing enterprises – with respect to the reservations expressed earlier – are the principal beneficiaries of sectoral aid in Finland. Since 1992, such aid had been consistently reduced. All the state-owned manufacturing enterprises included under the Finnish reporting are quoted at the Helsinki Stock Exchange. They have not received new capital injections since 1994.

Under the policy objective of R&D and technological innovation, spending more than doubled when the beginning and the end of the reporting period are compared. Programmes in support of industrial R&D largely focus on financial assistance to the development of new products. With the exception of energy research, direct support to specific technologies does not constitute a priority of industrial R&D support in Finland.

Expenditure on regional development in Finland was in the order of Mk 1 billion in every year of the period from 1989 to 1995. While a smaller part of this expenditure was provided for low-cost transportation of SME products in less-developed areas, investment incentives in such areas accounted for the lion's share of regional development aid. Only in the exceptional years 1991 and 1992, when high levels of sectoral aid biased the composition of total support, did regional development aid not rank as the most important area of public support in Finland.

Under the policy objective of exports and foreign trade, the strong rise in expenditure in 1993, 1994 and 1996 was due to weaknesses in the export credit guarantee scheme. Some large claims were paid out, at least doubling the amounts paid out in normal years.

With only 24 per cent of all programmes terminating within an eight-year period, turnover in the stock of programmes does not appear to be very dynamic. Moreover, almost 60 per cent of programmes have a duration of eight years or more. The shift in policy focus of public support in Finland can be traced to modified financial flows in ongoing programmes, rather than to the implementation of new or the phasing-out of existing programmes.

Of the 42 programmes reported (Annex 1), one was identified which limits the access to public support to national enterprises. In this respect, support polices in Finland appear to be more advanced than the OECD average.

Grants and guarantees were the dominant financing instruments used in Finland throughout the 1989-95 period. These instruments channelled, on average, more than 60 per cent of total expenditure to manufacturing industry. Concerning the NCG values reported under equity capital injections, it should be kept in mind that these values are the result of a calculation which is not based on actual flows. Tax concession programmes play a minor role in the financing of Finnish support policies.

Table 36. **Reported expenditure by financing instrument**

	Programmes	Million Mk							
		1989	1990	1991	1992	1993	1994	1995	1996
Regular grant	18	1 317	1 368	1 365	1 236	1 217	1 204	1 313	1 111
Interest rate subsidy	7	49	95	188	260	438	135	41	42
Regular loan	2	6	6	6	6	2	7	2	1
Conditional loan	1	56	61	72	58	45	105	71	51
Guarantee	7	380	72	561	279	650	962	224	1 715
Equity capital	1	32	66	2 182	2 602	0	0	0	0
Tax concession	3	375	215	85	45	205	194	204	0
Mixed	2	193	223	303	525	332	472	439	151
Unspecified	1	20	20	21	22	23	0	0	0
Total	42	2 428	2 126	4 783	5 032	2 911	3 079	2 294	3 071

Source: OECD Industrial Support Database (February 1998).

Five programmes were applied in the period under review under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of support programmes (Annex 1) and assigned to a second annex (Annex 2).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN FINLAND

Discussions on the future orientation of Finnish national support policy continue. While the simplification of the support system through a reduction in the number of programmes has not notably progressed, new legislation on general conditions for the provision of industrial subsidies went into force on 1 January 1998. This act limits the duration of all new support programmes and requires that they be periodically assessed. Furthermore, under the new legislation support schemes will primarily target research, product development, training or other forms of immaterial corporate development, or the long-term enhancement of the competitiveness of SMEs. For the promotion of physical investments or the financing of fixed assets in large companies, public support will be granted only on special grounds. An ''Advisory Committee on Business Subsidies'' will be established to prepare an appraisal statement on each new scheme prior to its formal approval.

Such far-reaching provisions are expected to result in a significant improvement of the policy effectiveness of future support programmes. They should, at the same time, provide the procedural framework necessary to further curtail public support to manufacturing industry in Finland.

Annex 1: **List of industrial support programmes reported by Finland**

Programme code	Programme title
1401001	Equity Capital Injections to State-owned Enterprises
1401002	Subsidies to the Press
1401003	The Ship Guarantee Scheme of the Finnish Guarantee Board (FGB)
1401004	Export Credit Guarantee Scheme (Shipping) of the FGB
1401005	Interest Rate Subsidies for Ship Deliveries
1401006	Aid for Investments and Adaptation of Food Industry
1401007	State Aid for Shipbuilding
1402001	Support to Certain Enterprises in Difficulty
1402002	Firm Specific Loans
1403001	Grants for Industrial R&D
1403002	Soft Loans for Industrial R&D
1403003	Aid for the Promotion of Energy Research
1403004	The Fund for Investments in Industrial R&D
1403005	R&D Co-operation Grants
1404001	Regional Transport Subsidy
1404002	Regional Development Aid for Enterprises
1404003	Relocation Aid for SMEs
1404004	Small Business Aid
1404005	Regional Development Activities of KERA Ltd
1404006	Accelerated Regional Depreciation
1404007	Regional Stamp Duty Exemption
1404008	Provincial Development Grants
1404009	State Aid for Improvement of the Operational Conditions of Undertakings
1405001	Accelerated Depreciation Scheme for Investment in Industrial Production
1405002	Transfer to State Investment Fund
1406001	Industry Guarantee Scheme of the FGB
1406002	Interest Rate Subsidy for Investments of SMEs
1406003	Interest Rate Subsidy for SMEs
1406004	Regional Business Service Offices
1406005	Consolidation Guarantee Scheme of the FGB
1406006	Venture Capital Guarantee Scheme of the FGB
1408001	Internationalisation of SMEs
1408002	Soft Loans for the Internationalisation of Businesses
1408003	Promotion of Industrial Performance
1408004	Export Credit Guarantee Scheme of the FGB
1408005	Interest Rate Subsidies to the FEC Ltd
1409001	Energy Grants
1409002	Interest Rate Subsidy for Energy Investments
1410001	Environmental Protection Guarantee Scheme of the FGB
1410002	Interest Rate Subsidy for Waste Management and Air Pollution Control
1410003	Interest Rate Subsidy for Water Protection Investments by Industry
1410004	Promotion of Environmental Protection

Annex 2: **List of labour and training programmes reported by Finland**

Programme code	Programme title
1407001	Employment Subsidy Scheme
1407002	Subsidy for Worsened Employment Situation
1407003	Structural Change Scheme
1407004	Investment Aid to Promote Employment
1407005	Vocational Training Scheme: Compensation to Employers

FRANCE

FRANCE 1993

GDP billion: FF (current prices)	7 077.1
Manufacturing GDP: billion FF (current prices)	1 380.3
Unemployment rate (standardised)	11.7%
Corporate tax rate	33%
Government borrowing rate	7.04%
Civil procurement	–
Military procurement	–
Support to labour and training: million FF	67.1
R&D contracts	–
Financial support to R&D institutions	–
Public space programmes: million FF	4 947

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN FRANCE

Industrial policy in France has substantially changed over the past 15 years. Governments with differing political stances and different views of the role of the state in the economy have succeeded one another. Very roughly, the contrast was between direct government intervention in the economy (support for national champions, publicly owned enterprises, strong sectoral policies, etc.) and horizontal policies designed to create a favourable and attractive environment for entrepreneurship. Since the late 1980s, because of major economic constraints primarily related to expanding budgetary deficits and public debts, a horizontal approach to industrial policy has developed.

In order to improve the attractiveness of France as an industrial location, the government has been working over the past few years to create a more conducive environment for the development of industrial activities. This approach has been applied in a number of domains and primarily consisted of: a dynamic territorial development policy; an education policy aimed at ensuring a supply of skilled labour; sustained efforts to reduce the administrative burden on enterprises; the construction of comprehensive and high-quality communication infrastructures; major efforts to promote research activities and the diffusion of technological innovation; and constant improvements in commercial and tax law.

The new orientation of industrial policy, and the efforts related to fiscal consolidation in order to meet the Maastricht criteria and to participate in the Economic and Monetary Union from its inception, had a strong impact on the level and structure of public support to industry in the period from 1989 to 1995. A sharp decline in the volume of support and a shift towards horizontal policy objectives such as R&D, regional development and SMEs resulted from these efforts.

The decentralisation of powers from central government to communes, departments and regions continued in the period under review. The increased autonomy has provided these authorities with an opportunity to devise and apply their own economic development policies resulting in a growing share of sub-central support in total support to manufacturing industry.

France ratified the WTO Agreement on Subsidies and Countervailing Measures in 1994, and approved, at the same time, a new legislation on public procurement which aims to transpose into national law the procurement agreement concluded in the Uruguay Round.

II. THE STRUCTURE OF PUBLIC SUPPORT IN FRANCE

In France, public support to manufacturing industry which amounted to FF 21.5 billion in 1989 came down to FF 12 billion in 1995. In spite of this strong downward trend, public support peaked in 1993, mainly as a result of the method of calculating the net cost to government of equity capital injections under a sectoral scheme in this year. If the impact of this scheme were to be isolated, public support would have consistently diminished since 1989. In real terms, expenditure decreased by 51 per cent.

Table 37. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million FF						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG	21 531	17 138	19 429	19 120	23 143	17 759	12 018
Real NCG	21 531	16 623	18 260	17 622	20 850	15 786	10 533
Manufacturing support rate (%)	1.6	1.2	1.4	1.4	1.7	1.3	0.8
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

Source: OECD Industrial Support Database (February 1998).

Given the reasons mentioned above, France is one of the 15 OECD Member countries in which public support increased, when 1989 and 1993 levels are compared. However, over the period from 1989 to 1995 for which figures are available for only nine countries and at the level of the Commission of the European Communities, France belongs to a group of three countries in which 1989 expenditure had almost halved by 1995. Massive cuts in spending under the policy objectives of sectoral aid and exports and foreign trade stand lie this development.

The manufacturing support rate which measures public support to manufacturing industry as a share of manufacturing GDP was above the OECD average from 1989 to 1993. In 1995, this rate had diminished by 50 per cent when compared with its 1989 level underlining the serious efforts made by the French Government to reduce public expenditure. In the light of the information available for other OECD Member countries for 1995, France would belong to the group of countries in which the manufacturing support rate lies below the average.

The changes in French support policies had far-reaching implications for the levels of aid and the breakdown of expenditure. At the beginning of the period under review, support to industrial R&D efforts, export promotion and sectoral aid represented 83 per cent of total public support. Since then, the focus of French support policies has shifted towards horizontal policy objectives such as R&D and regional development, while the share of sectoral aid and export promotion in total support declined to 21 per cent.

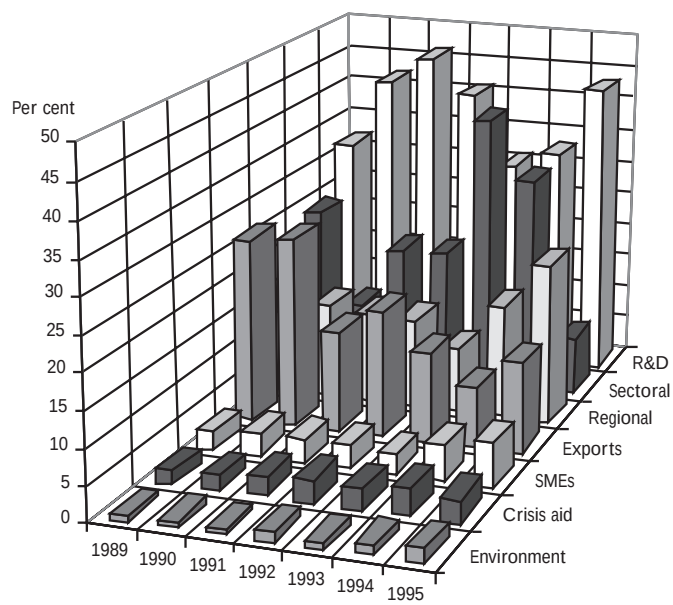
As a result of privatisation, sectoral aid, including equity funding for publicly owned enterprises, declined substantially in the period under review. At the end of this period, only one manufacturing enterprise remained in public ownership, and minority holdings were retained in a few privatised businesses. Expenditure sank from FF 5.2 billion in 1989 to FF 1 billion in 1995. Shipyards were the main beneficiaries of sectoral support schemes.

Under the policy objective of R&D and technological innovation, the French Government continued its efforts to encourage business to invest in research. In terms of the expenditure reported, R&D support emerged as the major domain of public support in France. Spending was particularly focused on R&D in microelectronics and the promotion of R&D in industrial SMEs.

Table 38. **Reported expenditure and programmes by policy objective**

Objectif	Nominal NCG: million FF						
	1989	1990	1991	1992	1993	1994	1995
Sectoral	5 168	1 725	3 737	3 709	9 357	5 639	1 026
% share	*24.0*	*10.1*	*19.2*	*19.4*	*40.4*	*31.8*	*8.5*
Crisis aid	405	349	520	657	728	688	382
% share	*1.9*	*2.0*	*2.7*	*3.4*	*3.1*	*3.9*	*3.2*
R&D	6 800	7 232	8 981	7 839	7 008	5 804	5 190
% share	*31.6*	*42.2*	*46.2*	*41.0*	*30.3*	*32.7*	*43.2*
Regional	2 609	2 404	2 570	2 519	2 184	2 914	2 805
% share	*12.1*	*14.0*	*13.2*	*13.2*	*9.4*	*16.4*	*23.3*
SMEs	624	559	670	678	679	918	765
% share	*2.9*	*3.3*	*3.4*	*3.5*	*2.9*	*5.2*	*6.4*
Exports	5 781	4 711	2 791	3 491	2 978	1 546	1 600
% share	*26.8*	*27.5*	*14.4*	*18.3*	*12.9*	*8.7*	*13.3*
Environment	144	159	159	227	210	250	250
% share	*0.7*	*0.9*	*0.8*	*1.2*	*0.9*	*1.4*	*2.1*
Total	21 531	17 138	19 429	19 120	23 143	17 759	12 018

✦ Graph 10. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Support programmes exclusively targeted on SME development are fairly marginal and represented less than 5 per cent of total expenditure in each year of the reporting period. However, the promotion of small and medium-sized businesses is a major concern of many R&D and regional development programmes. When such support is added to expenditure under direct SME support programmes, a steady rise in the significance of SME support may be observed virtually throughout the period 1989 to 1995.

In France, the trend in regional development aid generally followed the economic cycle, but was also determined by the 1988 Act extending the devolution process and giving more power and resources to local authorities. Under the policy objective of regional development, public support to manufacturing industry was provided both by the central government and by sub-central authorities. Most of the expenditure was spent on attracting entrepreneurs and investment to disadvantaged regions.

Financial flows to manufacturers under the policy objective of exports and foreign trade were largely channelled through schemes on export credit insurance and interest rate subsidies for export credits. The decreasing expenditure under this policy objective mirrors the French Government's efforts to simplify procedures and to take a more selective approach in order to minimise the risk of losses. In 1995, the net expenditure reported accounted for only 28 per cent of its 1989 level. Helping SMEs to prospect foreign markets and take part in fairs and trade exhibitions outside the European Union has emerged as a new policy focus of public support to exports and foreign trade in recent years.

With only 12 per cent of all programmes terminating within an eight-year period, and another 12 per cent implemented, turnover in the stock of programmes does not appear to be very dynamic. 76 per cent of French support programmes have a duration of eight years or more. The shift in the policy focus of public support in France can be traced to modified financial flows in ongoing programmes, rather than to the implementation of new or the phasing out of existing programmes.

As a general rule, access to public support in France is open to all domestically established enterprises. In this respect, support policies in France appear to be more advanced than the OECD average.

Grants and tax concessions were the dominant financing instruments used in France in the period under review. On average, more than 50 per cent of total expenditure was financed by these instruments. While the role of equity capital injections declined, "soft" financing instruments such as reimbursable grants, loans and guarantees gained in importance. The gap between gross and net expenditure widened towards the end of the reporting period. By 1995, half of all new reimbursable grants were financed from the repayment of earlier ones. Increased financing using soft instruments is part of the French Government's strategy to improve control on public spending and to reduce the budgetary impact of support policies.

Table 39. **Reported expenditure by financing instrument**

	Million FF						
	1989	1990	1991	1992	1993	1994	1995
Capital infusion	3 270	0	2 000	2 000	8 010	3 844	200
Regular grant	5 209	5 343	5 083	4 929	3 822	4 449	2 805
Interest rate subsidy	1 308	1 097	1 157	832	663	409	386
Reimbursable grant	3 349	2 205	2 332	2 590	2 349	2 617	1 729
Tax concession	2 727	3 845	6 009	4 993	4 912	4 521	5 075
Guarantee	5 668	4 648	2 848	3 776	3 387	1 919	1 823
Total	21 531	17 138	19 429	19 120	23 143	17 759	12 018

Public support to manufacturing industry in France is the domain of central government. Less than 10 per cent of total expenditure as provided at the regional or local level. However, this share was growing in recent years.

Three programmes were applied in this period under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting public support to manufacturing industry, such programmes were removed from the final list of support programmes (Annex 1) and assigned to a second annex (Annex 2).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN FRANCE

Neither the aims nor the emphasis of French support policies have undergone fundamental changes since 1995. The chief feature today, and probably for some years to come, is the continuing downward pressure on funding appropriations for budgetary reasons. The obligation to make the most effective possible use of public funding has now become imperative.

In this new context, evaluation of government policy has become a priority issue. All existing programmes and new programme proposals are subject to detailed reviews, with the two-fold aim of identifying scope for streamlining schemes and identifying the critical mass of funding at which a programme would attain maximum utility. These evaluation activities play a major role in improving procedures and guidelines of public support to manufacturing industry.

Public support to industrial innovation and SME development will further gain significance in French support policies. The government has recently launched a number of initiatives to promote these objectives; the focus is on less by introducing new instruments than on making the existing ones more consistent. In addition, the government is preparing the framework for the multimedia era.

Annex 1: **List of industrial support programmes reported by France**

Sectoral policy

Machine tools
Information technology
Aluminium
Aid for the electronics industry
Aid for the textile industry
Aid for the automobile industry
Aid to shipyards
Equity capital for publicly owned enterprises

Emergency aid to firms in difficulties

Interministerial Committee for Industrial Restructuring
Business restructuring credits
Loans by the French Economic and Social Development Fund
Exemption from corporation tax when firms in difficulties are taken over

Aid to R&D

Agence française pour la maîtrise de l'énergie (research side)
R&D programme on land transport
French research and technology fund
Programme for advanced materials use
ANVAR innovation assistance
Support fund for petroleum technologies
Filière électronique (electronics)
Special depreciation of equity stakes in *Sociétés de financement de l'innovation*

Aid for regional development

Lower rates of property transfer charges
Industrialisation fund for mining areas
Enterprise zones in shipbuilding areas
Industrial reconversion
Industrial redevelopment loans in recession-hit areas
Mining reconversion programme (SOFIREM/FINORPA)
Temporary exemption from business tax
Local authority assistance for purchasing or renting buildings and sites
Local authority loan guarantees
Physical planning premium (PAT)
Regional employment and business creation premiums (PRE/PRCE)
Regional development loans, at concessional rates

Aid to SMEs

Focused activities
Regional production procedures
Assistance with co-operation procedures to enhance the environment for SMEs
Regional aid to SMEs to enhance production processes
Regional Consulting Fund (FRAC)
Tax measures to promote business creation
Industrial redevelopment and extension fund
MECA

Exports and trade

Assistance with ordinary trading
IDE promotion
Prospection/exhibition insurance
Concessional loans (BFCE)
COFACE export credit insurance
Export Development Committee (CODEX)

Environmental protection

Monitoring atmospheric pollution
Aid for clean technology
Aid for air quality
Pollution prevention

Annex 2: **List of labour and training programmes reported by France**

Fund for the Improvement of Working Conditions
Tax Credit for Training

GERMANY

GERMANY 1993

GDP: billion DM (current prices)	2 883.6
Manufacturing GDP: billion DM (current prices)	785.5
Unemployment rate	8.9
Corporate tax rate	50% retained profits 30% distributed profits
Government borrowing rate	6.48%
Civil procurement: million DM	246 300
Military procurement: million DM	9 009
Support to labour and training: million DM	0.07
R&D contracts	
– *of which:* Manufacturing	
Financial Support to R&D institutions	
– *of which:* German contribution to ESA: million DM	1 188

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN GERMANY

The reunification of Germany, which took place on 3 October 1990, was the outstanding event that outshone priority setting and policy design in all areas of governmental decision making. While German industrial policy continued to address the country's attractiveness as an industrial location by creating favourable investment and production conditions, policies after German reunification were dominated by an overriding concern: assisting the rapid adjustment of the economy in the new *Länder* to the needs of a market economy.

The federal government put in place three major sets of market-oriented and structural policies with the following main features:

- the establishment of diversified and efficient SMEs together with investment in new and competitive jobs in both manufacturing industry and services;
- the privatisation of the former nationally owned firms under the guidance of the Treuhandanstalt to reorganise industry in the eastern part of Germany; and
- the labour market and social policy measures necessary to facilitate the period of adjustment and to assist in the restructuring process.

The financing of such new policies was partly met by means of cuts and shifts in measures particularly benefiting the old *Länder*. However, in view of the volume of the financial burden and the slow down of economic development during the 1992/93 slump, further tax measures and additional borrowing were necessary.

The horizontal policy approach to improving the overall economic framework conditions remained unchanged in the period from 1989 to 1993. This approach centres on the market and competition; interventionist measures in favour of individual industries are disapproved of.

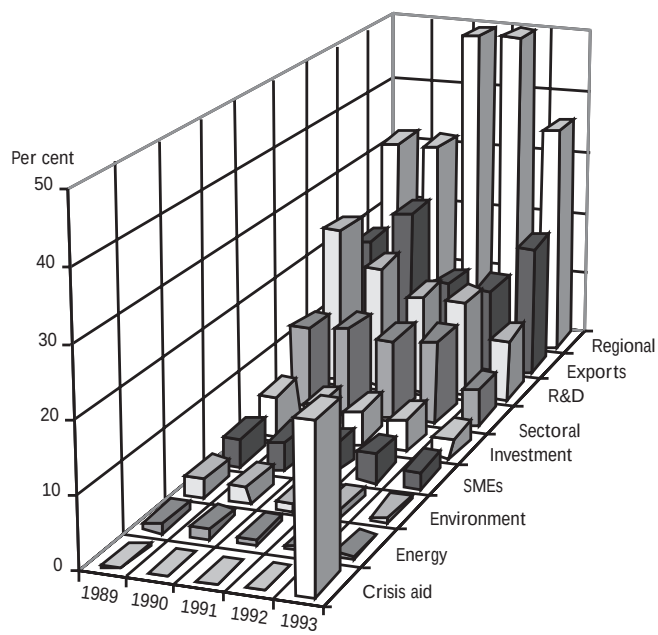
Deregulation, privatisation and the provision of a framework for enforcing a competition policy which will contribute to the creation of a more competitive climate, constitute the substantive mechanisms of German industrial policy. The reduction of subsidies may be considered as an additional element of this policy. While the significance of financial support measures in general should decline under such a policy framework, the strengthening of the innovative potential is the exception to this rule. However, due to the burden of reunification, this policy element could be steadily pursued only in the old *Länder* whereas, due to special circumstances in the new *Länder*, overall subsidisation expanded considerably.

The need for European Community countries to prepare for the 1993 Single Market was the driving force behind the German Government's efforts to support the European Community facilities designed, in particular, to improve small firms' knowledge of the European market.

II. THE STRUCTURE OF PUBLIC SUPPORT IN GERMANY

In Germany, reunification largely determined the development of public support to manufacturing industry in the period from 1989 to 1993. While many schemes benefiting the manufacturing sector in the former Federal Republic were cut down or phased out, hypothetically resulting in a decline in net expenditure, when 1989 and 1993 figures were reduced, the huge transfers into the five new *Bundesländer*, which were partly targeted to manufacturing, lead to an exceptional increase in overall support. In current prices this increase was in the order of 128 per cent. Expenditure grew steadily by 34 per cent from 1989 to 1992, but increased significantly from 1992 to 1993. Even in real terms public support to manufacturing industry grew by 94 per cent in the period under review. Germany is one of the 15 OECD Member countries in which public support expanded when 1989 and 1993 levels are compared.

◆ Graph 11. ***Percentage distribution of NCG expenditure by policy objectives***



Source: OECD Industrial Support Database, February 1998.

Table 40. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million DM				
	1989	1990	1991	1992	1993
Nominal NCG	7 999	8 551	9 725	10 719	18 200
Real NCG	7 999	8 286	9 072	9 477	15 503
Manufacturing support rate (%)	1.17	1.15	1.23	1.34	2.44
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*

Source: OECD Industrial Support Database (February 1998).

The manufacturing support rate which measures public support to manufacturing as a share of manufacturing GDP was close to the OECD average until 1991, but clearly exceeded this level in the peak year 1993. However, when conclusions are drawn from these figures, the very complete reporting of Germany, including comprehensive information on public support to manufacturing industry provided by the *Bundesländer* should be borne in mind.

Nominal growth of public support since 1989 was absorbed by additional spending under the policy objectives of regional development, crisis aid and export credit guarantees. Spending under all the other areas was not affected by major changes. Thus, the focus of public support to manufacturing industry in Germany remained on regional development, export and foreign trade and R&D, which represented 73.9 per cent of total expenditure in 1989 and 65.2 per cent in 1993. The latter figure is biased by a single rescue operation resulting in an unusually high share of crisis aid in that year, otherwise the focus of German support in regional development, export and foreign trade and R&D would have been stronger than in 1989.

Table 41. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million DM				
		1989	1990	1991	1992	1993
Sectoral	9	977.4	1 100.6	1 155.8	1 314.1	1 062
% share	*4%*	*12.2*	*12.9*	*11.9*	*12.3*	*5.8*
Crisis aid	9	7	3.9	1.3	1.3	4 181.7
% share	*4%*	*0.1*	*0.0*	*0.0*	*0.0*	*23.0*
R&D	58	1 902	1 582	1 409	1 548	1 707
% share	*23%*	*23.8*	*18.5*	*14.5*	*14.4*	*9.4*
Regional	39	2 520	2 681	4 829	5 350	6 507
% share	*16%*	*31.5*	*31.4*	*49.7*	*49.9*	*35.8*
Investment	13	474	461	513	488	494
% share	*5%*	*5.9*	*5.4*	*5.3*	*4.6*	*2.7*
SMEs	80	332.4	353.7	373.6	439	423.1
% share	*32%*	*4.2*	*4.1*	*3.8*	*4.1*	*2.3*
Export	7	1 486.2	2 037.4	1 274.2	1 377.8	3 648.8
% share	*3%*	*18.6*	*23.8*	*13.1*	*12.9*	*20.0*
Energy	14	81.8	106	95.9	71.6	67
% share	*6%*	*1.0*	*1.2*	*1.0*	*0.7*	*0.4*
Environment	22	218.2	225.0	73.6	128.9	110.6
% share	*9%*	*2.7*	*2.6*	*0.8*	*1.2*	*0.6*
Total	251	7 999	8 551	9 725	10 719	18 200

The measures taken by the German Government to alleviate the burden of adjustment and to trigger industrial investment and business start-ups in the new *Bundesländer*, strengthened the predominant role of regional investment promotion in particular. Moreover, these measures implemented or applied existing schemes on the territory of the five new *Länder*, rather than constituting a new and different type of support policy.

In many respects, the trends and patterns of public support to manufacturing industry in Germany are very similar to the OECD average: *e.g.* the priority areas of spending (regional development, R&D, and export and foreign trade); the emphasis on support to SMEs in terms of the programmes reported; and the declining share of, and expenditure on, sectoral policies.

As some important sectoral programmes sunsetted in 1993, figures for 1994 would have shown a clearer cut in sectoral aid in Germany than those reported for the former year. The sunsetting programmes in question supported German shipyards.

SME programmes in Germany represented almost one-third of all programmes, but, on average, less than 4 per cent of the expenditure reported. This paradox can partly be explained by the high share of soft loan financing and guarantees in SME support, which does not result in high net expenditure.

On the other hand, Germany is one of the few countries in which public support to R&D, energy efficiency and environmental protection in the manufacturing sector was higher at the beginning of the reporting period than at the end. Public support to industrial R&D, which spans a broad range of measures, focused on direct promotion of selected technologies, accounting, on average, for more than 50 per cent of expenditure. R&D-specific tax schemes were abandoned in the course of the reporting period.

Due to reunification, the turnover in the stock of programmes in Germany was particularly dynamic when compared with the OECD average: almost 38 per cent of the programmes were implemented after 1989, and 17 per cent of the programmes expired. Only 45 per cent of all programmes have a duration of five years or more.

Table 42. **Reported expenditure by financing instrument**

	Programmes	Nominal NCG: million DM				
		1989	1990	1991	1992	1993
Regular grant	148	2 285.2	2 254.2	4 137.6	5 224.1	10 975.4
% share	*59.0*	*28.6*	*26.4*	*42.5*	*48.7*	*60.3*
Reimbursable grant	8	538.2	744.9	505.0	656.7	488.6
% share	*3.2*	*6.7*	*8.7*	*5.2*	*6.1*	*2.7*
Interest rate subsidy	15	102.5	78.5	67.7	116.7	53.0
% share	*6.0*	*1.3*	*0.9*	*0.7*	*1.1*	*0.3*
Regular loan	11	134.1	206.3	163.4	69.3	34.4
% share	*4.4*	*1.7*	*2.4*	*1.7*	*0.7*	*0.2*
Guarantee	24	1 360.6	1 868.0	1 199.3	1 402.1	3 715.7
% share	*9.6*	*17.0*	*21.8*	*12.3*	*13.1*	*20.4*
Equity capital	2	0.0	0.0	0.0	0.0	0.0
% share	*0.8*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Tax concession	21	3 348.6	3 235.9	3 532.0	3 085.3	2 788.8
% share	*8.4*	*41.9*	*37.8*	*36.3*	*28.8*	*15.3*
Mixed	22	229.7	163.4	120.5	164.9	144.3
% share	*8.8*	*2.9*	*1.9*	*1.2*	*1.5*	*0.8*
Total	251	7 999	8 551	9 725	10 719	18 200

Slightly more than 2 per cent of the programmes reported limit access to public support to national enterprises. In this respect, the opening of support policies in Germany to domestically established, foreign-owned firms or to enterprises from abroad, can be considered as more advanced than the OECD average.

Grants emerged as the most important financing instrument of public support in Germany. At the same time, tax concessions which ranked as the first financing instrument in 1989 and 1990 declined in importance. As the state is no longer owner or majority shareholder of manufacturing enterprises, capital injections have disappeared from the landscape of support financing in Germany.

In Germany, more than half of the programmes reported are managed and financed by the governments of the 16 *Länder*. Combined with the 20 programmes that are jointly managed by federal and *Länder* governments they represent almost two-thirds of all programmes. In terms of the expenditure involved, *Länder* programmes, on average, accounted for 6 per cent of total support. Federal support, including programmes managed by public or private institutions which to a large extent are established at the federal level, declined from 81 per cent in 1989 to 47 per cent in 1993. Jointly financed programmes gathered an increasing share of total expenditure, equalling 49 per cent in 1993.

Table 43. **Public support by managing structure**

	Programmes	Nominal NCG: million DM				
		1989	1990	1991	1992	1993
Central	60	5 171.0	5 062.1	5 249.2	5 361.5	4 878.1
% share	*23.9*	*64.7*	*59.2*	*54.0*	*50.0*	*27.4*
Sub-central	144	577.4	523.2	583.3	681.3	783.8
% share	*57.4*	*7.2*	*6.1*	*6.0*	*6.4*	*4.3*
Joint central/Sub-central	20	906.4	1 031.1	2 679.3	3 317.5	8 834.4
% share	*8.0*	*11.3*	*12.1*	*27.6*	*31.0*	*48.5*
Private institution	12	1 312.4	1 909.0	1 194.1	1 312.5	3 573.6
% share	*4.8*	*16.4*	*22.3*	*12.3*	*12.2*	*19.6*
Public institution	14	10.2	14.8	14.9	46.2	30.4
% share	*5.6*	*0.1*	*0.2*	*0.2*	*0.4*	*0.2*
Unclassified	1	21.5	11.0	4.6	0.0	0.0
% share	*0.4*	*0.3*	*0.1*	*0.1*	*0.0*	*0.0*
Total	251	7 999	8 551	9 725	10 719	18 200

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN GERMANY

The further reduction of subsidies remains on the policy agenda in Germany. The phasing-out of selected financial measures for industries that are no longer competitive will mark the emphasis of future national support policies. To this extent, the duration of support measures will be further reduced in the old *Länder*, and more focused and concentrated in the new *Länder*.

Concerning the future role of tax concessions, a further tax reform including the closure of tax loopholes is on the agenda. The abolition of exemption rules and benefits shall contribute to a further reduction of tax subsidies in manufacturing industry.

The "Medium-term Support Concept of the Federal Government for the Economic Development in the Eastern Federal States" provides a new framework for the promotion of economic development in the new *Länder* from 1998 to 2004. This new concept will particularly focus on the promotion of investment, financial assistance to business start-ups and the strengthening of risk capital in SMEs, the promotion of industrial R&D, and export promotion and marketing.

Annex 1: **List of industrial support programmes reported by Germany**

Programme code	Programme title
1601001	Programme to Support the International Competitiveness of West German Shipyards
1601002	8th Shipyard Aid Programme
1601003	Programme to Support the International Competitiveness of East German Shipyards
1601004	Airbus Development Cost Aid
1601005	Grants for the Development of Civil Aircraft
1601006	Restructuring Aid for Shipyards
1601007	Conversion Programme
1601008	Restructuring Assistance for Shipyards
1601010	Grants to Steel Companies for Assistance to accompany Structural Adjustment
1602001	Diversification Assistance for Shipyards
1602002	Restructuring Aid for Shipyards in the Coastal Länder
1602003	Financial Assistance for Enterprises in Trade and Industry whose Viability is Endangered by the Gulf War and its Repercussions
1602004	Guarantee Programme
1602005	Public Financial Aid in Emergencies due to Natural Disaster
1602006	Back-Guarantees to Credit Guarantee Associations
1602007	Government Guarantees for Enterprises in Trade and Industry
1602008	Liquidity Aid Programme
1602009	Debt Relief for Arbed Saarstahl
1603001	Discretionary Valuation for Investments in Research and Development
1603002	Investment Allowance for Business Investments in Research and Development
1603003	Grants to Support R&D Potential in SMEs in the New *Länder* – Personnel Promotion (PFO)
1603004	Support for Projects of Research Institutions connected with Industry in the *Länder* listed in Article 3 of the Reunification Treaty
1603005	Promotion of the Development of New Products and Processes in SMEs in the New *Länder* (Promotion of Innovation)
1603006	Biotechnology – Indirect Specific Measure
1603007	Energy – Indirect Specific Measures: *a)* 250 MW Wind; *b)* 1 000 Roofs Photovoltaic Programme
1603008	Microperipherals/Microsystems – Indirect Specific Measure
1603009	Production Engineering – Indirect Specific Measures: *a)* CAD/CAM; *b)* Robotics; *c)* CIM
1603010	Research Co-operation Between Industry and Science – Indirect Measure
1603011	Contract R&D in the New *Länder* (AFO/AWO) – Indirect Measure
1603012	Research Personnel Increase Promotion in the New *Länder* – Indirect Measure
1603013	Research Co-operation (SME)
1603014	New Technology-Based Firms (NTBF) – Indirect Measure
1603015	Marine Research and Marine Technology; Polar Research – Direct Project Promotion to Industry
1603016	Space Research and Space Technology – Direct Project Promotion to Industry
1603017	Energy Research and Energy Technology – Direct Promotion to Industry
1603018	Environmental Research; Climate Research – Direct Project Promotion to Industry
1603019	Research and Development in Health Services
1603020	R&D to Improve Working Conditions – Direct Project Promotion
1603021	Information Technology (including Production Engineering) – Direct Project Promotion to Industry
1603022	Biotechnology – Direct Project Promotion to Industry
1603023	Materials Research; Physical and Chemical Technologies – Direct Project Promotion to Industry
1603024	Aeronautical Research and Hypersonic Technology – Direct Project Promotion to Industry
1603025	Research and Technology for Ground Transport (including Traffic Safety) – Direct Project Promotion to Industry
1603026	Geosciences and Raw Material Supplies – Direct Project Promotion to Industry
1603027	Building Research – Direct Promotion to Industry
1603028	Specialised Information – Direct Project Promotion to Industry
1603029	Humanities; Economic and Social Sciences – Direct Project Promotion
1603030	Contract R&D – Indirect Measure
1603031	Programme for Forward-looking Technologies
1603032	Financial Support Programme at *Land* level for Projects to Develop, Introduce and Disseminate New Technology (Technology Programme for Industry)
1603033	Technology Programme for Materials Development
1603034	Guidelines on Grants Towards Employing Innovation Assistants in Small and Medium-sized Enterprises
1603035	Project to Support Innovation Internships (as from 1990: "Promotion of Personnel Transfer Measures")
1603036	Establishment of Technologieagentur STRIDE. Grants towards Technology Transfer Measures at Regional Level
1603037	Programme to Support R&D Projects in the Field of Artificial Intelligence
1603038	Progr to Improve Possibilities for Young Technology-oriented Innovative Businesses/Persons Setting Up in Business to Access Investment Capital
1603039	Guidelines on Financial Assistance at the *Land* Level for Applied Research and for Projects Involving the Development and Implementation of New Technology
1603040	Modern Technology Programme

Annex 1: **List of industrial support programmes reported by Germany** *(cont.)*

Programme code	Programme title
1603041	Support for Development Projects of Small and Medium-sized Businesses (Innovation Support Programme)
1603042	Programme to Promote Innovation
1603043	Structural Assistance for SMEs in R&D Services (R&D Structural Assistance Programme)
1603044	Guideline on Support for the Development of Technologically New Products and Processes (Research & Technology Programme)
1603045	Grants and Other Support for New Technologies
1603046	Support for New Technologies in Production
1603047	Research Programme "New Materials"
1603048	Programme to Promote Innovation
1603049	Grants for Technology and Services Consultancy
1603050	Integrated Research and Development
1603051	Support for R&D Projects
1603052	Innovation Fund
1603053	Programme to Support Research and Technology Projects and the Use of Modern Technologies in SMEs (Innovation Promotion & Technology Programme)
1603054	Programme to Support Industry-related R&D and Innovation
1603055	Programme to Promote Innovation Assistants
1603056	Guideline on Grants to Promote Innovation within the Framework of the Economic Support Programme
1603057	Programme to Introduce New Technologies
1603058	Co-operation with the Successor States of the Former Soviet Union in the Field of Civil Aerospace
1604001	Tax Concessions for Business Investments in the *Zonenrandgebiet* (areas in the proximity of Germany's East-West border). Border Zone Aid Law 3
1604002	Special Depreciation for Business Investment in the New *Länder*
1604003	Investment Allowances in the New *Länder*
1604004	Net Worth Tax Not Imposed on the New *Länder*
1604005	Trade Tax on Capital Not Imposed in the New *Länder*
1604006	Accelerated Depreciation for Certain Investments in Depreciable Fixed Assets of Enterprises in Berlin (West)
1604007	Tax Relief for Loans for Business Investment and Construction Work in Berlin (West)
1604008	Investment Allowances Granted in Berlin (West)
1604009	Tax Relief for Income Earned in Berlin (West)
1604010	Investment Allowance for Investments in the *Zonenrandgebiet* (area in the proximity of Germany's East-West border) and Other Eligible Areas
1604011	Eligibility for Turnover Tax Deductions
1604012	Granting of Transport Charge Subsidies from Federal Funds to Compensate for Additional Transport Charges due to the Division of Germany
1604013	Promotion of the Participation of SMEs in Domestic Trade Fairs and Exhibitions within the Framework of the Sales Promotion of Eastern Products
1604014	Joint Federal/*Länder* Programme "Improving Regional Economic Structures" (original *Länder*)
1604015	Joint Federal/*Länder* Programme "Improving Regional Economic Structures" (new *Länder*)
1604016	Special Programme Aachen-Jülich
1604017	Special Programme covering Structural Change outside Coal, Iron and Steel Industry Regions
1604018	Special Programme covering Coal, Iron and Steel Industry and Footwear Regions
1604019	Special Programme for Wilhelmshaven
1604020	Special Programme for Mining Regions
1604021	Joint Federal Government/*Länder* Programme for "Improving Regional Economic Structures"
1604022	Financial Support to Improve Regional Structures
1604023	Programme for Objective-2 Areas at *Land* Level
1604024	Programme for Resider Areas at *Land* Level
1604025	Programme for Rechar Areas at *Land* Level
1604026	Programme to Promote Investment in Less-favoured Regions
1604027	General Guidelines on the Use of Financial Resources for Economic Development
1604028	Operational Programme of the European Fund for Regional Development (Objective-2)
1604029	Support for Measures to Improve the Economic Efficiency and Economic Structures of the *Land* (Support Programme of the *Land*)
1604030	Guarantees extended by the *Land*
1604031	Regional Support Programme
1604032	Investment Assistance to Maintain or Establish Industry and Crafts at Long-established Locations
1604033	Grants to Support the Creation of New Jobs and Supplementary Measures in Industry
1604034	Additional Funds made available by the *Land* for the Joint Scheme "Improving the Regional Economic Structures"
1604035	Regional Support Programmes for Trade and Industry
1604036	Programme to Assist the Zonal Border Area
1604037	Loan Programme to Support Investment of SMEs in the Areas Mentioned in Art. 3 of the Reunification Treaty (Loan Programme for SMEs-former GDR)
1604038	Support Programme for "Mittlere Oberpfalz"
1604039	ERP Support of Berlin

Annex 1: **List of industrial support programmes reported by Germany** *(cont.)*

Programme code	Programme title
1605001	Transfer to New Investments of Hidden Reserves that are Disclosed in Connection with the Selling of Certain Assets
1605002	Law on Tax Measures Relating to Foreign Investments of German Industry
1605003	Back-Guarantees Supplied by the Federal Government to Guarantee Banks of the *Länder*
1605004	Guarantee Programme of the Deutsche Ausgleichsbank
1605005	Federal Government/*Länder* Guarantees in the Original *Länder*
1605006	Federal Government/*Länder* Guarantees for Projects in the New *Länder*
1605007	Programme to Promote Business Consultancy for Small and Medium-sized Enterprises
1605008	Guarantees Extended by the *Land* in Accordance with the General Guidelines on Guarantees
1605009	Guarantee Guideline of the *Land*
1605010	Programme for New Business (part of the Programme to Support Small and Medium-sized Business, Technology and Innovation)
1605011	Guideline on Investment Capital Promotion in the context of the Programme to Support Small & Medium-sized Business, Technology and Innovation
1605012	Non-recurrent Interest Subsidies for Low-interest Loans
1605013	Guarantee Programme of the *Land*
1606001	Special Depreciation Allowances Granted for Movable Assets to Assist Small and Medium-sized Businesses
1606002	Deductible Allowances for Yields from Sale
1606003	Deductible Allowance for Certain Corporations
1606005	ERP Programme to Assist SMEs
1606006	ERP Business Start-up Programme
1606007	ERP Environmental Programme
1606008	Promotion of Participation of German Companies in Trade Fairs and Exhibitions Abroad
1606009	Employment Promotion Programme
1606010	Projects to Increase Productivity in Small and Medium-sized Business
1606011	Short-time Consulting Programmes for SMEs in the Retail, Wholesale, Catering Trades and the Road Transport Sector
1606012	''Stimulus to Industry, Consulting Branch''
1606013	Credit Facilities at *Land* Level to Foster Employment
1606014	Guarantees given by the *Land* to Industry, the Liberal Professions, Agriculture and Forestry
1606015	Back Guarantees given by the *Land* and Federal Governments to the Guarantee Bank
1606016	Back Guarantees given by the *Land* and the Federal Governments to the Guarantee Bank to Cover Investment Guarantees
1606017	Interest Subsidies for Investment at *Land* level
1606018	Programme to Promote New Business
1606019	Programme Adopted by the *Land* to Promote Participation in Trade Fairs and Exhibitions
1606020	Guarantees given by the *Land*
1606021	Promotion of Innovation Assistants and Interns
1606022	Promotion of Projects Involving Innovative Products and Processes
1606023	Promotion of Technology Consultancy Services
1606024	Promotion of Technology Centres (initial establishment and start-up phase)
1606025	Programme Governing Loans Financed From the Fund to Promote Small and Medium-sized Businesses (Small Business Loan Programme)
1606026	Innovation Fund of the *Land*
1606027	Guidelines on the Promotion of Consultancy on Setting-up Business, General Consultancy, Services and Consultancy on Consolidation
1606028	Special Fund of the *Land* to Support SMEs
1606029	Programme to Promote Research and Development in SMEs
1606030	Support for SMEs in the Context of Economic and Labour Market Issues of Particular Significance
1606031	Programme to Support SMEs
1606032	Invest. Grants to SMEs and Craft Businesses as well as the Liberal Prof., Incl. Persons Setting-up Business (Investment Programme of the *Land*)
1606033	Programme for New Business
1606034	Programme for New Business
1606035	Programme to Increase the Efficiency of SMEs
1606036	Guarantee Programme of the Landeskreditbank to Cover Investments
1606037	Guarantees for Small and Medium-sized Firms
1606038	Programme to Promote Small and Medium-sized Business at *Land* Level
1606039	Support for Joint Participation of Small and Medium-sized Firms in Fairs, Exhibitions and Symposia Abroad
1606040	Export Promotion Programme
1606041	Equity Interests for SMEs, Persons Setting-up in Business and New Technology-oriented Businesses
1606042	Guideline on Support for the Development of New Products and Production Processes (promotion of innovation) In Small & Medium-sized Business
1606043	Guideline on Support for SMEs for Participation in Fairs and Exhibitions
1606044	Guideline on Support for the Marketing of Domestic Products

Annex 1: **List of industrial support programmes reported by Germany** *(cont.)*

Programme code	Programme title
1606045	Guideline on the Promotion of Measures to Improve the Economic Structure in the Field of Modern, Forward-looking Technologies
1606046	Guideline on Grants to Promote Product Innovation under Programme to Support Small & Medium-sized Business, Technology & Innovation
1606047	Guideline on Grants for Market Analyses & Technology Studies under Programme to Support Small & Medium-sized Business, Technology & Innovation
1606048	Guideline on Grants for Introduction of New Environmental Technology under Programme to Support Small & Medium-sized Business, Technolgy & Innovation
1606049	Grants for Consult Services for Inv & to Safeguard Ind. Prop. Rights under Progr. to Support Small & Medium-sized Business, Technology & Innovation
1606050	Guidelines on the Interest Rate Subsidies in the Context of the SMEs Structural Programme of the Land
1606051	Employment-oriented Investment Assistance Programme in the Context of the Progr. to Promote Small & Medium-sized Bus., Technol. and Innov.
1606052	Progr. on Interest Rate Subs. for Loans to Finance Operating Resources in the Context of the Progr. to Promote Small & Medium-sized Bus, Tech & Innov.
1606053	Investment Support Programme for SMEs
1606054	Interest Subsidies for Small and Medium-sized Business (Interest Subsidy Programme)
1606055	SME Credit Programme
1606056	RECHAR 1990-1993 (agency to support management initiat. to enhance the status of the *Land* as a bus. location within the internal European market)
1606057	Support for New Businesses in Small & Medium-sized Industry and Bonus Scheme for New Businesses
1606058	Guideline on Support for Business Consultancy for SMEs (Consultancy Programme)
1606059	Guideline on Support for the Introduction of Technologically New Products and Processes (Programme to Introduce New Production Processes)
1606060	Guidelines on Promoting Innovation Projects of SMEs
1606061	Programme on Grants to Support SMEs and Tourism
1606062	Guidelines to Support Consultancy on Strategy & Rationalisation for SMEs in Industry & Industry-oriented Services (Bus. Consult. Progr. for SMEs)
1606063	Consultancy Programme for Small and Medium-sized Industries in Two New *Länder*
1606064	Programme Facilitating Access of SMEs and Members of the Liberal Professions to International Market (SMEs Guarantee Programme)
1606065	Loans to the SME Capital Investment Company to Re-finance Participation in SMEs
1606066	Loan Programme to Support Small and Medium-sized Business (SME Loan Programme)
1606067	Programme to Support Participation of SMEs in Trade Fairs
1606068	Programme to Promote Small and Medium-sized Business
1606069	Programme to Assist Industry in Preparing for the Internal European Market
1606070	Programme to Support Independent Small and Medium-sized Business (Support Programme for SMEs)
1606071	SME Programme of the Aufbaubank
1606072	Consultancy Services for Innovation and Technology Transfer
1606073	Loan Programme for Trade and Industry
1606074	Support Programme for SMEs
1606075	Interest Subsidy Programme
1606076	Guarantee Programme
1606077	Consultancy Services of the Rationalisation Board of German Industry
1606078	Guarantees Under the General Guidelines on Guarantees of the *Land* of 9 August 1990
1606079	Guidelines on Guarantees of the *Land* to Cover Investments in Countries in the Process of Changing to a Democratic and Market-economy System
1606080	Consultancy for SMEs
1606081	Loans from the *Land* to Support Industry
1608001	Downward Valuation Adjustment for Imports Subject to Major Price Variations
1608002	Programme to Promote Participation in Trade Fairs
1608003	Export Guarantee Programme
1608004	Programme to Support SMEs in Opening Up New Domestic and International Markets
1608005	Programme to Promote Exports of SMEs to Countries Outside the Community
1608006	Loan Guarantee and Insurance Programmes
1608007	Official Direct Export Credits
1609001	Investment Allowance for Specific Investments in Energy Production and Distribution
1609002	Programme to Support Efficient Use of Energy, Demonstration and Publicity Schemes, Information Projects on Energy Use
1609003	Measures to Promote Energy Conservation
1609004	Energy Conservation Programme
1609005	Notif. of a Guideline from the Eco. Ministry to Support the Constr. or Efficiency-improving Ext. of Small Hydro-Power Plants w/capac. < 1 MW
1609006	Guideline of the Economics Ministry on Support Given Under the Programme on the Efficient Use of Energy and Renewable Sources of Energy

Annex 1: **List of industrial support programmes reported by Germany** *(cont.)*

Programme code	Programme title
1609008	Guideline on Support for the Promotion of Pilot and Demonstration Facilities within the Framework of the Energy Programme
1609009	Guideline on Support for the Use of Solar Energy for Thermal Purposes
1609011	Guideline on Support for the Establishment of Wind Power Plants
1609012	Guideline on Support for Converting Heating Systems With a Thermal Output Capacity of up to 100 kW to Different Energy Sources
1609013	Support for the Development of Corporate Energy Concepts
1609014	Programme to Promote More Efficient Energy Generation and Use of Energy
1609015	Programme to Promote Renewable Energy Sources
1609016	Economic Development Fund – Ecology – Guideline on Energy
1610001	Special Depreciation for Assets Related to Environmental Protection
1610002	Promotion of Investments in Demonstration Projects Aimed at the Reduction of Pollution
1610003	Financial Support Progr. at *Land* Level to Promote Invest. to Control Air Pollution, Noise and Vibration (Support Progr. for Emission Control)
1610007	Environmental Technology Programme
1610008	Grants Financed Out of Proceeds Accruing From Wastewater Charges
1610009	Programme to Promote Environmental Protection
1610010	Guidelines on Promotion Measures to Improve the Environmental Acceptability of Production Facilities
1610011	Programme to Promote the Integration of Ecological and Economic Aspects in Management Processes – Pilot Project
1610012	Support for Consultancy for SME on Questions of Environmental Technology
1610013	Programme to Promote Environmental Protection
1610014	Environmental Protection Programme
1610015	Loan Programme to Promote Emission Reduction
1610016	Progr. to Promote Environment Protection in Trade & Industry (air pollution control, effluent treat., resource & waste managt., recycling)
1610017	Support for Waste Management
1610018	Support for Emission Reduction Projects
1610019	Support for Sewage Treatment Facilities of Commercial Enterprises Funded from Wastewater Charges
1610020	Promotion of Investment Protection Under the Special Programme of the Landesanstalt fur Aufbaufinanzierung
1610021	Loan Programme to Support Clean Air Control, Avoidance of Noise and Vibrations, Proper Waste Disposal – Trade and Industry
1610022	Promotion of Pilot Projects and Plans to Develop Applicable Environment Protection Technologies
1610023	Programme to Promote Small Hydro-power Plants
1610024	Economic Development Fund – Ecology – "Industry and Environment"
1610025	Economic Development Fund – Ecology – "New Environment Technologies"

Annex 2: **List of labour and training programmes reported by Germany**

Programme code	Programme title
1607001	Tax Relief in the Context of Employment Benefits
1607002	Support for Consultancy for Independent Firms and Projects
1607003	Programme to Promote the Transfer of Know-how to SMEs (Management Assistance)
1607004	Loan Programme at *Land* Level to Support Local Employment Initiatives

HUNGARY

HUNGARY 1993

GDP: million HUF (current prices)	2 548 262	
Manufacturing GDP: million HUF (current prices)	558 257[1]	
Unemployment rate	11.9	
Corporate tax rate	18%	
	23%	(supplementary tax on dividends)
Government borrowing rate	22.3%	
Civil procurement: million HUF	67 100	
Military procurement: million HUF	2 500	
Support to labour and training: million HUF	73	
R&D contracts	n.a.	
– *of which:* Manufacturing		
Financial support to R&D institutions	n.a.	
Public space programmes	–	

n.a. Not available.
1. Secretariat estimate.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN HUNGARY

The transformation of the Hungarian economy from a state to a market economy was the outstanding policy event in the period from 1989 to 1995. The economic transformation process in Hungary, initiated by the regime change in 1989, can be divided into two stages. The first stage, the transformation crisis period (1990-92), was characterised by a sharp decline of GDP, growing unemployment, high levels of inflation and reduced levels of industrial activity. The second stage (1993-95) recorded both a slow recovery in economic activity and growing macroeconomic imbalances.

Most of the loss-making state-owned companies went bankrupt (3 175 companies between 1993 and 1995), and were either re-organised or liquidated. Restructuring aid was granted only for those enterprises considered eligible for restructuring and, in the next step, for privatisation. In some cases, the time span between the beginning of the restructuring process and privatisation was longer than expected, partly due to budgetary constraints in providing the necessary restructuring aid. With the privatisation process moving ahead, restructuring aid gradually diminished. With a few exceptions that persist, this kind of aid had been phased out.

The industrial policy approach of the successive Hungarian Governments changed considerably during the period under review: state ownership was consistently reduced and subsidies from the state budget have been greatly cut back and re-oriented towards horizontal policy objectives to facilitate the positive adjustment of industry. While at the beginning of the 1990s the establishment of framework conditions conducive for a properly functioning market economy was the focus of economic and industrial policy in Hungary, the promotion of industrial restructuring by horizontal means such as investment promotion, SME promotion, dissemination of technology, export promotion, regional development, etc., has been enhanced since the mid-1990s.

Driven by the strategic objective of strengthening the competitiveness of industry, industrial policy documents of the Hungarian Government, published consecutively in 1991, 1993 and 1995, increasingly emphasized the role of horizontal policy instruments in achieving this objective, and made an ambitious effort to widen the scope of industrial policy considerations.

At the same time, compliance with contractual obligations under international agreements gained importance in industrial policy formulation and, more specifically, in the design of industrial support policies. In this respect, the Europe Agreement, the ratification of the WTO Agreement on Subsidies and Countervailing Measures, membership in the OECD as of 1996, and last but not least, Hungary's intention to join the European Union, have particularly influenced legislation and policy making in Hungary in the period under review.

These developments offered opportunities to adjust the principles and eligibility criteria for obtaining support with a view towards conformity with existing state aid frameworks established by the Commission of the European Communities. Such harmonization may be considered a major positive achievment of this process.

Public support to manufacturing industry in Hungary was exclusively provided by central government authorities and public institutions at the central level. The Ministry of Finance, the National Committee for Technological Development and the Ministry of Industry, Trade and Tourism emerged as the main sources of industrial support in the period from 1989 to 1995.

II. THE STRUCTURE OF PUBLIC SUPPORT IN HUNGARY

In the case of Hungary, the structural analysis of public support to industry is limited. Due to the unavailability of net values for the programmes reported, the analysis focuses on qualitative aspects of public support to manufacturing industry. In order to avoid any misunderstanding of the gross expenditure figures reported, most of which refer to total expenditure including support to non-manufacturing enterprises, the quantitative analysis of such figures has been omitted.

Twenty-one industrial support programmes were reported by the Hungarian Government for the period from 1989 to 1996. One-third of these programmes provided support to the promotion of investment, five schemes were applied under the policy objective of R&D and technological innovation, and three programmes were in support of SMEs. The remaining programmes were applied under the policy objectives of crisis aid (two programmes), regional development, export promotion, energy efficiency and environmental protection (Annex 1). Two programmes reported under the policy objective of labour and training were removed from the final list of programmes and assigned to a second annex (Annex 2).

The strong focus of programmes on investment promotion, R&D and SME support reflects the prominent role of these issues in Hungarian industrial policy. The information available on the gross expenditure allocated to these policy objectives underlines the increasing significance of such supports.

The Hungarian Government's approach in promoting investment puts particular emphasis on attracting foreign direct investment and making the re-investment of foreign shareholders' dividends more attractive. Tax concessions are primarily used to provide incentives both for domestic companies and investors from abroad.

The main objective of SME support programmes is the improvement of the financing situation of small and medium-sized businesses in Hungary. The financing of business start-ups, the development and growth of SMEs and the establishment of a workable system for venture capital financing were the main targets of SME support in the period under review.

The majority of Hungarian support programmes were implemented in 1990 or later. The high share of new programmes in the stock of programmes (76 per cent) differs significantly from the OECD average, but should be interpreted as the result of frequent changes in the design of programmes, particularly with respect to the policy objectives envisaged and the financing instruments used.

Tax concessions are the financing instrument used in six programmes. They channelled the lion's share of expenditure to manufacturing industry. Four programmes were financed by loans, four by mixed instruments, three programmes by grants and three by interest-rate subsidies. Guarantee financing was exclusively used in only one support programme. In relation to the number of programmes, a broad range of financing instruments were used in Hungary.

Only one of the 21 programmes reported was identified which limits the access to national enterprises. Regarding the remaining schemes, all enterprises established in Hungary may participate. However, in this respect, support policies in Hungary appear to be slightly less advanced than the OECD average.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN HUNGARY

In 1996, the Hungarian Government implemented a first set of support measures aiming to improve the capital supply for the business sector and its self-financing abilities. Priority treatment will also be given to the promotion of SMEs. The existing framework for the promotion of regional development will be revised with a view to better targeting financial support to disadvantaged regions. R&D support and support to education and training will be increased in the frame of the strategic objective of enhancing the competitiveness of Hungarian industry.

Particular attention is being paid to ensuring that new industrial support programmes comply with the frameworks established by the WTO (World Trade Organisation) and the European Union.

Budgetary constraints may limit the Hungarian Government's intention to increase expenditure on public support to industry, expenditure which is deemed necessary to achieve the improvements in national support policies, and, more specifically, in the areas of investment promotion, SMEs, regional development, R&D and educational and training supports.

In this light, greater emphasis will be placed on improving the efficiency of support programmes. According to the intentions of the government, this should be achieved through a better integration of national support policies into economic policy management, the monitoring of support policies (*ex ante* and *ex post* evaluation), and the introduction of regional programmes. The allocation of expenditures to the various policy objectives will be reviewed, evaluated and, if necessary, adapted to better reflect the priorities of structural policies.

Annex 1: **List of industrial support programmes reported by Hungary**

Programme code	Programme title
2902001	Metallurgy Conversion Programme
2902002	Tax Benefit for the Purchase of Machines
2903001	Applied R&D Programme
2903002	Aid to Patent Application
2903003	Geographic Information System Development Programme
2903004	Programme for the Improvement of R&D Infrastructure
2903005	Support to Hungarian Participants in the Fourth R&D Framework Programme of the European Union
2904001	Territorial Development Fund
2905001	Budgetary Scheme Earmarked for Economic Development 1 (BSEED)
2905002	Budgetary Scheme Earmarked for Economic Development 2 (BSEED)
2905003	Tax Concessions to Offshore Companies (since 1994)
2905004	Corporate Tax Concessions for Companies with Foreign Participation
2905005	Tax Benefit related to Interest on Loans and Credit
2905006	Corporate Tax Concessions for Foreign Shareholder's Dividends Reinvested in Hungary
2905007	Investment-related Tax Concession
2906001	Budgetary Scheme Earmarked for Economic Development 3 (BSEED)
2906002	Budgetary Scheme Earmarked for Economic Development 4 (BSEED)
2906003	Aid to SMEs
2908001	Competitive Products Programme
2910001	Environmental Protection Fund
2910002	Water Management of Industrial Establishments

Annex 2: **List of labour and training programmes reported by Hungary**

Programme code	Programme title
2907001	Subsidy for Part-time Employment (income supplement for workers employed part-time)
2907002	PHARE Programme for SMEs

ICELAND

ICELAND 1993

GDP: million IKr (current prices)	359 448
Manufacturing GDP: million IKr (current prices)	53 023 (estimated)
Unemployment rate	4.4%
Corporate tax rate	39%
Government borrowing rate	14.9%
Civil procurement: million IKr	1 288
Military procurement	
Support to labour and training: million IKr	36
R&D contracts	
– *of which:* Manufacturing	
Financial support to R&D institutions: million IKr	187
Public space programmes	

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN ICELAND

Impressive results have been achieved in the Icelandic economy in recent years, including high economic growth, low inflation and significant increases in the purchasing power of disposable income. Contributing to this success have been the following:

- major efforts to strengthen the market economy, the opening of a financial market and EEA participation;
- efforts to ensure overall economic stability have been increased through fiscal and monetary policies; and
- the favourable growth conditions within Iceland have coincided with positive international conditions.

Iceland has also recognised the important role of microeconomic policies in increasing competitiveness, and that of more focused horizontal policies.

Industrial support policies have been designed: to help complement a stable business environment especially for export industries; to promote new initiatives with regard to product development and marketing; and to further develop the marine resources so important to Iceland's economy. These policies have aimed to avoid market distortion and instead have preferred generally available measures, such as those provided to SMEs, involving advisory services, inter-firm co-operation, information dissemination and training. Support to R&D and technical innovation has a pre-eminent role throughout Iceland's industrial support programmes.

II. THE STRUCTURE OF PUBLIC SUPPORT IN ICELAND

Public support to manufacturing industry in Iceland, taking the form of 16 individual support programmes[11] (see Annex 1), accounted for IKr 296 million in 1989 and had reached IKr 328 million by

1995, an increase of almost 11 per cent in nominal terms on 1989. Iceland is, therefore, one of 15 OECD Member countries where overall support had increased when the end and beginning years of the 1989-93 period are compared. Given the small size of the Icelandic economy and the small number of programmes, variations in total expenditure during the period are accounted for by expenditure movements in a few programmes. For example, an important once-off expenditure supporting the energy costs of the fishing industry accounted for almost 29 per cent of total support in 1989. Again, a drop in total support for the year 1992 can be explained by reductions in three R&D programmes and by the onset of reductions in one export programme. For these reasons, the concept of a trend for total NCG is rendered slightly more problematic than for other countries.

In real terms, Iceland's support to industry recorded a drop of 21 per cent when the last year and the first year of the period under review are compared. However, during this period, support in real terms had plunged in 1992 to 60 per cent of the 1989 level. Following a 30 per cent increase in 1993, the level of real support stabilised thereafter until 1995.

The manufacturing support rate, which measures public support to manufacturing industry as a share of manufacturing GDP, was on average 46 per cent of the OECD average for the years 1989 to 1993 (see Table 44).

R&D and technical innovation accounted, on average, for at least half of total support during the period, ranging from 40 per cent in 1989[12] to 64 per cent in 1992, before settling close to 55 per cent for the period 1993-95. In terms of actual support programmes, four, of a total of 16, were devoted to this policy area. Specifically, one programme, the National Research Fund, administered by the National Research Council and covering the entire range of costs, including administration and overhead costs, dwarfed all other R&D support programmes in terms of expenditure, accounting for at least half of the expenditure dedicated to this policy area in earlier years and close to 90 per cent in 1994 and 1995. Increased knowledge and innovation within firms, along with the development of new products and processes were the focus of the three smaller R&D programmes which saw their expenditure peak in the earlier years in contrast to the evolution of expenditure related to the National Research Fund. This points to a consolidation of expenditure in this latter programme, away from more individual targeted programmes.

The predominance of R&D support is revealed when the reported "economic activities supported" are examined. It is very noteworthy that eleven of a total of 16 programmes support R&D costs representing on average over 80 per cent of total NCG for the seven-year period.

SME support programmes attracted on average over 20 per cent of total funding until 1992 and thereafter declined by two-thirds in expenditure levels, representing 12 per cent of total support in 1995. By the latter year this policy area had lost its second rank in commanding public expenditure to regional development programmes. SME programmes were also numerically the most important of any policy area, numbering five in total. During the reporting period, expenditure on these programmes either declined significantly, as in the case of the more financially important programmes (the decline being approximately 50 per cent for two large programmes and one smaller programme when 1995 and

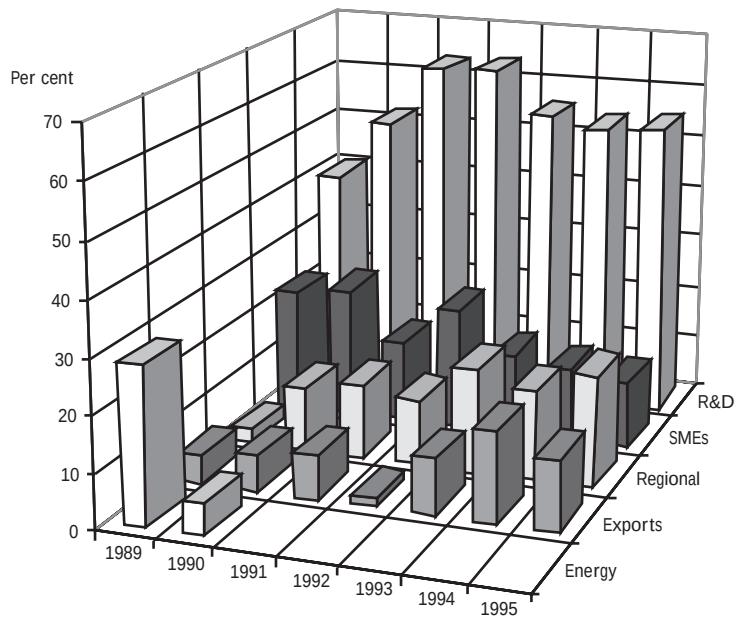
Table 44. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million IKr						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG[1]	296	247	281	230	311	309	328
Real NCG[1]	296	211	224	177	234	229	236
Manufacturing support rate (%)	0.7	0.5	0.5	0.4	0.6	0.6	0.6
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

1. NCG data is available for 14 out of 16 support programmes. Only GGBE data for two crisis aid programmes, incurring expenditure for 1990 only, have been reported.

Source: OECD Industrial Support Database (February 1998).

✦ Graph 12. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

1989 levels are compared) or remained constant in the case of the two smallest programmes. Invariably these five SME programmes offered in different combinations, support for R&D and product development including prototype costs, consultancy, marketing and quality control costs. Three programmes were managed by a public institution while two others were under control of a government ministry. Regular grants were used as the financing instrument in all cases.

Regional development support, in the form of two programmes targeting specific regions outside Reykjavik, one of which was geared to raising the participation of women in business, increased its share in total support and represented in 1995 the second most important destination of public funding for industry. However, the respective patterns over time in the funding of these two programmes were dissimilar, a surge in expenditure occurring in 1993 for the programme targeting women in business and diminishing in later years, while the more general programme incurred significant levels of funding, relative to other years in the reporting period, in 1990-91 and in 1995. Both programmes supported R&D and innovation costs including costs associated with the development of new products and processes, confirming the influential role accorded to R&D and technical innovation in Iceland's industry support policies.

During this period, Iceland also operated two export and trade programmes, one of which related mainly to the operation of the Export Council of Iceland, which saw its funding diminish dramatically from 1992 onwards. A second programme was instituted in 1993 aiming to increase knowledge within firms and offering support for market analysis, consultancy, and trade exhibitions. This latter programme, which was not sectorally focused, spent IKr 45 million on average for 1994-95, surpassing, for example, spending on all five SME programmes for these last two years.

Only in 1989 and in 1990, under the aegis of a specific programme dedicated to support the energy costs of the fishing industry, did Iceland incur expenditure in the policy area of energy efficiency. In 1989 the support constituted almost 29 per cent of total public support to manufacturing industry,

followed by a mere fraction of this figure in 1990. While the expenditure incurred was the government's response to the difficulties of the industry due to a small fishing catch in those years and might naturally be considered for inclusion with crisis aid measures, the underlying intention, however, was that through the support of specialised investment, companies might be encouraged to minimise energy consumption in the future.

Under the crisis aid policy area, two support programmes were reported. These programmes were in response to the financial difficulties encountered by companies engaged in the development of new products based on natural resources. This support was limited to a single year, 1990. Equity capital infusions were the vehicles for financial support in both cases and, as such, represented the sole instances in Iceland's industrial support where an instrument other than regular grants was used. Once again, the important R&D component of the activities of the beneficiaries of these programmes is evidence of Iceland's attachment to the promotion of innovation. While the GGBE (Gross Government Budget Expenditure) has been reported, no data is available for NCG (Net Cost to Government), thereby precluding the inclusion of this support in the total calculated in Tables 44 and 45.

Table 45. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million IKr						
		1989	1990	1991	1992	1993	1994	1995
Crisis aid	*2*	0	n.a.[1]	0	0	0	0	0
% share	*12.5*	*0.0*	*n.a.*[1]	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
R&D	4	119	128	177	146	173	166	179
% share	*25.0*	*40.2*	*51.8*	*63.0*	*63.5*	*55.6*	*53.7*	*54.6*
Regional	2	9	29	39	28	59	50	67
% share	*12.5*	*3.0*	*11.7*	*13.9*	*12.2*	*19.0*	*16.2*	*20.4*
SMEs	5	67	59	42	52	47	41	40
% share	*31.3*	*22.6*	*23.9*	*14.9*	*22.6*	*15.1*	*13.3*	*12.2*
Exports	2	16	16	23	4	32	52	42
% share	*12.5*	*5.4*	*6.5*	*8.2*	*1.7*	*10.3*	*16.8*	*12.8*
Energy	1	85	15	0	0	0	0	0
% share	*6.3*	*28.7*	*6.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Total	16	296	247	281	230	311	309	328

1. Gross Government Budget Expenditure values only have been reported for two crisis aid programmes.

Two programmes were reported by Iceland under the labour and training policy objective. As several Member countries do not consider their labour and training programmes to constitute support to manufacturing industry, a Working Party decision was taken to assign such programmes to a second annex (Annex 2).

Ten of a total of 16 programmes were managed by Central Government. These programmes accounted for over 60 per cent of total expenditure early in the reporting period, declining to 35 per cent of the total in 1995. Four of the remaining programmes were administered by public institutions; their share in total expenditure passing from 30 to 51 per cent in the seven-year period. Of the two remaining programmes, one was managed jointly by central and sub-central government tiers while the other was administered jointly by a private and a public institution.

The award of grants is the preferred method of transmitting public support, being the sole financing instrument of all but the two crisis aid programmes, the latter involving capital infusions, on a once-off basis in each case.

When the actual economic activities benefiting from public support are examined, it is clear that supporting R&D costs has been the overriding concern of Iceland's industrial support, as reported to this exercise. R&D costs benefited from 62 per cent of total industrial support as measured by NCG, in 1989. This share rose dramatically to exceed 90 per cent of the total in the years 1992 to 1994, falling back to 82 per cent in 1995. Although the overall manufacturing support rate for Iceland may be low by international standards, a measure taking into account only R&D support would certainly position the Icelandic effort in this respect among the highest-spending countries in this field. Furthermore, specialised investment accounted for most of the remainder, while the share of non-profit institutions dropped from 5 per cent to just over 0.5 per cent during the period.

All reported support programmes are open to all companies operating domestically, whether nationally owned or affiliates of foreign-owned companies. This is rather exceptional when compared with other countries' record in the National Treatment area, where the openness of a country's support to industry does not usually extend to 100 per cent of programmes.

Of the 16 support programmes implemented during the 1989-95 period, seven were new programmes while another seven programmes were already in operation before 1989 and an expiry date within the reporting period had not been fixed for these latter programmes. Two programmes were reported to be sunsetting in the period. Two of the newly introduced programmes incurred expenditure only in 1990. Overall, the turnover in the stock of support programmes in Iceland is more dynamic than the average for OECD countries where 60 per cent of programmes were ongoing, albeit, for the shorter period 1989-93.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN ICELAND

In the foreseeable future Iceland will continue to work towards improving the competitive business environment, relying on a strengthened market economy. To this end, and *inter alia*, the government has expressed its intention to convert state enterprises to public limited companies. The important role and influence of R&D and technical innovation will continue, given that product development and the development of marine resources remain priorities. The harnessing of information technology for the benefit of all sectors of the economy is currently being studied with a view to formulating and implementing appropriate policies in this regard. Support to SMEs will remain in the forefront, as evidenced by a recently announced special project "The Job Creation Initiative for SMEs", which comprises a range of support measures. Improved access to venture capital, and reduced administrative and fiscal burdens (the corporate tax rate has recently been reduced) on firms are also objectives.

While the core of the Icelandic Government's policy aims to enhance the macroeconomic environment in general, thereby ensuring growth and employment, there is also an ever-increasing emphasis on formulating a more comprehensive policy on industrial competitiveness and technological advancement, encompassing the various relevant ministries. A significant contribution to this effort was made in the paper *Icelandic Competitiveness for Growth and Jobs*,[13] published in September 1996.

Annex 1: **List of industrial support programmes reported by Iceland**

Programme code	Programme title
1802001	Industrial Research – Mineral Salt
1802002	Industrial Research – Seaweed
1803001	Industrial Research
1803002	The National Research Fund
1803003	Industrial Research – EUREKA/Halios
1803004	Development and Marketing in the Fishing Industry
1804001	Regional Development Programme
1804002	Support to Women in Business
1806001	Small Companies in Rural Areas
1806002	Industry Development and Marketing
1806003	SMART – Competition
1806004	The Enterprise Initiative
1806005	Product Development Programme
1808001	General Export Promotion
1808002	The Market Qualification Programme (MQP)
1809001	Subvention of Energy Costs in the Fishing Industry

Annex 2: **List of labour and training programmes reported by Iceland**

Programme code	Programme title
1807001	Vocational Training in the Fishing Industry
1807002	Vocational Training Fund

JAPAN

JAPAN 1993

GDP: billion ¥ (current prices)	475 381
Manufacturing GDP: billion ¥ (current prices)	121 428
Unemployment rate	2.5
Corporate tax rate	51.38%
Government borrowing rate	4.3%
Civil procurement:	n.a.
Military procurement: billion ¥	1 188
Support to labour and training: million ¥	19.0
R&D contracts: billion ¥ (1991 data)	163
Financial support to R&D institutions	–
Public space programmes: billion ¥	116

n.a. Not available.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN JAPAN

The ultimate goal of industrial policy is to maintain and create jobs and to increase national income by securing the basis for economic development through sound and healthy development of industries, and thus to improve the living standards of this and future generations. Japanese industrial policy places an emphasis on the market mechanism and has adopted indirect policy means rather than direct measures to achieve this goal. The synergy with macroeconomic policies, which contribute to the expansion of the world economy in harmony with the international economic environment, has been considered very important for the last decade. In particular, the realisation of domestic demand-led economic growth has become an important goal with a view to decreasing the surplus of balance of payments.

Industrial support policies, in the period under review, were based on the principle of providing incentives to firms to strengthen their economic performance

In Japan, the focus of industrial support policies, which traditionally centred on future-oriented issues, shifted more clearly towards the promotion of technological fundamentals, including advanced information and telecommunication systems, and intangible fundamentals, such as education and training.

Public support to manufacturing industry in Japan is provided by both central and regional governments. Public support programmes administered by regional governments mainly focus on the promotion of SMEs and local industries.

Japan ratified the WTO Agreement on Subsidies and Countervailing Measures in 1994, and approved, at the same time, a new legislation on public procurement which aims to transpose into national law the procurement agreement concluded in the Uruguay Round.

II. THE STRUCTURE OF PUBLIC SUPPORT IN JAPAN

Public support to manufacturing industry in Japan strongly increased at the beginning of the period under review. Expenditure which peaked in 1991 at ¥ 616 billion had more than doubled when compared with the 1989 level. In 1992 and 1993 when the claims to be paid on export credit guarantee schemes had reached the normal level of 1989, total public support decreased sharply, resulting in a slight increase in the order of 7 per cent over this five-year period. In real terms, public support in 1993 equalled its 1989 level.

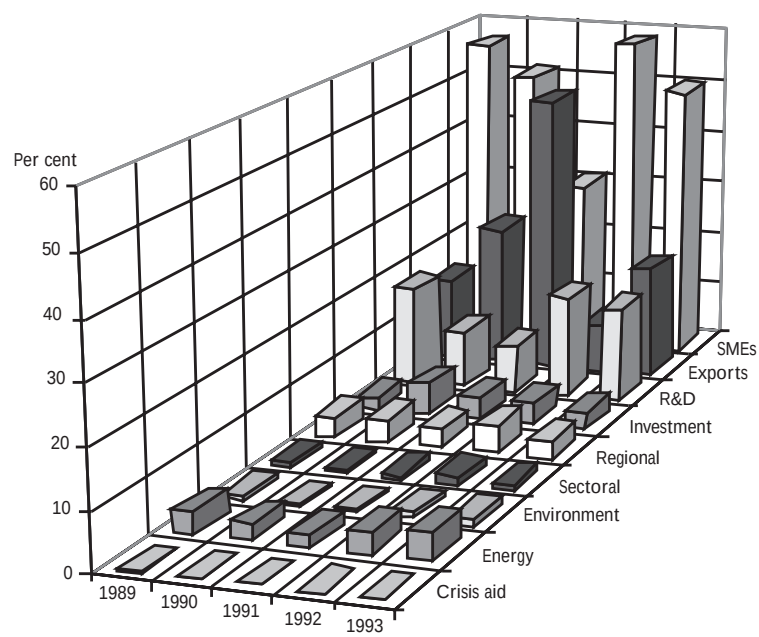
Japan is one of 15 OECD Member countries in which public support to manufacturing industry increased when the beginning and the end of the period from 1989 to 1993 are compared. The manufacturing support rate, which measures public support to manufacturing industry as a share of manufacturing GDP, was below the OECD average in each year of the period under review. Even in 1991, when spending on public support peaked, the Japanese support rate amounted to under a third of the OECD average rate.

Table 46. **Nominal and real NCG expenditure and the manufacturing support rate**

	Billion ¥				
	1989	1990	1991	1992	1993
Nominal NCG	270	510	616	276	288
Real NCG	270	498	587	259	269
Manufacturing support rate (%)	*0.24*	*0.42*	*0.48*	*0.22*	*0.24*
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*

Source: OECD Industrial Support Database (February 1998).

❖ Graph 13. ***Percentage distribution of NCG expenditure by policy objective***



 Source: OECD Industrial Support Database, February 1998.

Spending on SME programmes, R&D and export promotion represented 88 per cent of total expenditure in 1989 and 87 per cent in 1993. Thus, neither the volume nor the focus of public support changed significantly between the beginning and the end of the period. Only in 1991, when the Japanese export credit guarantee system was particularly hit by loan write-offs and total guarantee and insurance claims paid – problems which occurred in many other Member countries in 1991 and 1992 – was the leading role of support to SMEs in public support to manufacturing industry challenged. However, in each of the remaining years, the share of SME support in total support represented more than 50 per cent. Combined sector- and enterprise-specific support under the policy objectives of sectoral policies and crisis aid represented expenditure in the order of only 1 to 1.5 per cent in each year of the reporting period, demonstrating that the shift from enterprise-, sector- and product-specific support towards support of a more horizontal nature had already taken place before the period under review.

Table 47. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: billion ¥				
		1989	1990	1991	1992	1993
Sectoral	8	2.36	3.32	3.92	3.88	3.24
% share	*3.2*	*0.87*	*0.65*	*0.64*	*1.40*	*1.12*
Crisis aid	*9*	0.54	0.68	0.43	0.21	0.41
% share	*3.6*	*0.20*	*0.13*	*0.07*	*0.08*	*0.14*
R&D	22	47.41	51.96	52.82	50.77	48.54
% share	*8.7*	*17.53*	*10.19*	*8.57*	*18.38*	*16.85*
Regional	17	9.90	20.51	21.15	13.04	9.47
% share	*6.7*	*3.66*	*4.02*	*3.43*	*4.72*	*3.29*
Investment	28	5.10	27.48	23.85	10.55	9.44
% share	*11.1*	*1.89*	*5.39*	*3.87*	*3.82*	*3.28*
SMEs	154	152.66	260.02	187.95	160.90	143.68
% share	*60.9*	*56.46*	*50.99*	*30.51*	*58.25*	*49.88*
Exports	5	40.66	129.13	309.02	23.64	57.70
% share	*12.7*	*15.04*	*25.32*	*50.16*	*8.56*	*20.03*
Energy	5	9.97	14.19	14.13	10.51	13.39
% share	*2.0*	*3.69*	*2.78*	*2.29*	*3.80*	*4.65*
Environment	5	1.81	2.53	2.83	2.73	2.18
% share	*2.0*	*0.67*	*0.50*	*0.46*	*0.99*	*0.76*
Total	253	270.40	509.92	616.11	276.23	288.06

The petrochemical industry, computer industry and shipbuilding were the main beneficiaries of sector-targeted programmes. Sectoral support, which played a minor role in support to manufacturing industry in Japan, increased by 37 per cent when the 1993 and 1989 levels are compared.

Under the policy objective of R&D and technological innovation, spending remained stable throughout the reporting period. While in terms of the programmes reported the focus was on technology-specific programmes, horizontal programmes in support of technological development absorbed more than 70 per cent of the reported R&D expenditure. Energy technologies were the most important area of technology-specific R&D support.

Public support to manufacturing industry under the policy objective of regional development remained below 5 per cent of total Japanese support in each year of the period under review. Sub-central levels of government and institutions were particularly involved in providing such support.

154 support programmes representing 60 per cent of the programmes reported by Japan channelled public expenditure to small and medium-sized businesses. SME support strongly increased until 1990 but fell below its 1989 level at the end of the reporting period. Financing issues, consultancy and the modernisation of the production base constitute the priority objectives of SME support in Japan. Programmes at the central government level in many cases were complemented by a set of prefectural programmes addressing the same issues.

Net expenditure on support to exports and foreign trade can be traced *grosso modo* to a large export credit insurance programme which, on average, accounted for approximately 90 per cent of such support. However, the net cost reported is related to export credits and guarantees which were committed prior to the period under review.

With only 3 per cent of programmes terminating within a five-year period, and a share of 14 per cent of programmes that were implemented in 1990 or later, the stock of Japanese support programmes remained fairly unchanged over the period from 1989 to 1993. The comparatively low turnover in the stock of programmes, and, moreover, the relatively high stability of expenditure on most of the programmes throughout the period under review, reflect the policy orientation of industrial support in Japan, which changed only gradually from 1989 to 1993.

Of the 235 programmes reported (Annex 1), only 2 per cent were identified which limit access to public funds to national enterprises. Eighty-three per cent of the programmes are accessible to firms established in Japan and 11 per cent are accessible even to firms from abroad. In this respect, support policies in Japan appear to be more open than the OECD average.

In Japan, the majority of support programmes are managed and financed by local government authorities; prefectures were in charge of 143 programmes. Only 37 programmes were executed under the strict responsibility of the Japanese Government, but most of the programmes managed by public institutions were also managed centrally. The existence of support programmes at the regional and sub-central level points to a division of responsibilities in national support policies between different layers of government which is much more diversified than in most other Member countries. However, in terms of expenditure, centrally managed programmes, including those managed by public institutions and prefectural programmes, on average accounted for almost 90 per cent of total expenditure.

While the broad range of existing financing instruments was applied in Japanese support policies in the period under review, the strong and increasing weight of loan financing in Japan emerged as an unique financing feature within OECD Membership. More than two-thirds of all Japanese programmes were financed both by conditional (25) and regular (140) loans. Combined financing by loans and guarantees amounted to almost 60 per cent on average. Such so-called "soft financing" mobilised a gross funding of support programmes representing a multiple of the net cost involved. Combined financing by grants and tax concessions – in most other countries the predominant part – accounted for only 34 per cent on average.

Table 48. **Reported expenditure by financing instrument**

	Programmes	Million ¥				
		1989	1990	1991	1992	1993
Regular grant	35	29 369	31 220	33 150	33 386	35 486
Reimbursable grant	8	5 867	6 336	4 375	3 380	4 380
Interest rate subsidy	1	363	420	553	9 56	1 063
Regular loan	140	71 355	190 390	14 2593	106 651	90 225
Conditional loan	25	6 727	15 025	8 547	8 704	7 628
Guarantee	8	69 694	150 474	283 981	8 291	59 070
Equity capital	1	19	72	119	127	102
Tax concession	23	74 389	90 525	120 706	96 623	72 131
Mixed	12	12 618	25 356	22 085	18 108	17 975
Total	253	270 401	509 818	616 108	276 226	288 059

One programme was applied in the period under review under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of support programmes and assigned to a second annex (Annex 2).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN JAPAN

Support policies in Japan will be changed according to the stronger market-orientation of industry policy as well as the stringency of the Japanese budget.

In November 1997, ''The Law on Special Measures for the Promotion of Financial Structure Reform'' was approved by the Diet. This law aims at the reform of national finance to reduce the financial deficit and stipulates various measures needed for the reform, including setting numerical marks for budgetary cutbacks across a wide range of policy areas. It also refers to the cutback in the budget for public support, and establishes the ceiling for the public support budget in the general account from 1998 to 2000. As a consequence, an amount equivalent to 10 per cent of the total initial budget for the previous year should be cut during the period. Thus, the phasing out of public support programmes and the reduction of the total amount of public support necessary to achieve this objective will become effective until the end of the year 2000.

Annex 1: **List of industrial support programmes reported by Japan**

Programme code	Programme title
0501001	Assistance to Rationalisation of Oil-refinery Industry
0501002	Assistance for Promoting the Textile Industry
0501003	Loan Guarantee for the Structural Improvement of Textile Industry
0501004	Equity Capital under the Law on Extraordinary Measures for the Structural Improvement of the Textile Industries
0501005	Reserve for Computer Programme
0501006	Grant for the Promotion of Research and Development of Future Ships
0501007	Wood Industries Upgrading Funds
0501014	Reserves for Programme, etc., of Software Business
0502001	FY 1992 Emergency Economic Measure Special Funds
0502002	FY 1993 Emergency Economic Measure Special Funds
0502003	FY 1993 Cool Summer Measure Special Funds
0502004	Appreciation of Yen Measures Emergency Special Loans for SMEs
0502005	Special Loans for Small Scale Enterprises in Regional Development Measure Areas
0502006	Special Funds for Regional SMEs
0502007	Special Funds for SMEs Emergency Economic Measures
0502008	Wood Industry Stable Management Funds
0502009	Wood Industry, etc., Upgrading Funds
0503001	Assistance for Establishment of Chemical Uranium Concentration Technologies
0503002	Assistance to R&D of Technology to Promote Recycling of Non-ferrous Metal Materials
0503003	Equity Capital and Loan Service to Facilitate Research in Fundamental Technologies
0503004	Assistance for Development of New & Practical Technology for Power Generation
0503005	Assistance for Development of Residential Rational Use of Energy Systems
0503006	Assistance for Development of Practical Technologies Related to Energy Rational Use
0503007	Assistance for Development of Practical Technologies Related to Oil-substitute Energy
0503008	Loan Guarantee under the Law Concerning the Improvement of R&D Systems in the Field of Industrial Technology
0503009	Assistance for the Promotion of International Co-operative Development of Civil Aircraft
0503010	Assistance for Development of Nuclear Power Plant Safety Support Systems
0503011	Assistance for Open Fundamental Software Technology Project
0503012	Special Depreciation Allowance for Expenses of Research Associations for Development of Mining and Manufacturing Technologies
0503013	Special Tax Deduction on Increased Expenditure for Research and Testing
0503014	Assistance for Technological Development of New Uses for Light Quality Oil
0503015	Assistance for R&D of Metallic Uranium Production System
0503016	Assistance for Technological Development of New Materials for Apartment Complexes
0503017	Assistance for Promotion of the Project on Nuclear Fuel Reprocessing
0503018	Assistance for R&D Projects in Radioactive Waste and Disposal
0503019	Assistance for Research and Development of Atomic Vapour Laser Isotope Separation and Tax Credit
0503020	Programme for the Promotion of Regional Industries
0503021	Subsidy for the Support of Technological Development
0503022	Special Tax Deduction on Increased Expenditure for Research and Testing, etc.
0504001	Assistance for Industrial Relocation Promotion
0504002	Industrial Relocation Loan
0504003	Hokkaido-Tohoku Development Finance Public Corporation: Loan, Equity Investment, Loan Guarantee
0504004	Coal Mining Area Development Loan
0504005	Loan Guarantee under Law to Promote the Group-siting of Designated Types of Business Contributing to More Soph. Local Ind. Structures
0504006	Special Depreciation of Corporate Income Tax to Develop Designated Areas based on High-technology Industries
0504007	Special Depreciation of Corporate Income Tax to Promote Employment and Development in Underdeveloped Areas
0504008	The Okinawa Development Finance Corporation – Loan
0504009	Tottori Prefectural Enterprise Establishment Funds
0504010	Tottori Prefectural R&D-Oriented Enterprise Establishment Promotion Funds
0504012	Saga Prefectural Funds for the Establishment of Enterprises in Areas Adjacent to Electric Power Generating Facilities
0504017	Special Measure Funds for Declining Orders On Hand
0504025	Interest Rate Subsidies, Equity Capital and Loan Guarantee under Law of Temporary Measures to Facilitate Industrial Structural Adjustment
0504028	Tottori Prefectural Subsidy for Promoting Enterprise Establishment at Takeuchi Industrial Park in Sakai-Minato
0504029	Niigata Prefecture Subsidy for the Promotion of Enterprises Location in Tokyo Industrial Zone
0504030	Fukuoka Prefectural Grant for Specified Areas
0504031	Subsidies for Encouraging Investment in Core Noto Industrial Sites

Annex 1: **List of industrial support programmes reported by Japan** *(cont.)*

Programme code	Programme title
0505001	Equity Capital and Loan Guarantee Under the Law on Temporary Measures to Facilitate Specific New Business
0505002	The Japan Development Bank – Loan
0505003	Tottori Prefectural Subsidy for the Promotion of Enterprise Establishment
0505005	Enterprises Establishment Promotion Subsidy
0505006	Subsidy for the Promotion of Regional Location by Enterprises
0505008	Private Laboratory Establishment Subsidy
0505009	Enterprise Establishment Promotion Subsidy
0505010	Loans for the Establishment of Industries
0505012	Fukuoka Prefectural Funds for the Promotion of Enterprise Establishment
0505014	Ishikawa Prefecture High Technology Industry Location Promoting Subsidy
0505018	Assistance for the Promotion of Regional Location by Enterprises
0505019	Tokushima Prefecture Funds for the Promotion of Regional Location by Enterprises
0505020	Financial Aid of Fukui Prefecture for the Promotion of Regional Location by Enterprises
0505021	Subsidies for the Promotion of Establishing Enterprises
0505022	Shimane Prefecture Enterprises Establishment Funds
0505023	Gunmma Prefectural Subsidy for Establishing Enterprise
0505024	Financial Aid for the Promotion of Regional Location by Enterprises
0505025	Funds for the General Development of the Region
0505026	Loans for Promoting the Change of Enterprise Location
0505027	Funds for the General Development of the Region
0505028	Loans for the General Development of the Region
0505029	Iwate Prefecture Industrial Location Promotion Funds
0505030	Subsidy for the Completion of Plant-related Facilities
0505031	Plant Establishment Funds
0505032	Fukushima Prefecture Financial Aid for the Promotion of Regional Location by Enterprises
0505033	Enterprise Establishment Promotion Subsidy
0505034	Enterprise Establishment Promotion Funds
0505035	Wakayama Prefectural System of Loans for the Promotion of Enterprise Establishment
0506001	The Shoko Chukin Bank Loan
0506002	Japan Finance Corporation for Small Business – General Loan
0506003	Japan Finance Corporation for Small Business – Special Purpose Loan
0506004	The System of Credit Insurance
0506005	The System of Loan Guarantee for R&D Enterprises by Venture Enterprise Center
0506006	People's Finance Corporation – General Loan
0506007	People's Finance Corporation – Special Loan
0506008	Special Depreciation Allowance for SMEs Using Certain Types of Machinery
0506009	Additional Depreciation Allowances for Member of Commercial and Industrial Co-operatives Conducting SME Structural Reform Projects
0506010	Special Deduction from Corporate Income Tax or Additional Depreciation Allowances for SMEs to Strengthen their Business Foundation
0506011	Special Depreciation Allowance for SMEs which have Acquired Certain Types of Office Machines
0506012	Special Non-taxed Addition to Reserves for Dead Loans of SMEs
0506013	Special Deduction from Corporate Income Tax or Additional Deprec. Allowances for SMEs having Acquired Facilities using Electronic Equipment
0506014	Assistance for Expenses in Providing Guidance to Small Business
0506015	Assistance for Guiding the Organisation of SMEs
0506016	Guidance and Financing Polices for Upgrading Projects
0506017	Assistance for SMEs Equipment Modernisation
0506018	The Subsidies of Subcontracting Small and Medium-sized Enterprise Promotion
0506019	Assistance for the Expenses in Providing Guidance to SMEs
0506020	Kanagawa Prefectural Subsidy for Encouraging the Development of High Technology
0506021	Kanagawa Prefectural Financing System for SMEs
0506022	Small and Medium Enterprises Upgrading System
0506023	SMEs Credit Supplementary System
0506024	Ibaragi Prefectural Financing System for SMEs
0506025	Yamagata Prefectural Funds for Promotion of Industry and Commerce
0506026	Yamagata Prefectural Funds for the Equipment Modernisation by SMEs
0506027	Yamagata Prefectural Equipment Leasing Programme for SMEs
0506028	Yamagata Prefecture Small and Medium Enterprises Upgrading Loan System
0506029	Tottori Prefectural System Funds for New Technology Development and Industrialisation of SMEs
0506030	Tottori Prefecture Small and Medium Enterprises Upgrading Loan System
0506031	Tottori Prefectural SMEs Small-lot Loan
0506032	Tottori Prefectural SMEs Revitalising Loan
0506033	Tottori Prefectural SMEs Stable Management Funds

Annex 1: **List of industrial support programmes reported by Japan** *(cont.)*

Programme code	Programme title
0506034	SMEs Development Funds
0506035	SMEs Season Financial Measure Loan
0506036	Credit Supplementary System
0506037	Small Company Management Funds
0506038	SMEs Stable Management Funds
0506039	Technology Promotion Funds
0506040	Funds for the Reinforcement of SMEs Operational Base
0506041	SMEs Welfare Facilities Promotion Funds
0506042	Special Loans for Promoting R&D of SMEs
0506043	Saga Prefectural SMEs Business Funds
0506044	Saga Prefectural Small and Medium Enterprises Upgrading Loan System
0506045	Saga Prefectural Funds for the Equipment Modernisation by SMEs
0506046	Saga Prefectural Equipment Leasing Programme for SMEs
0506047	Funds for the Co-operative Loan to SMEs
0506048	Niigata Prefecture Frontier Enterprises Cultivation Loan
0506049	Advanced Equipment Installation Loan
0506050	Financial System for SMEs
0506051	Funds for the Promotion of SMEs
0506052	Short-term Season Funds
0506053	Emergency Economy Measure Special Funds
0506054	Funds for the Revitalisation of Regional Industries
0506055	Related Bankruptcy Preventing Funds
0506056	Machine Industry Promoting Funds
0506057	Special Funds for Promoting the Reduction of Working Hours
0506058	Extra Funds for Improving Glasses Industries
0506059	Special Funds of Fukui Prefecture for the Equipment Reinforcement by Textile Industries
0506060	Mie Prefecture Financial System for SMEs
0506061	Small and Medium Enterprises Upgrading Loan System
0506062	Unsecured Loan
0506063	New Business Establishment Loans
0506064	Loans for the Stability of Management
0506065	Enterprise Loans (Long-term)
0506066	Equipment Leasing Programme for SMEs
0506067	Financial Aid for the Equipment Modernisation by SMEs
0506068	Saitama Prefecture Supplementary Equipment Leasing Programme for SMEs
0506069	Loans for the Promotion of Upgrading SMEs
0506070	Small and Medium Enterprises Upgrading Loan System
0506071	Guarantee Fee Subsidy for Stable Management
0506072	Financial Aid for Equipment Modernisation by SMEs
0506073	Small and Medium Enterprises Upgrading Loan System
0506074	Kagoshima Prefecture Financial System for SMEs
0506075	Kagoshima Prefecture Loans for Regional Location by Enterprises
0506076	System Entrusting Funds
0506077	Financial Aid for Equipment Modernisation by SMEs
0506078	Small and Medium Enterprises Upgrading Loan System
0506079	Financial Aid for Equipment Modernisation by SMEs
0506080	Equipment Leasing Programme for SMEs
0506081	Iwate Prefecture Machine Leasing Programme for SMEs
0506082	Commerce and Industry and Sightseeing Funds
0506083	Funds for the Stable Management of SMEs
0506084	Small-lot Funds for Small-scale Enterprises
0506085	Co-operatives of SMEs, etc., Management Funds
0506086	Funds for the Reinforcement of SMEs Operational Base
0506087	Regional SMEs Funds for the Entry into New Business Areas
0506088	Loans for the Promotion of Regional Businesses
0506089	SMEs Investment Promotion Funds
0506090	Funds for the Transfer of Large Machines
0506091	Funds for the Transfer of High-technology Equipment
0506092	Management Diversifying Funds
0506093	Yamaguchi Prefecture SMEs System Funds
0506094	Hiroshima Prefecture Entrusting Funds
0506095	Osaka Prefecture SMEs System Funds
0506096	Financial Aid for Equipment Modernisation by SMEs
0506097	Small and Medium Enterprises Upgrading Loan System
0506098	Industrial Promotion Financing for SMEs
0506099	Financial Assistance of China Prefecture for the Promotion of SMEs

Annex 1: **List of industrial support programmes reported by Japan** *(cont.)*

Programme code	Programme title
0506100	Small and Medium Enterprises Upgrading Loan System
0506101	Financial Aid for the Equipment Modernisation by SMEs
0506102	Equipment Leasing Programme for SMEs
0506103	Chiba Prefecture Machinee Leasing Programme for SMEs
0506104	Financial Aid for Equipment Modernisation by SMEs
0506105	Small and Medium Enterprises Upgrading Loan System
0506106	Fukushima Prefecture System Funds
0506107	Aomori Prefecture Funds for Long-term Stable Management
0506108	Aomori Prefecture Funds for the Promotion of Regional Businesses
0506109	Aomori Prefecture Funds for the Reinforcement of SMEs Operational Base
0506110	Aomori Prefecture Funds for the Expansion of Channel of Regional Businesses
0506111	Small and Medium Enterprises Upgrading Loan System
0506112	Aomori Prefecture Funds for the Equipment Modernisation by SMEs
0506113	Aomori Prefecture Refresh-work Funds
0506114	Gunma Prefectural Funds for SMEs
0506115	Financial Aid for Equipment Modernisation by SMEs
0506116	Miyazaki Prefectural System Funds for SMEs
0506117	Oita Prefectural Financial System for SMEs
0506118	Yamanashi Prefecture Commerce and Industry Promotion Funds
0506119	Kochi Prefectural Independent Funds
0506120	Equipment Leasing Programme for SMEs
0506121	Tochigi Prefecture System Funds
0506122	Financial Aid for Equipment Modernisation by SMEs
0506123	Small and Medium Enterprises Upgrading Loan System
0506124	Miyagi Prefectural Funds for Stable Management of SMEs
0506125	Small and Medium Enterprises Upgrading Loan System
0506126	Fukuoka Prefectural Funds for Promoting SMEs
0506127	Financial Aid for Equipment Modernisation by SMEs
0506128	Fukuoka Prefecture Small and Medium Enterprises Upgrading Loan System
0506129	Ishikawa Prefectural System Funds
0506130	Financial Aid for Equipment Modernisation by SMEs
0506131	Small and Medium Enterprises Upgrading Loan System
0506132	Small and Medium Enterprises Upgrading Loan System
0506133	Small and Medium Enterprises Upgrading Loan System
0506134	Okayama Prefectural Special Funds for SMEs
0506135	Wakayama Prefectural Finance System for SMEs
0506136	Financial Aid for Equipment Modernisation by SMEs
0506137	Shiga Prefectural Funds for the Promotion of SMEs
0506138	Shiga Prefectural Entrusting Funds for the Equipment Lease
0506139	Financial Aid for Equipment Modernisation by SMEs
0506140	Equipment Leasing Programme for SMEs
0506141	Special Deduction from Corp. Income Tax or Additional Depreciation Allow. for SMEs which have Acquired Facilities using Electronic Eqpmnt
0506142	Special Non-Taxed Addition to Reserves for Dead Loans SMEs
0506143	Special Depreciation Allowance for SMEs Using Certain Types of Machinery
0506144	Special Deduction from Corporate Income Tax or Additional Depreciation Allowances for SMEs to Strengthen their Business Foundation
0506145	Special Loans for the Group-Sitting of Specific SMEs
0506146	Funds for Securing a Labor Force of SMEs
0506147	Funds for Improving the Management of SMEs
0506148	Funds for the Promotion of Small Scale Enterprises
0506149	SMEs Short-term Operating Funds
0506150	Akita Prefecture Unique Funds for the Transfer of Machines
0506151	Equipment Leasing Programme for SMEs
0506152	Financial Aid for Equipment Modernisation by SMEs
0506153	Subsidies for the Technological Improvement for SMEs
0506154	Small and Medium Enterprises Upgrading Loan System
0508001	International Trade Insurance
0508002	Equity Capital and Loan Guarantee Under the Law on Extraordinary Measures for the Promotion of Imports and the Facilitating of FDI in Japan
0508003	Tax Deduction on Additional Depreciation Allowances of Production Machines on Increased Amount of Imported Products
0508004	The Export-Import Bank of Japan – Loan
0508005	Tax Deduction or Additional Depreciation Allowances of Production Match on Increased Amount of Imported Products

Annex 1: **List of industrial support programmes reported by Japan** *(cont.)*

Programme code	Programme title
0509001	Assistance for Construction of New Type of Converter, Demonstration of Nuclear Reactor
0509002	Assistance for Environmentally Friendly Energy Community Projects
0509003	Interest Rate Subsidy and Loan Guarantee to Promote Business Activities for the Rational Use of Energy and the Utilisation of Recycled Resources
0509004	Tax Deduction or Special Depreciation of Corporate Income Tax to Promote Investment for Structural Reform of Energy Demand and Supply
0509005	Tax Deduction or Special Depreciation of Corporate Income Tax to Promote Investment for Structural Reform of Energy Demand and Supply
0510001	Japan Environment Corporation – Loan
0510002	Special Depreciation of Corporate Income Tax to Promote Installation of Equipment for Anti-pollution Measures
0510003	Nara Prefecture Loans and Interest Rate Subsidy for Pollution Prevention
0510004	Financial Assistance of Tochigi Prefecture for Pollution Abatement
0510005	Special Depreciation of Corporate Income Tax to Promote Installation of Equipment for Anti-pollution Measures

Annex 2: **List of labour and training programmes reported by Japan**

Programme code	Programme title
0507001	Latitude Creation Fund

NORWAY

NORWAY 1993

GDP: billion NKr (current prices)	823.7
Manufacturing GDP: billion NKr (current prices)	94.7
Unemployment rate	6.0%
Corporate tax rate	28%
Government borrowing rate	6.88%
Civil procurement: billion NKr	71.6
Military procurement: billion NKr	14.1
Support to labour and training: million NKr	107.3
R&D contracts: million NKr	575
Financial support to R&D institutions: million NKr	162
– *of which:* Norwegian contribution to ESA: million NKr	191

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN NORWAY

Norway's present support scheme for business and industry was largely built up in the late 1970s and the early 1980s. A relatively large proportion of support was directed towards sectors and companies.

By the late 1980s, Norwegian industrial policy was undergoing significant change. The emphasis shifted away from sector- and company-specific policy measures towards horizontal measures, such as policies concerning research and development (R&D), small and medium-sized enterprises (SMEs), regional support and general framework conditions. This change in industrial policy approach was manifested in the presentation of the *Næringsmeldingen* report on industrial policy to the *Storting* (Parliament) in 1989.

Sectoral supports were largely abolished. Support to the shipbuilding sector has, however, continued and has been maintained at a rather high level. After 1995, budgetary expenditure related to the shipbuilding industry was substantially reduced. From 1998, the maximum aid ceilings for the shipbuilding industry have been reduced, from the maximum ceilings allowable in European Economic Area (the EEA Agreement) of 9 per cent for larger vessels and 4.5 per cent for rebuilding and smaller vessels, to 7 and 3.5 per cent respectively.

In 1993 the Norwegian industrial policy schemes were reorganised, merging four different institutions into one, the Norwegian Industrial and Regional Development Fund (SND). Thus, the number of aid schemes was reduced and the schemes were made more general. The foundation of SND has simplified the government supply of risk capital and made it more efficient.

A number of structural reforms have been implemented in Norway over the last few years. Examples include the deregulation of the electricity market, the dismantling of access regulations in the air transport and telecommunication sectors, the tax reform which resulted in a more neutral tax-system and the changes in competition policy in connection with a new act on competition.

The EEA Agreement, which came into effect on 1 January 1994, secures the participation of EFTA countries in the EU's internal market. Within the EEA, common rules for government support, competition rules, standardization and regulation against preferential treatment of domestic industry, contribute to the same set of rules and regulations for all companies. The EEA Agreement and the World Trade Organisation (WTO) Government Procurement Agreement (WTO-GPA) have opened public procurement to competition.

In the context of the EEA and WTO Agreements, co-operation has generally resulted in the review and reform of a number of regulations, which should lead to increased competition and improved economic efficiency.

II. THE STRUCTURE OF PUBLIC SUPPORT IN NORWAY

In Norway, public support to manufacturing industry showed a slight upward trend in the period from 1989 to 1995. Expenditure, which was NKr 3.3 billion in 1989, increased in nominal terms by 8 per cent, resulting in a level of NKr 3.6 billion in 1995. In real terms, support declined by 4 per cent. From 1990 to 1992, net expenditure reached a high levels of over NKr 4.2 billion, while in the period from 1993 to 1995, after a significant cut in public spending, expenditure consistently approached the Nkr 3.5 billion mark.

Table 49. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million NKr						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG	3 325	4 431	4 198	4 395	3 829	3 703	3 596
Real NCG	3 325	4 252	3 923	4 131	3 507	3 373	3 185
Manufacturing support rate (%)	3.9	5.3	4.9	5.0	4.0	3.7	3.2
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

Source: OECD Industrial Support Database (February 1998).

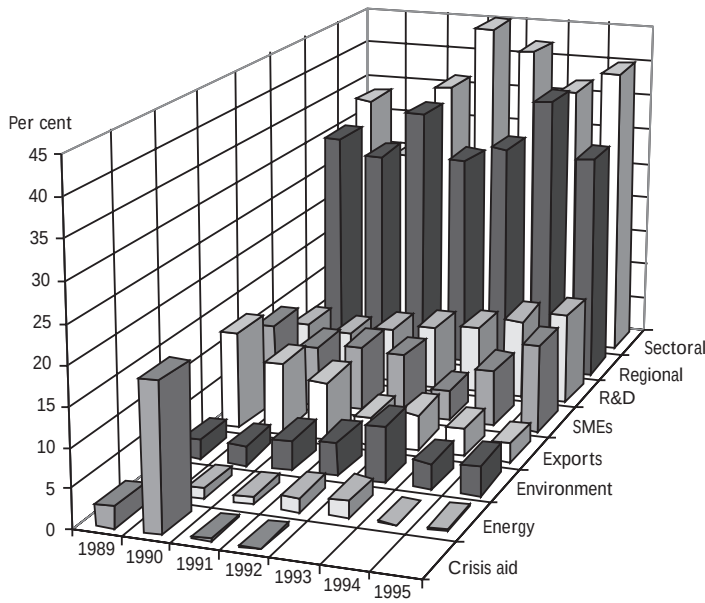
Norway is one of 15 OECD Member countries in which public support increased when the 1989 and 1993 levels are compared. The manufacturing support rate, which measures public support to manufacturing as a share of manufacturing GDP, lay above the OECD average in each year of this period. For 1994 and 1995, when this rate declined in Norway, OECD averages do not exist.

Sectoral aid and regional development ranked as the most important areas of public support to manufacturing industry in Norway throughout the period from 1989 to 1995. Under the policy objective of R&D, expenditure almost doubled between the beginning and the end of this period. As a result of such dynamic spending, R&D has been established as the third most important area since 1992.

Unlike in many other OECD Member countries, sectoral aid was expanded in Norway by almost 30 per cent, nominally, in the period under review, while it emerged as a priority area of expenditure cuts across the OECD area between 1989 and 1993. The shipbuilding industry absorbed 85 per cent of total sectoral aid. The main reason for the increased sectoral aid on an NCG basis in the period was the introduction of a contract-related aid scheme in January 1990 to replace the interest rate subsidy scheme. The budgetary consequences of the interest rate subsidy scheme have continued, although the scheme has been dismantled. The other major beneficiary is the daily press, which receives subsidies to promote and maintain a pluralistic and diversified Norwegian press.

The crisis aid measures taken by the Norwegian Government in the late 1980s and early 1990s concerned the restructuring of the domestic steel industry and rescue operations in Ostfold county. The last substantive payment dates back to 1991.

✦ Graph 14. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 50. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million NKr						
		1989	1990	1991	1992	1993	1994	1995
Sectoral	16	1 111	1 144	1 520	1 974	1 611	1 364	1 434
% share	*36.4*	*33.4*	*25.8*	*36.2*	*44.9*	*42.1*	*36.8*	*39.9*
Crisis aid	2	90	832	13	1	0	0	0
% share	*1.3*	*2.7*	*18.8*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*
R&D	2	233	273	308	365	342	392	427
% share	*4.5*	*7.0*	*6.2*	*7.3*	*8.3*	*8.9*	*10.6*	*11.9*
Regional	8	1 011	1 253	1 461	1 260	1 181	1 406	1 092
% share	*18.2*	*30.4*	*28.3*	*34.8*	*28.7*	*30.8*	*38.0*	*30.4*
SMEs	5	344	346	361	361	153	279	411
% share	*11.4*	*10.3*	*7.8*	*8.6*	*8.2*	*4.0*	*7.5*	*11.4*
Exports	5	426	415	323	165	185	132	84
% share	*19.2*	*12.8*	*9.4*	*7.7*	*3.7*	*4.8*	*3.6*	*2.3*
Energy	2	23	61	47	76	84	5	10
% share	*4.5*	*0.7*	*1.4*	*1.1*	*1.7*	*2.2*	*0.1*	*0.3*
Environment	4	88	107	165	194	275	125	139
% share	*2.6*	*2.7*	*2.4*	*3.9*	*4.4*	*7.2*	*3.4*	*3.9*
Total	44	3 325	4 431	4 198	4 395	3 829	3 703	3 596

Direct support to industrial R&D efforts increased consistently since 1989. While total R&D expenditure did not increase during the reporting period, the share of such supports directly benefiting the manufacturing sector grew as a result of a reorientation of funding away from research institutions towards manufacturers. Support focuses on the co-financing of high-risk R&D projects. Additionality – *i.e.* the project would not have been carried out in the absence of support – and the impacts on sustainable resource allocation widely determine the public co-financing of industrial R&D.

The encouragement of industrial activities in less-developed regions is the main objective of regional development schemes in Norway. The Norwegian Industrial and Regional Development Fund channelled the major part of expenditure to manufacturing industry. The scheme for the restructuring of regions dependent on a single industry and schemes for certain regions addressed specific issues of regional development in municipalities and regions. Restructuring programmes in support of specific communities and regions were always applied for a limited period of time only.

Under the policy objective of support to SMEs, the Norwegian Industrial and Regional Development Fund provided the major part of total financial assistance to SMEs. The fund was particularly involved in the co-financing of R&D and investment activities of SMEs. Other SME programmes addressed consultancy, subsidised services for SMEs in the area of R&D and technological innovation, and co-operation between Swedish and Norwegian SMEs.

The export credit financing scheme is the most important support programme under the policy objective of exports and foreign trade. Due to the improved performance of this scheme in recent years, net expenditure at current prices under this policy objective had been successfully reduced to 20 per cent of the 1989 level in 1995.

The promotion of new energy technologies and support for energy efficiency investments were phased out in the period under review. Net expenditure on the promotion of new energy technology was increased again in 1995. The promotion of new environmental technologies, including the recycling and treatment of waste, was enhanced. However, after a period of progressive expansion of net expenditure, spending on such schemes was reduced in 1994 and 1995.

The turnover in the stock of support programmes has been fairly low, as only 20 per cent of all programmes have been terminated in a seven-year period, and 28 per cent were implemented in 1990 or later. Fifty-two per cent of the programmes have a duration of seven years or more. The main reason is that most programmes were of a general and horizontal character, thus there has been little need for terminating old programmes and starting new programmes to adapt to changes in policy.

Table 51. **Reported NCG expenditure by financing instrument**

	Programmes	Nominal NCG: million NKr						
		1989	1990	1991	1992	1993	1994	1995
Regular grant	33	735	820	1 211	1 736	1 625	1 572	1 851
% share	*75.0*	*22.1*	*18.5*	*28.8*	*39.5*	*42.4*	*42.4*	*51.5*
Regular loan	1	221	151	137	143	162	101	67
% share	*2.3*	*6.6*	*3.4*	*3.3*	*3.2*	*4.2*	*2.7*	*1.9*
Conditional loan	1	1.1	2.7	0.0	0.0	0.0	0.0	0.0
% share	*2.3*	*0.0*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Guarantee	3	210	271	179	18	122	9	18
% share	*6.8*	*6.3*	*6.1*	*4.3*	*0.4*	*3.2*	*0.2*	*0.5*
Mixed	5	2 069	2 355	2 658	2 498	1 921	2 022	1 659
% share	*11.4*	*12.0*	*10.4*	*13.0*	*13.4*	*14.9*	*18.3*	*55.5*
Unclassified	1	90	832	13	1	0	0	0
% share	*2.3*	*2.7*	*18.8*	*0.3*	*0.0*	*0.0*	*0.0*	*0.0*
Total	44	3 325	4 431	4 198	4 395	3 829	3 703	3 596

Of the 44 programmes reported (Annex 1), only one was identified which limits the access to national enterprises. In this respect, support policies in Norway appear to be more advanced when compared with the OECD average.

In Norway, a particularly high share of net expenditure was financed by mixed instruments, which means that programmes used more than one financing instrument. When looking at the significance of single-instrument financing, grants have been increasingly used to finance support programmes, while tax concessions were not used to finance public support in the period under review.

Two programmes were applied in Norway under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting public support to manufacturing industry, such programmes were removed from the final list of programmes and assigned to an annex (Annex 2).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN NORWAY

An important aim of industrial policy is to strengthen the competitiveness of Norwegian industry and commerce.

Stimulating R&D activities in the business sector will be an important part of this policy. Government involvement will be concentrated on projects that can be expected to provide good economic results but where there is insufficient basis for commercial funding. Areas of special interest will be projects encouraging the diffusion of knowledge and technology, and fields where there are broad user interests in Norway.

SMEs account for an important share of innovation and restructuring in the business sector. In general economic policy and industrial policy, the government will attach particular attention to the needs of these enterprises. Industrial and regional policy instruments of considerable importance to SMEs include the availability of risk capital, advisory services, efficient rules and regulations and the transfer of know-how.

The government will continue to place substantial emphasis on competition policy. The dismantling of trade barriers, in accordance with the WTO and EEA Agreements, have led to increased cross-border trade and competition. This is viewed as a positive development, in terms of both industrial policy and competition policy.

Annex 1: **List of industrial support programmes reported by Norway**

Programme code	Programme title
2201001	Contract & Construction Loan Subsidies to Shipbuilding(1994) / Construction Subsidy to Shipbuilding (1995)
2201002	Support to Fishing Vessels for Domestic Delivery; Contract Subsidies and Construction Loan Subsidies
2201003	Interest Rate Subsidies for Fishing Vessels for Domestic Delivery; Long-term Financing and Construction Loan
2201006	Support to Fish-processing Companies in Northern Norway
2201007	Support to the Fish-processing Industry
2201008	Grants for the Writing-off of Debts and the Strengthening of Equity Capital in the Fishing Industry
2201009	Remedial Action for the Herringmeal Industry in Northern Norway
2201010	Structural Changes and Adjustment in Fish-processing Companies
2201011	Energy Support Programme for the Herringmeal Industry
2201012	Marketing Programmes
2201013	Increase Efficiency in the Fishing Industry, including Processing, Harvesting and Aquaculture
2201014	Increase Competitiveness in Fishing Industry, including Processing, Harvesting and Aquaculture
2201015	Loans to Fish-processing Companies
2201016	Subsidies to the Press
2201017	Interest Rate Subsidies to Shipbuilding (Long-term Financing and Construction Loan)
2201018	Customs Duty Exemptions for Shipbuilders
2202001	Restructuring of Norsk Jernverk A/S
2202002	Viking Business Development A/S
2203001	Industrial R&D Programmes
2203002	Industrial R&D Projects
2204001	Funds for the Restructuring of the Community of S¢r-Varanger
2204002	Funds for the Restructuring of the Rana Community, Nordland County
2204003	Funds for the Restructuring of the Grenland Region, Telemark County
2204005	Scheme for the Restructuring of Regions Dependent on a Single Industry
2204006	Norwegian Industrial and Regional Development Fund (SND)
2204007	Development Scheme for Northern Norway
2204008	National Programme of Regional Development Scheme (from 1995, programme identification: chap 552.53)
2204009	Structural Changes and Adjustment in Fish-processing Companies in Finnmark
2206001	Norwegian Industrial and Regional Development Fund (SND)
2206002	The Regional Consulting Services (the Norwegian Business Advisors)
2206003	The North Norwegian Institute for Technology and Innovation (VINN)
2206004	National Institute of Technology (TI)
2206005	Swedish-Norwegian Industrial Fund
2208001	The Export Campaign
2208002	The Strategy Programme
2208003	Programme for Export Development in SMEs
2208005	Export Guarantee Scheme (Guarantees to Promote Norwegian Exports and Investments)
2208006	Export Credit Financing Scheme
2209001	Grant Programme for the Introduction of New Energy Technology
2209002	Grant Scheme for Energy Efficiency Investments in Industry and Commercial Buildings
2210001	Grants to Promote Recycling of Waste and Better Treatment of Hazardous Waste
2210002	Grants for Promoting Environmental Technologies
2210004	Guarantee for Loans for Specific Environmental Measures in Industry (facility can be used in combination with grants)
2210005	Preferential Loans and State Guarantees

Annex 2: **List of labour and training programmes reported by Norway**

Programme code	Programme title
2207001	Wage Subsidies to Employers
2207002	Integrated On-the-job Training Programme

PORTUGAL

PORTUGAL 1993

GDP: million Esc (current prices)	13 209 560
Manufacturing GDP: million Esc (current prices)	3 262 761[1]
Unemployment rate (standardised rate)	5.5%
Corporate tax rate	36.0%[2]
Government borrowing rate	17.68%
Civil procurement	
Military procurement	
Support to labour and training: million Esc	3 750.9
R&D contracts	
– *of which:* Manufacturing	
Financial support to R&D institutions: million Esc	3 716
Public space programmes	

1. Secretariat estimate.
2. 1994 data.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN PORTUGAL

In Portugal, the period from 1989 to 1995 has been marked by significant efforts in bringing about a greater reliance on market mechanisms, in the undertaking of rationalisation and privatisation, and in upgrading the country's stock of physical and human capital.

Since its entry to the European Community in 1986, assistance from various Community programmes proved to be a valuable support for the development of industrial structures in response to the demands of the evolving European and broader international context. EC Membership has also provided an important stimulus to the inflow of foreign direct investment.

Industrial policy during this period was oriented towards creating better framework conditions for businesses, in particular:

– to develop the internationalisation of the economy;

– to strengthen the business service sector;

– to support the use of clean technologies and to improve energy efficiency;

– to increase the technology content of products and services;

– to foster an entrepreneurial culture;

– to promote intangible investments; and

– to speed up the privatisation process.

At the same time, efforts at the sectorial level targeted the restructuring and modernisation of traditional manufacturing industries, and the development of the electromechanical industry branch.

A specific Programme for Industrial Development (PEDIP), a five-year programme to enhance the dynamism of Portuguese industry, was launched in 1988. PEDIP emerged as the major building block of Portuguese support policy in the period under review. It provided the framework for measures of a

general nature, such as the diffusion of technological innovations, financial support for modernisation investments, management training, quality systems implementation, design facilities and marketing services in specific sectors of strategic importance. Total funding for PEDIP by the EC, the European Investment Bank and the Portuguese Government was ECU 2 350 million.

The changing pattern of industrial policies to a more framework-oriented approach was the driving force behind the process of reducing public support to manufacturing industry in Portugal.

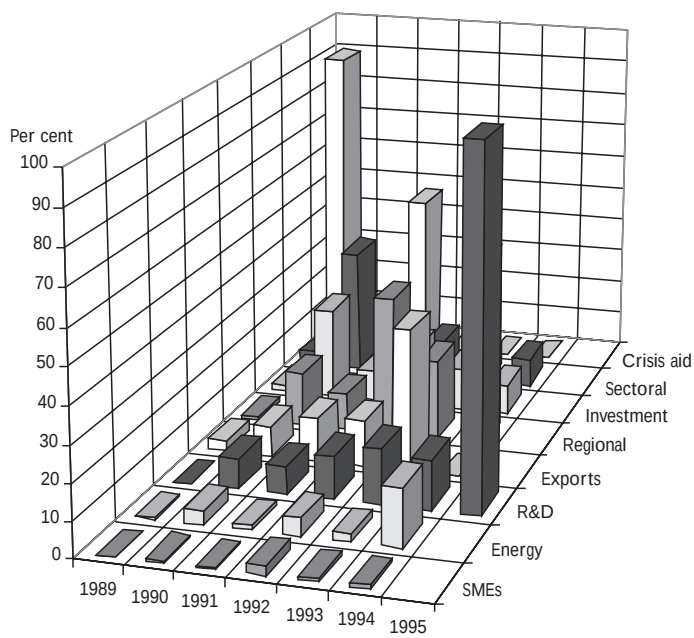
In Portugal, the autonomous regions have no statutory competences in industrial policy issues. Responsibility for industrial policies and, more specifically, for providing financial support to manufacturing industry lies exclusively at the level of the central government. However, Community funds and programmes are an important source of financial support to Portuguese manufacturing.

Portugal ratified the WTO Agreement on Subsidies and Countervailing Measures, and during the winter of 1994/95 approved new legislation on public procurement which aims to transpose into national law the procurement agreement concluded in the Uruguay Round. Therefore, the international subsidy and procurement discipline established in the WTO has become binding for Portuguese support policies.

II. THE STRUCTURE OF PUBLIC SUPPORT IN PORTUGAL

Specific developments under the policy objectives of crisis aid and exports and foreign trade in 1989, 1991 and 1993 were responsible for a somewhat erratic trend in total expenditure. The sharp decrease in total support from Esc 164 billion in 1989 to Esc 57 billion in 1993 is more the result of these specific developments than of systematic efforts to reduce expenditure. In the absence of these factors, a slight upward trend would have been apparent. However, due to the rather high amount of total support in 1989, the 1993 figure represents a nominal reduction of almost two-thirds with regard to 1989. In real terms, the reduction amounted to approximately 76 per cent.

❖ Graph 15. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Figures reported by Portugal for the years 1994 and 1995 are included for information. They reflect the updating of 13 programmes for 1994, and one R&D programme for 1995, and are not comparable with the comprehensive reporting for the years 1989 to 1993.

Table 52. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million Esc						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG	163 897	25 214	64 554	34 152	57 213	6 775[1]	266[1]
Real NCG	163 897	22 333	50 790	24 290	38 142	4 371[1]	160[1]
Manufacturing support rate (%)	7.3	1.0	2.3	1.1	1.8		
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

1. 1994 and 1995 figures are not complete.
Source: OECD Industrial Support Database (February 1998).

Portugal is one of nine OECD Member countries in which public support declined when 1989 and 1993 levels are compared. The manufacturing support rate, which measures public support to manufacturing as a share of manufacturing GDP, dropped significantly from 7.3 to 1.8 per cent. It was below the OECD average in 1990 and 1992, but above it in the remaining years of the period under review.

In the 1990s, public support was strengthened under the policy objectives of R&D and regional development; the levels of support to general investment incentives and energy efficiency were maintained. Three important interventions in favour of state-owned manufacturing companies in 1989 and 1991 account for the absolute and relative high spending under the policy objective of crisis aid. The high net expenditure under the policy objective of exports and foreign trade in 1993 reflects exceptional payments on guarantee and insurance claims under the Portuguese export credit and guarantee scheme in this year (Table 53).

Table 53. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million Esc						
		1989	1990	1991	1992	1993	1994	1995
Sectoral	8	6 658	9 059	8 267	3 721	3 680	536	0
% share	*22%*	*4.1*	*35.9*	*12.8*	*10.9*	*6.4*	*7.9*	*0.0*
Crisis aid	4	146 704	335	30 000	0	0	0	0
% share	*11%*	*89.5*	*1.3*	*46.5*	*0.0*	*0.0*	*0.0*	*0.0*
R&D	5	113	2 155	5 191	4 091	8 857	934	266
% share	*14%*	*0.1*	*8.5*	*8.0*	*12.0*	*15.5*	*13.8*	*100.0*
Regional	4	1 653	3 819	6 635	13 456	13 114	3 594	0
% share	*11%*	*1.0*	*15.1*	*10.3*	*39.4*	*22.9*	*53.0*	*0.0*
Investment	6	3 412	6 519	5 459	5 867	6 886	578	0
% share	*17%*	*2.1*	*25.9*	*8.5*	*17.2*	*12.0*	*8.5*	*0.0*
SMEs	3	72	187	292	924	588	47	0
% share	*8%*	*0.0*	*0.7*	*0.5*	*2.7*	*1.0*	*0.7*	*0.0*
Export	5	4 684	2 139	7 830	4 411	22 807	0	0
% share	*11%*	*2.9*	*8.5*	*12.1*	*12.9*	*39.9*	*0.0*	*0.0*
Energy	1	594	1 001	881	1 682	1 282	1 087	0
% share	*3%*	*0.4*	*4.0*	*1.4*	*4.9*	*2.2*	*16.0*	*0.0*
Total	36	163 897	25 214	64 554	34 152	57 213	6 775	266

It is fair to say that in the absence of specific interventions under the policy objectives of crisis aid and exports and foreign trade, the focus of public support in Portugal had shifted to regional development, investment incentives and R&D, which gathered approximately 70 per cent of total support in 1992, a year that was not marked by any particular event.

In response to the changing policy focus, 16 programmes expired and nine new programmes were introduced over the period 1989 to 1993. Only nine of the programmes reported were started in 1989 or before, and applied beyond 1993. This points to a comparatively dynamic turnover in the stock of programmes when compared with the OECD average.

Among the 36 programmes reported (Annex 1), none was identified which limits access to the programme to national enterprises only. In this respect, again, support policy in Portugal appears to be more advanced than the OECD average.

Grants were the dominant financing instrument throughout the 1989-93 period. Other financing instruments were mainly applied in programmes of a more complex nature, which tended to use mixed-instrument financing. None of the programmes reported used tax incentives as financing instrument.

The evaluation of support programmes became an issue in Portugal when PEDIP was launched. An *ex-ante* evaluation of projects prior to their implementation was systematically installed, and *ex-post* evaluations were carried out on a case-by-case basis.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN PORTUGAL

The orientation of industrial policy in Portugal will be maintained in the years following the reporting period. PEDIP II, a strategic programme aiming at the modernisation and competitiveness of Portuguese industry, is the new umbrella for business-related policies. For the period from 1994 to 1999, this programme will provide the framework for government support to the business sector under a broad range of policy areas articulated with regional development, labour markets, science and technology, energy, environment and education and vocational training. The emphasis of PEDIP II lies in the encouragement of investments and their financing.

Table 54. **Reported NCG expenditure by financing instrument**

	Programmes	Million Esc						
		1989	1990	1991	1992	1993	1994	1995
Regular grant	29	144 249	22 801	56 841	29 666	34 343	6 689	266
Regular loan	1	0	0	0	138	93	87	0
Conditional loan	1	5	10	21	26	49	0	0
Mixed	5	19 643	2 403	7 692	4 322	22 728	0	0
Total	36	163 897	25 214	64 554	34 152	57 213	6 775	266

Annex 1: **List of industrial support programmes reported by Portugal**

Programme code	Programme title
2301001	Support to Shipbuilding and Ship Conversion
2301002	Restructuring of the Fertilizer Sector
2301003	Woollen Sector Structural Adjustment (PEDIP Programme)
2301004	Foundry Sector Structural Adjustment (PEDIP Programme)
2301005	Support of Specific Sectors (PEDIP Programme)
2301006	Programme for the Modernisation of Wood Furniture Industry
2301007	Special Action – PERIFRA
2301008	PIATV
2302001	Restructuring of Government-owned Company QUIMIGAL
2302002	Restructuring of Government-owned Company SETENAVE
2302003	Restructuring of Company EPSI
2302004	Restructuring of Government-owned Company Siderurgia Nacional
2303001	Technological Infrastructures (PEDIP Programme)
2303002	System of Specific Incentives of LNETI
2303003	EUREKA
2303004	SCIENCE
2303005	Stride Portugal
2304001	System of Incentives on a Regional Basis (SIBR)
2304002	System of Incentives to Small Investments in Setubal (RAPIS)
2304003	System of Incentives to the Industrial Diversification of Ave Valley (SINDAVE)
2304004	Incentives to Small Investments in Border Areas
2305001	Operational Programme PRISMA
2305002	System of Incentives on a Regional Basis (SEBR)
2305003	PEDIP Incentive Scheme – SINPEDIP (PEDIP Programme)
2305004	Productivity Missions (PEDIP Programme)
2305005	Industrial, Quality and Design Missions (PEDIP Programme)
2305006	PIAEI – Interim Programme to Support Industrial Firms
2306001	System of Incentives to Advanced Telecom Services (SISAT)
2306002	System of Incentives to Endogenous Potential (SIPE)
2306003	System of Incentives to Small Investment Projects
2308001	New Instrument for Export Development (NIDE)
2308002	Customs and Promotional Incentives to Exports (IAPE)
2308003	Complementary Groupings of SMEs for Export (ACE)
2308004	PAIEP – Internationalisation of Portuguese Firms Support Programme
2308005	Export Credits and Guarantees
2309001	Incentive Scheme for the Rationalisation of Energy Consumption – SIURE

Annex 2: **List of labour and training programmes reported by Portugal**

Programme code	Programme title
2307001	Professional Training (PEDIP Programme)
2307002	Support to Co-operative training
2307003	Support to Vocational Training and Employment

SPAIN

SPAIN 1993

GDP: billion Ptas (current prices)	60 934.3	
Manufacturing GDP : billion Ptas (current prices)	12 367.4	
Unemployment rate	22.8	
Corporate tax rate	30%	
Government borrowing rate	10.2	
Civil procurement : million Ptas	253 000	
Military procurement : million Ptas	46 523[1]	(1994 data)
Support to labour and training : million Ptas	442	
R&D contracts: million Ptas	13 061	
– *of which:* Manufacturing		
Financial support to R&D institutions: million Ptas	27 239	(1994 data)
Public space programmes: million Ptas	12 742	

1. R&D defence procurement expenditures only.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN SPAIN

The current Spanish industrial production structure is the result of specific developments over the past 20 years in the context of the global industrial adjustment taking place in most developed economies.

Until 1984, the Spanish economy faced a deep crisis with major consequences for the industrial sector. In the years prior to 1984, government and society as a whole were reluctant to address the underlying economic problems and to implement the necessary industrial adjustment. The inefficient performance of the manufacturing sector was accentuated, leading to a deterioration in competitiveness. Wide gaps between wages and productivity and an increasing specialisation in labour-intensive industries were the most negative features of industrial development at that time.

Driven by the recovery of the world economy and Spain's Membership of the EC as from 1986, the industrial sector achieved high production and employment growth rates between 1985 and 1989. Improved business competitiveness considerably raised market shares, both at the national and international level. Massive flows of foreign direct investment, in many cases leading to foreign governance in domestic firms, were the driving force behind the dynamic growth of gross capital formation in these years.

Between 1989 and 1993, industrial policy in Spain was based on sectoral considerations, and sectoral programmes constituted an important tool for fostering structural adjustment (*i.e.* steel and shipbuilding).

However, the European Single Market established a new competitive scenario within which Spanish industry was confronted with a number of challenges: fierce global competition; the key role of technological innovation, especially in information and communication technologies (ICTs); increased demand for immaterial investments and intangible assets; the accelerated pace of technological change and the emergence of the information society; and, finally, the need to adopt systematic processes of continuous enhancement in order to comply with the evolution of markets.

As a result, the objectives of Spanish industrial policy during 1989-93 particularly focused on the technological and innovative aspects of industrial development and support to SMEs. Other important issues included internationalisation, structural adjustment, regional development, human resources, sustainable environmental protection and energy efficiency.

Most of the programmes were carried out under the exclusive competence of the Ministry of Industry and Energy. However, the scope and the complexity of the above-mentioned issues implied the need for inter-administrative co-ordination and co-operation between the public and private sectors.

In accordance with the Industry Act 21/1992, the Sectoral Conference of Industry is the designated instrument to implement collaborative mechanisms between the national government and the 17 regional authorities.

II. THE STRUCTURE OF PUBLIC SUPPORT IN SPAIN

The figures provided by the Spanish Government for the period from 1989 to 1993 point to a strong reduction in public support to manufacturing industry. In current prices, expenditure declined consistently, from Ptas 238 billion in 1989 to Ptas 128 billion in 1993, resulting in a reduction of the 1989 level in the order of almost 50 per cent.

Table 55. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million Ptas				
	1989	1990	1991	1992	1993
Nominal NCG	238	198	182	169	128
Real NCG	238	211	224	177	234
Manufacturing support rate (%)	2.2	0.5	0.5	0.4	0.6
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*

Source: OECD Industrial Support Database (February 1998).

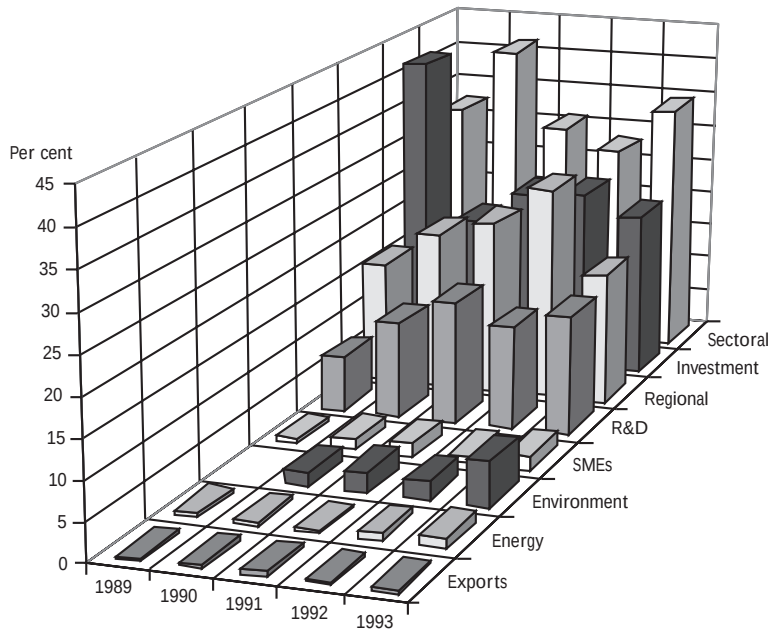
In real terms, expenditure in 1993 represented only 40 per cent of the level reported in 1989. The manufacturing support rate, which measures public support to manufacturing industry as a share of manufacturing GDP, dropped from 2.2 per cent in 1989 to 1.0 per cent in 1993, thereby falling below the OECD average in the last year of the reporting period.

Due to the unavailability of figures and, more specifically, NCG figures, particularly for 1993, but to some extent also for 1991 and 1992, the declining trend in public support to manufacturing industry in Spain has been weaker than shown by the figures reported. However, even when estimations for such reporting gaps are taken into account, actual figures would show a consistent downward trend in public support to manufacturing industry in Spain, resulting, in current terms, in an estimated decline of 30 per cent in expenditure. Spain is one of nine OECD Member countries in which public support declined when the beginning and the end of the period from 1989 to 1993 are compared.

The successful efforts of the Spanish Government to reduce public expenditure led to significant changes in the levels of aid, but had only limited impacts on the breakdown of expenditure. Both in 1989 and 1993, more than 90 per cent of total public support were spent under the four policy objectives of investment promotion, sectoral aid, regional development and R&D.

Support to R&D and environment protection were the only policy areas under which expenditure increased when 1989 and 1993 levels are compared. The strongest cuts in expenditure were reported under the policy objectives of investment promotion, sectoral aid and regional development.

✦ Graph 16. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 56. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: billion Ptas				
		1989	1990	1991	1992	1993
Sectoral	4	77	82	56	47	44
% share	*9.1*	*32.3*	*41.4*	*30.6*	*27.8*	*34.2*
R&D	10	18	26	30	23	21
% share	*22.7*	*7.4*	*12.9*	*16.4*	*13.7*	*16.2*
Regional	14	49	42	43	49	23
% share	*31.8*	*16.6*	*21.4*	*23.5*	*28.9*	*17.6*
Investment	2	100	39	44	42	29
% share	*4.5*	*41.8*	*19.8*	*24.3*	*25.0*	*22.2*
SMEs	7	2	3	3	2	2
% share	*15.9*	*0.9*	*1.5*	*1.8*	*1.0*	*1.9*
Exports	3	1	1	1	1	1
% share	*6.8*	*0.3*	*0.4*	*0.5*	*0.3*	*0.4*
Energy	3	2	1	1	1	2
% share	*6.8*	*0.7*	*0.5*	*0.4*	*0.9*	*1.4*
Environment	1	0	4	5	4	8
% share	*2.6*	*0.0*	*2.0*	*2.7*	*2.4*	*2.0*
Total	44	238	198	182	169	128

Under the policy objective of sectoral aid, shipyards, the steel industry and the defence industry were identified as beneficiaries of public support programmes. While the shipyards continued to receive high and almost constant expenditure throughout the period under review, support to the steel and defence industries was either phased out or reduced in the early 1990s.

Direct R&D support in Spain went up by 18 per cent, thereby expanding its share in total public support to manufacturing industry from 7.4 per cent in 1989 to 16.2 per cent in 1993. The promotion of horizontal R&D activities accounted for almost two-thirds of direct R&D expenditure. Aeronautics and microelectronics gathered more than 90 per cent of technology-specific R&D support.

Almost one-third of the programmes reported channelled public support to manufacturing industry under the policy objective of regional development. The promotion of physical investment in selected regions was adopted in most of these programmes as the means to enhance regional development. Spending under this policy objective, including expenditure at the sub-central level, increased consistently between 1989 and 1992, when it became the main source of public support to manufacturing industry in Spain. This trend would have continued if 1993 figures had been reported for all regional development programmes.

The important financial flows reported under the policy objective of general investment incentives can be traced to a tax concession programme allowing for the limited deduction of both physical and intangible investments, and to a programme providing public support to restructuring and redeployment investments in publicly owned manufacturing firms. The latter programme accounts for the exceptional high spending reported for the year 1989, and reduced expenditure in subsequent years resulted in part from the reduction of direct state intervention in the publicly owned manufacturing sector.

Only Ptas 2 to 3 billion were spent in support of Spanish SMEs in each year of the period under review, representing between 0.9 per cent in 1989, and 1.9 per cent in 1993, of total support to manufacturing industry in Spain. However, support to SMEs was a key concern in many programmes reported under the policy objectives of R&D and regional development.

The low expenditure reported under the policy objective of exports and foreign trade does not include the net cost to government caused by the export credit and guarantee schemes for which only gross figures were reported. Thus, the presentation of this area of public support in Spain is strongly biased.

Environmental protection and energy efficiency increased their shares in total public support to manufacturing industry when the beginning and the end of the period under review are compared. While the growth in expenditure was only marginal in the case of energy efficiency, spending on environmental protection grew dynamically, and ranked as the fifth most important area of public support in Spain in 1993.

Of the 44 programmes reported (Annex 1), two limit access to public support to nationally-owned enterprises. The remaining programmes were accessible for all domestically established enterprises. In this respect, support policies in Spain appear to be less open when compared with the OECD average.

In Spain, approximately 75 per cent of the programmes reported were managed at the central government level, and 25 per cent at the sub-central level. However, in terms of the financial flows involved, the average share of central government support – excluding the year 1993 for which sub-central figures were not available – reached almost 80 per cent. Sub-central support programmes were exclusively reported under the policy objective of regional development.

With only 20 per cent of all programmes terminating within a five-year period and 15 per cent classified as new programmes, turnover in the stock of programmes does not appear to be very dynamic. Moreover, almost 65 per cent of the programmes have a duration of five years and more, and these programmes channelled on average more than 90 per cent of the expenditure to the manufacturing sector. Thus, new policy orientations in Spanish support to manufacturing industry were reflected by the volume of financial flows to existing programmes, rather than by the implemention new or phasing out of existing programmes.

A broad variety of financing instruments were used in Spanish support policies. Grants, which serve as financing instrument in 75 per cent of all programmes, played an outstanding role in financing support programmes. Due to the unavailability of NCG figures in programmes using equity capital infusions, interest rate subsidies and guarantees as financing instrument, the analysis of the net expenditure by financing instrument should be interpreted with care. The information available points to a dominant role of grants and tax concessions in the period from 1989 to 1993. They financed, on average, almost 60 per cent of the net expenditure reported. Mixed-instrument financing channelled on average almost 40 per cent of public spending to manufacturing industry.

Table 57. **Reported NCG expenditure by financing instrument**

	Programmes	Nominal NCG: billion Ptas				
		1989	1990	1991	1992	1993
Regular grant	33	73.4	93.3	72.7	51.7	37.2
% share	*70.4*	*30.8*	*47.0*	*40.0*	*30.5*	*29.0*
Reimbursable loan	2.0	6.6	9.4	10.8	6.7	4.9
% share	*4.5*	*2.8*	*4.7*	*5.9*	*4.0*	*3.8*
Interest rate subsidy[1]	1	n.a.	n.a.	n.a.	n.a.	n.a.
% share	*2.3*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Regular loan	1	3.2	3.3	6.6	7.0	5.9
% share	*6.4*	*1.3*	*1.7*	*3.6*	*4.1*	*4.6*
Guarantee	1	n.a.	n.a.	n.a.	n.a.	n.a.
% share	*2.3*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Equity capital	1	0.1	0.0	0.1	0.0	0.0
% share	*2.3*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Tax concession	1	22.8	29.8	44.1	42.3	28.6
% share	*2.3*	*9.6*	*15.0*	*24.3*	*25.0*	*22.2*
Mixed	6	132.2	62.5	47.4	61.7	51.8
% share	*13.6*	*55.5*	*31.5*	*26.1*	*36.4*	*40.3*
Total	44	238	198	182	169	128

n.a. Not available.
1. GGBE figures only were reported for this instrument.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN SPAIN

Creating employment in the Spanish economy and strengthening the industrial competitiveness of Spanish businesses calls for a new growth model, which, in the long term, will direct the allocation of factors of production away from stagnant sectors towards sectors characterised by high growth, value added and technology.

Spanish industry faces a two-fold challenge:

i) to restructure enterprises and, more specifically, the production systems and organisational structures on which they are built; and

ii) to innovate new markets and products, based on the search for solutions to problems related to the environment, health, culture, information society, etc.

For these reasons, the intention of Spanish industrial policy is not only to create an efficient and stable industrial and business environment, but also to:

– foster innovation, knowledge and new production and organisation systems;

– speed up the process of structural adaptation; and

– promote co-operation among enterprises.

This new orientation is taking the form of two policies, developed simultaneously and in co-ordination:

– a macroeconomic stability policy, which will enable enterprises to grow and create new jobs;

– a structural reform policy, aimed at improving the performance of the markets for products, services and labour.

Industrial aspects of competition policy

Competition policy is an essential, complementary instrument of industrial policy. Competition policy will be the first and basic axis in support of industrial competitiveness. The major lines of action to be adopted are:

– to develop a new model of competitive public services based on the notions of subsidiarity and streamlining;

– to reduce and restructure state-owned enterprises, with a view to privatisation, the liberalisation of state monopolies and the downsizing of public support.

Support to intangible investments

Technology and innovation policies are the core of the specific activities conducted by the Ministry of Industry and Energy. The ATYCA Initiative brings together the different activities aimed at promoting technological capacity, innovation, quality and industrial safety during the period 1997-99.

The purpose of the ATYCA Initiative is to foster innovation in the business world, with special emphasis on small and medium-sized enterprises. This initiative comprises two programmes: the Industrial Technology Support Programme (organised into different technological fields: information, computer and communications; production; biotechnology; chemicals; food; materials; pharmaceuticals; environment; and industrial development and design); and the Industrial Quality and Safety Programme (divided into areas of action in the fields of: quality and safety; diffusion, training and information; infrastructures; industrial products and installations).

Annex 1: **List of industrial support programmes reported by Spain**

Programme code	Programme title
2401001	Restructuring and Re-industrialisation
2401002	Aid for Shipbuilding
2401003	Loss Compensation for Shipyards
2401004	Support to Defence Industries
2403001	Industrial Quality National Plan (PNCI)
2403002	Technological Infrastructure Programme (PIT)
2403003	National Electronic and Computer Programme (PEIN II and PEIN III)
2403004	Advanced Industrial Automation Plan (PAUTA)
2403005	Incentive Plan for Research in the Pharmaceutical Industry (FARMA)
2403006	Support Plan for the Basic and Processing Sectors (SBT)
2403007	Development Plan for Biotechnology, Chemical Engineering and Materials Technology (BQM)
2403008	R&D Co-operation Projects
2403009	Technological Development and Innovation Projects (PDT/PIT)
2403010	Support to the aircraft industry
2404001	Adjustment to International Competition and Regional Diversification – Textile/Ready-made Clothing Industry
2404002	Incentives for Firms to Co-operate at National and International Level
2404003	VALOREN
2404004	Regional Economic Promotion
2404005	Regional Sectoral Measures
2404006	Aids for companies in difficulties
2404007	Regional R&D Promotion Programmes
2404008	Regional Development Programmes by Autonomous Communities
2404009	Investment Support Programmes by Regional Authorities
2404010	Regional Support for SMEs
2404011	Regional Support for Employment and Training
2404012	Regional Support for Exports and Trade
2404013	Regional Support for Energy Efficiency
2404014	Regional Support for the Environment
2405001	Fiscal Expenditure
2405002	Financing of Manufacturing Enterprises of the Public Sector
2406001	Company Adjustment to the Single Market (Company Diagnosis)
2406002	Mutual Guarantee System
2406003	Collective Action
2406004	Industrial Design Promotion Plan (PDDI)
2406005	Support to Professional Organisations Offering Services to SMEs
2406006	Support to SMEs for Promotion of Design, Quality and Fashion
2406007	Subsidies to Financial Support to SMEs
2408001	Support to Export Promotion Activities (ICEX)
2408002	Officially Supported Export Finance
2408003	Officially Supported Export Finance Guarantees (CESCE)
2409001	Energy Savings and Efficiency Plan (PAEE)
2409002	Subsidies to Energy Saving Investments
2409003	Subsidies to Energy Diversification and Renewable Energy Sources
2410001	Industrial and Technological Environment (PITMA)

Annex 2: **List of labour and training programmes reported by Spain**

Programme code	Programme title
2407001	Enterprise Technical and Industrial Qualification Plan

SWEDEN

SWEDEN 1993

GDP: million SKr (current prices)	1 442 181
Manufacturing GDP: million SKr (current prices)	260 100
Unemployment rate	8.2%
Corporate tax rate	30%
Government borrowing rate	8.54%
Civil procurement: million SKr	100 000[1]
Military procurement: million SKr	15 540.3
Support to labour and training: million SKr	448.9
R&D contracts: million Skr (1991 data)	2 886
– *of which:* Manufacturing (1991 data)	3 139
Financial support to R&D institution: million SKr	142
Public space programmes: million SKr	489

1. Rough estimation by the Swedish Government.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN SWEDEN

Swedish industrial policy is based on the principle that the allocation of productive resources is determined by market forces. The government defines the legal and administrative framework for the economic agents, but refrains from direct intervention in industry. The objective of industrial policy is to improve the conditions for sustained growth and innovation in industry through general measures.

Against this background, a new paradigm for industrial policy emerged in the early 1990s: the main task of the government is to support a favourable business climate, based on:

– stable institutions, including systems of regulations which make sure that the market functions efficiently; and

– framework conditions which make it profitable for companies to make long-term plans for investment and innovation as well as for individuals to engage in "lifelong learning".

Policy is oriented towards investments in infrastructure and the development of skills embodied in people and organisations. Direct financial support targeting individual companies or specific sectors has become less important, being increasingly replaced by measures of a horizontal nature. This new approach has resulted in the broadening of the industrial policy perspective in Sweden.

Through the structural reforms of recent years, a number of weaknesses in the Swedish economy have been rectified. The tax policy introduced in 1991/92 improved the conditions for work and saving and gave Sweden a low level of company taxation in comparison to other OECD Member countries. The restructuring of national health insurance and unemployment insurance removed obstacles to employment creation. The new Competition Act improved competition and increased the pressure to adjust within the business sector.

Sweden became a member of the European Union in 1995, and consequently adopted the basic EU rules for governmental support which are laid down in Articles 92-94 of the Treaty of Rome. Participation in the European Single Market has created new business opportunities for companies. Membership of the EU has, at the same time, improved Sweden's attractiveness as a location for foreign investment.

In the autumn of 1995, the government passed the bill, ''A Policy for Employment, Security and Development'', containing guidelines for growth policy for the following three years. The objective of this bill is an overall grasp of the growth problem with various impacts on macro and micro policies.

Sweden ratified the WTO Agreement on Subsidies and Countervailing Measures in 1994, and approved, at the same time, a new legislation on public procurement which aims to transpose into national law the procurement agreement concluded in the Uruguay Round.

In Sweden, the budget of the central government is the unique source of public support to industry. Local governments are, in principle, prohibited by law from providing financial support to enterprises. Administration of support programmes funded by the central government may, however, take place at the regional and local levels.

II. THE STRUCTURE OF PUBLIC SUPPORT IN SWEDEN

Table 58. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million SKr						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG	3 660.7	2 691.6	3 529.1	3 809.8	3 053.8	1 437.9	1 461.3
Real NCG	3 660.7	2 471.7	3 013.7	3 215.0	2 513.4	1 159.6	1 144.4
Manufacturing support rate (%)	1.41	1.01	1.36	1.54	1.17	0.48	0.45
OECD manufacturing support rate: %	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

Source: OECD Industrial Support Database (February 1998).

In Sweden, public support to manufacturing industry in current prices drastically declined when the beginning and the end of the reporting period are compared. Public support, which was SKr 3661 million in 1989, dropped to SKr 1 461 million in 1995. This reduction in nominal terms, amounting to almost 60 per cent of the 1989 level, underlines the successful efforts of the Swedish Government to restrain from financial interventions in the manufacturing sector, and, at the same time, to curb the financial impacts on the national budget. The high share of support programmes (36 per cent) that expired during the reporting period reflects the new policy approach adopted by the Swedish Government. In real terms, the reduction amounted to approximately 69 per cent of the 1989 levels.

The somewhat erratic development in total expenditure over the period under review can be attributed to three main factors. First, support sharply decreased from 1989 to 1990 as a result of cuts in shipbuilding subsidies. Second, the high levels of support in 1991, 1992 and 1993 are due to two main reasons. The high figures under crisis aid in 1991 and 1992 do not reflect any active financial intervention by the government in those years. They result from the method of calculating the net cost to government of equity capital injections. In fact, no state-owned manufacturing companies were in crisis in 1991 and 1992. The strong growth in spending on general investment incentives was caused by an increase in the number of companies eligible for reductions of their energy tax payments. Third, the drastic cuts in 1994 and 1995 are explained by a change in the scheme for energy tax reductions.

Sweden is one of the nine OECD Member countries in which public support declined when 1989 and 1993 levels are compared. The manufacturing support rate, which measures public support to manufacturing as a share of manufacturing GDP, was below the OECD average only in the exceptional year 1990, but was very close to the average in 1993. In the absence of OECD averages for 1994 and 1995, an assessment in the international context of the significant reductions in the Swedish manufacturing support rate is not possible at this point. However, the low rates in 1994 and 1995 indicate a weakening of public support as a policy instrument in Sweden.

The priorities of public support in Sweden during the period from 1989 to 1993 were horizontal measures, such as R&D and regional support. It may, however, seem as if the main objectives were sectoral policies and investment incentives. This is somewhat misleading, since most of the support under the heading of sectoral policies (97 per cent in 1995) consists of subsidies to daily newspapers with a low household coverage. The aim of the programme is to maintain pluralism and stimulate political debate in Sweden. Table 59 shows that during this period expenditure was fairly stable under the policy objectives of R&D, regional development, exports (except in 1993) and energy efficiency. While for the OECD area overall, R&D and regional development were the major areas of support, representing between 38 and 53 per cent of total expenditure, their combined share in Sweden exceeded 25 per cent in only one year. In the later years, 1994 and 1995, the structure of Swedish support to manufacturing industry began to resemble the OECD averages for the period 1989-93.

Table 59. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million SKr						
		1989	1990	1991	1992	1993	1994	1995
Sectoral[1]	6	1 721.0	774.0	803.0	827.0	731.0	684.0	545.0
Crisis aid	1	0.0	0.0	801.0[2]	734.0[2]	24.0	0.0	0.0
R&D	11	530.9	524.2	439.4	500.2	533.8	287.3[3]	362.53[3]
Regional	13	328.6	336.2	321.0	277.9	266.9	221.5	241.7
Investment	2	712.0	700.0	713.0	1 056.0	1 300.0	51.0[4]	56.0[4]
SMEs	8	65.2	88.6	81.3	98.1	82.6	155.7	156.7
Exports	4	296.1	259.3	363.8	307.0	103.9	21.6	92.5
Energy	2	7.0	9.3	6.6	9.6	11.7	16.8	7.0
Total	47	3 660.7	2 691.6	3 529.1	3 809.8	3 053.8	1 437.9	1 461.3

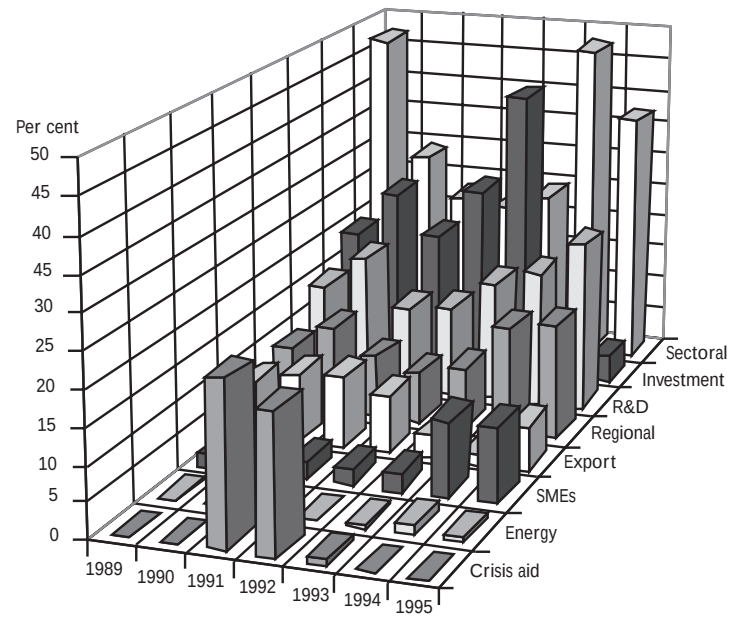
1. Of which on average SKr 550 million per year is due to support to the daily press.
2. This is due to the method of calculating equity capital. This figure does not reflect any active financial support by the government in those years.
3. Before 1994 it was not possible to separate R&D support to research institutions and universities, so this support was included in the total. Starting from 1994, only the share to private enterprises has been reported. (The total in 1994 was SKr 538 million and in 1995 SKr 462 million.)
4. This decline is due to a change in the rules for eligibility for energy tax.

When the analysis is extended to the years 1994 and 1995, it can been seen that the significant reduction in total support is the result of reduced expenditure under almost all policy objectives. Spending incurred under the SME policy objective is the exception.

The still significant amounts of sector-specific support at the end of the period under review, representing approximately 50 per cent of total support in 1994 and 37 per cent in 1995, were mostly directed to the press industry, while ailing industries such as textiles and shipbuilding only received minor amounts of financial aid.

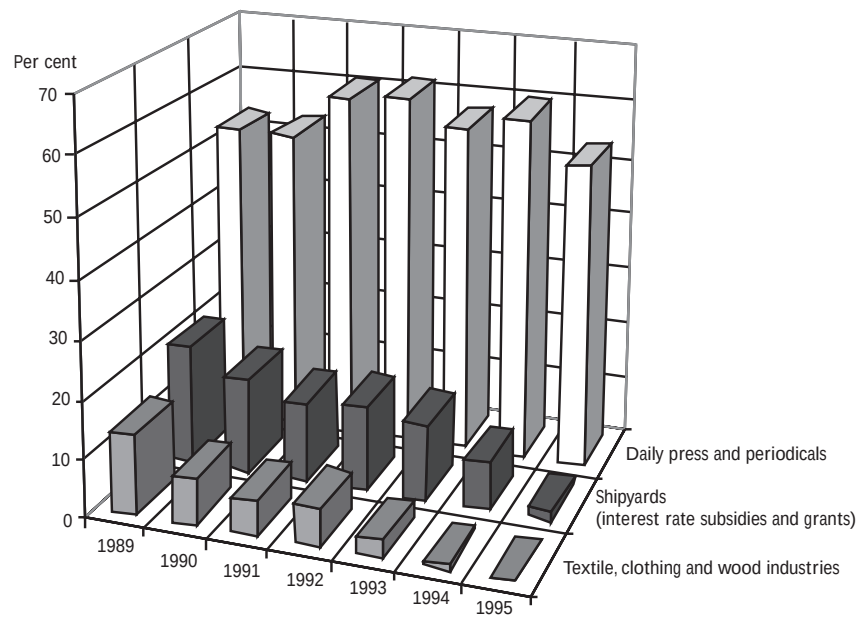
The net costs recorded in 1991 and 1992 under crisis aid refer to government equity holdings. They do not, as was mentioned above, reflect any actual financial measures. The state sold most of its holdings in manufacturing companies during the period 1989-95. At the end of 1995, the Swedish Government was a majority shareholder in only one manufacturing company.

◆ Graph 17. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

◆ Graph 18. ***Sector-specific support***
Million SKr



 Source: OECD Industrial Support Database, February 1998.

Under the policy objective of R&D and technological innovation, three programmes focus on the acquisition of R&D equipment and the appropriation of new technologies; their share in direct R&D support was 80 per cent in 1993. Six programmes, three of which were sunsetting in the period under review, directly promote specific technologies; they represented 15 per cent of direct R&D expenditure in 1993. The remaining programmes support international co-operation or risky technological projects.

As in other OECD Member countries the net cost of export credit and export credit guarantee schemes in Sweden significantly diminished since 1993 due to a better overall performance of such schemes.

Of 47 Swedish programmes reported covering the period 1989 to 1995, six were new support programmes introduced in 1990 or later, while 17 programmes expired before the end of 1995. This points to a comparatively dynamic turnover in the stock of programmes, and underlines the temporary nature of public support measures in Sweden.

Among the programmes reported, none was identified which limits *de jure* the access to public support to national enterprises. In this respect, support policy in Sweden appears to be more advanced than the OECD average.

Grants were the dominant financing instrument throughout the period from 1989 to 1995. Tax concessions played an important role only until 1993, when the scheme for reductions in energy tax was downsized. Equity capital injections, as a result of privatisation, and guarantees, due to the expiry of the credit guarantee scheme for the shipbuilding industry in 1990, had also diminished in importance towards the end of the period under review.

Table 60. **Reported expenditure by financing instrument**

	Programmes	Million SKr						
		1989	1990	1991	1992	1993	1994	1995
Regular grant	21	1 121.7	1 092.1	1 038.0	1 097.6	893.8	853.4	765.9
Reimbursable grant	4	140.9	146.6	133.5	148.9	98.3	6.0	131.7
Interest rate subsidy	1	93.6	0.0	0.0	0.0	50.2	0.0	91.5
Regular loan	5	53.4	36.0	28.5	38.4	32.7	70.8	51.9
Conditional loan	1	63.0	59.0	55.0	59.0	59.0	56.0	48.0
Guarantee	4	958.9	159.3	270.6	214.8	11.6	7.2	2.0
Equity capital	2	3.0	3.2	803.9	740.8	32.3	0.0	0.0
Tax concession	2	781.0	793.8	783.6	1 107.2	1 381.4	132.8	144.0
Mixed	7	445.2	401.8	416.1	403.3	494.6	311.8	226.3
Total	47	3 660.7	2 691.6	3 529.1	3 809.8	3 053.8	1 437.9	1 461.3

Finally, it should be mentioned that the Swedish reporting on public support to manufacturing industry is considered to be very complete. The Swedish authorities provided exhaustive quantitative and qualitative information in response to both the general and complementary reporting formats.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN SWEDEN

There is no indication that the views of the Swedish Government on the future of public support to manufacturing industry will change in the foreseeable future. A restrictive national support policy, embedded in the legal frameworks of relevant international agreements, will focus on measures supporting the development of SMEs, improving access to risk capital, promoting R&D and levelling out regional differences. Initiatives to support entrepreneurship by women will also be a priority. Finally, the overall objective to develop an environmentally safe society will also impact on any future support policy.

The Swedish Government has declared that the use of state resources as financial support to enterprises will become more efficient in the future, particularly concerning its effects on economic growth and the creation of jobs.

In this context, the monitoring and evaluation of public support programmes is now carried out as part of the annual budgetary process. In order to ensure an efficient use of state funds, the Swedish Government continues to pursue its efforts to improve evaluation methods. Besides regular exercises, initiatives are launched on a case-by-case basis aiming at a more thorough analysis of selected programmes. However, at this stage, an explicit strategy or common method for the monitoring and evaluation of support programmes does not yet exist.

Annex 1: **List of industrial support programmes reported by Sweden**

Programme code	Programme title
2501001	Wage Subsidies for the Textile and Clothing Industry
2501002	Adjustment Aid in Textile, Clothing Industry and Wood Products
2501003	Write-off Loans for the Textile and Clothing Industry (to promote Structural Rationalisation)
2501004	Subsidisation of Interest Rates and Cash Grants for Shipyards (in order to provide terms equivalent to those of other countries)
2501005	Credit Guarantees for the Shipbuilding Industry
2501006	Support to the daily press and periodicals
2502001	Government Equity Capital
2503001	Technical Research and Development
2503002	Information Technology
2503003	National Microelectronics Programme (NMP): 1) Education; 2) Basic Research; 3) Applied Research; 4) Industrial Development
2503004	Support for Procurement of New Technology
2503005	Programme for Diffusion of FMS Technology
2503006	Programme for Ocean Technologies
2503007	Loan for Scientific Equipment
2503008	Support for certain R&D Projects
2503009	Transport and Communication Research through the Transport and Communication Research Board
2503010	Research on Electrical and Hybrid Vehicles through the Transport and Communications Research Board
2503011	Information Technology
2504001	Location Grant also including figures for Development Grant and Development Grant for Location of certain Business Services
2504002	Location Loan (Discretionary for Investment in Buildings and Machinery in Regional Development Areas)
2504003	Employment Grant
2504004	Transport Grant
2504005	The Fund for Northern Sweden
2504006	Loan to Private Investment Companies
2504007	Aid to Firms in Sparsely Populated Areas
2504008	Reduced Social Security Contribution
2504009	Aid to Wood Products Industry in Northern Sweden
2504010	Aid to the Region of Bergslagen
2504011	Development Projects
2504012	Programme for Industrial Development in Regions of Regional Policy Priority
2504013	Aid to firms in rural areas
2505001	Industry Loan Guarantees (to Promote Structural Adjustment and Industrial Growth)
2505002	Reduction of Energy Tax
2506001	Fund for Industry and New Business
2506002	Operating Loans to SMEs
2506003	Development Capital for SMEs
2506004	Guarantees for SMEs
2506005	Small Business Fund
2506006	NUTEK: The Public Advisory System
2506007	The Fund for Swedish-Norwegian Industrial Co-operation
2506008	Temporary Support to Small Companies
2508001	State Supported Export Credits
2508002	Support for Exports of Industrial Projects and Systems (SPE)
2508003	Export Promotion
2508004	Export Credit Guarantees, Investment Guarantees
2509001	Energy Research Programme
2509002	Technology Procurement

Annex 2: **List of labour and training programmes reported by Sweden**

Programme code	Programme title
2507001	Support for On-the-job-Training
2507002	Recruitment Subsidy
2507003	Industrial Orders, Stop-gap Orders to Firms with Labour Problems
2507004	Recruitment Incentive
2507005	The Swedish Council for Work Life Research

SWITZERLAND

SWITZERLAND 1993

GDP: million SF (current prices)	342 850
Manufacturing GDP: million SF (current prices)	80 616
Unemployment rate	4.5%
Corporate tax rate	Profit: 9.25%-44% Capital: 0.398%-1%
Government borrowing rate	4.55%
Civil procurement: million SF	21 151
Military procurement: million SF	40 600
Support to labour and training: million SF	59.1
R&D contracts: million SF	373.5
– *of which:* Manufacturing	80.2
Financial support to R&D Institution: million SF	0
Public space programmes: million SF	111
– *of which:* Swiss contribution to ESA: million SF	111

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN SWITZERLAND

In the period from 1989 to 1995, the slow-down of growth in the Swiss economy heightened awareness of structural problems. The general economic sluggishness and the process towards economic integration in Europe led to a rethinking of Swiss industrial policy. Starting in the early 1990s, this policy has taken two major new directions: on the one hand, an inquiry into ways to create a more market-oriented framework for economic activity and, on the other, a strengthening of government support for training and strategic scientific research. This more active and more sharply defined industrial policy was intended to integrate Swiss industry into the broad European internal market and to improve Swiss competitiveness through technological upgrading.

The key event in structural policies in the period under review was the announcement of the government's first revitalisation package, which included measures to liberalise domestic markets, the labour market and public procurement and to improve competition policy. This wave of microeconomic reforms was put in place after the Swiss people and the cantons rejected the ratification of the European Economic Area Agreement in December 1992.

Embedded in such a framework-oriented policy approach, the role of public support as an instrument of industrial policies in Switzerland has never been particularly strong. In general, Switzerland, more than most other OECD Member countries, is specifically restrictive in providing financial support to industry. It is the stated belief of successive Swiss Governments that markets are normally more efficient in encouraging industrial activities than direct or indirect public support measures. Consequently, policy in Switzerland is essentially directed towards creating favourable framework conditions for entrepreneurial activities. Against this policy background, the role of public support in Switzerland, which in financial terms was already low at the beginning of the reporting period, further declined when data for 1994 and 1995 are considered.

The budgetary implications of the new industrial policy approach are particularly visible under the policy objective of support to R&D and technological innovation. The sharp increase in net expenditure for these objectives towards the end of the reporting period reflects the new direction of industrial policy in Switzerland.

Switzerland is composed of 26 cantons. Each is responsible for policy in all the areas under its control such as education and social affairs. Accordingly, financial support to manufacturing industry is provided both by the federal government and the cantons. In terms of financial support provided, the federal government is the major player in Swiss support policies (Table 63).

Switzerland has ratified the WTO Agreement on Subsidies and Countervailing Measures, and during the winter of 1994/95 approved new legislation on public procurement which aims to transpose into national law the procurement agreement concluded in the Uruguay Round. These agreements were also implemented by the cantons later in the year. Thus, the international subsidy and procurement discipline established in the WTO has become binding for Swiss support policies.

II. THE STRUCTURE OF PUBLIC SUPPORT IN SWITZERLAND

In Switzerland, public support to manufacturing industry in current prices increased from 1989 to 1991, when it peaked at SF 447 million. Financial support then consistently declined to SF 187 million in 1994, before increasing again in 1995. When the beginning and the end of the 1989-93 reporting period are compared, public support to manufacturing industry grew by 26 per cent – the OECD average was 27 per cent, while a comparison between 1989 and 1995 figures shows a 7 per cent reduction (Table 61).

Table 61. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million SF						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG	239.93	258.34	447.06	341.91	301.44	187.05	223.15
Real NCG	239.93	244.43	401.02	298.77	258.28	157.28	183.09
Manufacturing support rate[1]	0.34	0.34	0.57	0.43	0.37	0.23	0.26
OECD manufacturing support rate	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

1. Secretariat estimate for manufacturing GDP in 1994 and 1995.
Source: OECD Industrial Support Database (February 1998).

The absence of a clear trend in nominal expenditure is the result of special developments in the two big blocks of public support to industry programmes in Switzerland. First, due to the extremely high export credit guarantee and insurance claims paid out in 1991, and the much higher loan-write-offs in this year, resulting in a duplication of support to exports and foreign trade from 1990 to 1991, total support peaked in 1991. It is interesting to note the success of some of the substantive improvements of the credit guarantee mechanism, implemented in 1994 and 1995 in response to serious budgetary constraints. As support to exports and foreign trade had absorbed almost two-thirds of total public support to manufacturing industry in earlier years, the drop to SF 5.1 million in 1994 and to SF 7.8 million in 1995 explains the greater part of the decline in total expenditure (Table 62).

Second, the strengthening of government support for strategic scientific research led to a remarkable increase in expenditure, which more than tripled between the first and last year of the reporting period. This partial trend flattened the overall development in net expenditure particularly in the last two years.

In real terms, the increase from 1989 to 1993 fell to approximately 7.6 per cent, and the decline from 1989 to 1995 amounted to 24 per cent. The manufacturing support rate which was 0.34 per cent in

Table 62. **Reported expenditure and programmes by policy objective**

	Programmes Number	Nominal NCG: million SF						
		1989	1990	1991	1992	1993	1994	1995
R&D	4	39.1	51.1	55.7	64.1	62.6	108.2	142.1
Regional	3	41.3	42.7	48.9	64.9	67.0	70.6	69.7
SMEs	1	0.8	1.0	1.3	2.7	3.6	3.2	3.6
Exports	2	158.8	163.6	341.2	210.2	168.3	5.1	7.8
Total	10	240.0	258.4	447.1	341.9	301.5	187.1	223.2

1989, was 0.37 per cent in 1993 and 0.26 per cent in 1995. All these figures lie significantly below the OECD average of 1.15 per cent in 1989 and 1.23 per cent in 1993. This demonstrates that even from a very low level of support, further cut-backs in public support to manufacturing industry are possible.

It is important to mention that Switzerland, in the course of the peer-review procedure, succeeded in filling reporting gaps which existed especially at the cantonal level. Although it was not possible to break down the aggregate figures on cantonal support by canton, this was nevertheless a big step forward in fulfilling the reporting commitments.

Public support to manufacturing industry in Switzerland focuses on four policy objectives: R&D, regional development, exports and foreign trade, and SMEs. With the exception of export credit guarantees, firm-, sector- and product-specific assistance has disappeared from the landscape of industrial support. Under the policy objectives of general investment schemes, and support to energy efficiency and environmental protection, financial flows were not directed to the manufacturing sector. The share of expenditure on R&D and regional development in total spending has consistently increased from 1989 to 1995. From 33 per cent at the beginning of the reporting period, it reached 95 per cent at the end. In parallel, support to exports and foreign trade lost its predominant role representing only 2.7 and 3.5 per cent in 1994 and 1995 respectively.

Over the period 1989 to 1995, only one new support programme was introduced and none of the existing programmes expired. This points to a high stability in the stock of programmes, revealing a duration of seven years or more for almost all support programmes. In response to the changing policy focus, financial flows in existing programmes were adapted, rather than implementing new or phasing out existing programmes.

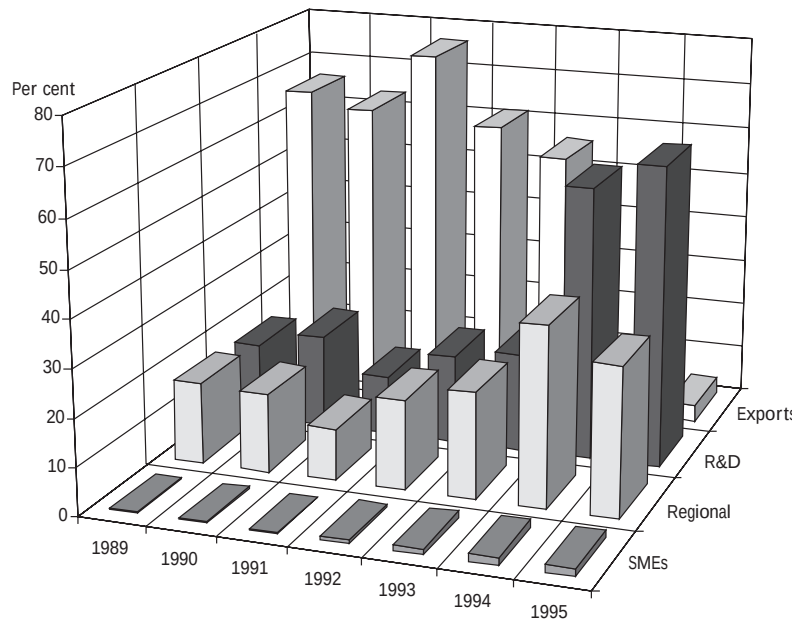
Among the ten programmes reported (Annex 1), none was identified which limits the access to public support to national enterprises. In this respect, the support policy in Switzerland appears to be more advanced than the OECD average.

Grants, guarantees and tax concessions are the financing instruments used in Swiss industrial support policies. The relatively high share of programmes with mixed financing instruments is more the result of the high level of aggregation of such programmes, particularly in cantonal support. In the absence of publicly owned manufacturing enterprises, at no stage of the reporting period were capital injections used as a financing instrument in Switzerland.

The growing importance of cantonal support in nominal and relative terms towards the end of the reporting period is the result of both increasing spending at the cantonal level and reductions in support at the level of the Swiss Confederation. Leaving aside joint support programmes, cantonal spending compared with federal spending was on a scale of roughly one to three in 1994 and 1995 (Table 62). While responsibility in support to R&D, exports and foreign trade, and SMEs appears to lie at the level of the confederation, cantonal support is concentrated on regional issues.

Two programmes were applied at the central and joint central/sub-central levels under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of public support programmes (Annex 1), and assigned to a second annex (Annex 2).

✦ Graph 19. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 63. **Support by managing structure: Confederation, cantons and institutions**

Managing level	Programmes	Nominal NCG: million SF						
		1989	1990	1991	1992	1993	1994	1995
Central	6	195.7	209.3	392.0	271.7	230.3	116.4	144.0
% share	*60*	*81.6*	*81.0*	*87.7*	*79.5*	*7.4*	*62.2*	*64.5*
Joint central/Sub-central	1	12.3	12.5	16.9	16.7	16.9	12.9	12.7
% share	*10*	*5.1*	*4.8*	*3.8*	*4.9*	*5.6*	*6.9*	*5.7*
Sub-central	1	27.4	29.0	30.7	44.6	45.4	49.5	55.1
% share	*10*	*11.4*	*11.2*	*6.9*	*13.0*	*15.1*	*26.5*	*24.7*
Private institution	1	0.8	1.0	1.3	2.7	3.6	3.2	3.6
% share	*10*	*0.3*	*0.4*	*0.3*	*0.8*	*1.2*	*1.7*	*1.6*
Unclassified	1	3.8	6.6	6.2	6.2	5.3	5.1	7.8
% share	*10*	*1.6*	*2.6*	*1.4*	*1.8*	*1.8*	*2.7*	*3.5*
Total	10	239.9	258.3	447.1	341.9	301.4	187.1	223.2

Source: OECD Industrial Support Database (February 1998).

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN SWITZERLAND

Switzerland will continue to pursue a restrictive national support policy in the future. No new support programme benefiting manufacturing industry is planned at this stage. R&D and technological innovation will continue to be the area of public support gathering the major share of net expenditure.

Improving framework conditions for doing business in Switzerland will continue to be at the top of the industrial policy agenda. Further reforms towards economic revitalisation will aim at extending past efforts to policy areas such as infrastructure, taxation and social security.

The evaluation of support programmes in Switzerland is undertaken in particular in the areas of regional development and R&D. As a general rule, the results of evaluations are published.

Annex 1: **List of industrial support programmes reported by Switzerland**

Programme code	Programme title
2603001	Encouragement of Applied Research (Commission for the Encouragement of Scientific Research: CERS)
2603002	Technological Co-operation in Europe (EUREKA)
2603003	Federal Grant to the Swiss Electronics and Micro-engineering Centre
2603004	Third Framework Programme of R&D of the European Community, 1991-1994
2604001	Financial Assistance for Regions whose Economy is Under Threat
2604002	Guarantees for Investments in Mountain Regions
2604003	Cantonal Economic Promotion
2606001	Support for Co-operatives that Provide Loan Guarantees for Small Businesses
2608001	Financial Assistance to the Swiss Office for Commercial Expansion (OSEC), Swiss Chambers Abroad and Non-profit Groups Outside the OSEC
2608002	Federal Law on Guarantees covering Export Risk

Annex 2: **List of labour and training programmes reported by Switzerland**

Programme code	Programme title
2607001	CIM and Microelectronics Training and Research Centres
2607002	Compensation for Reductions in Working Hours

TURKEY

TURKEY 1993

GDP: billion TL (current prices)	1 981 867	286 811 (1989 prices)
Manufacturing GDP: billion TL (current prices)	412 408	59 683 (1989 prices)
Unemployment rate	7.6%	
Corporate tax rate	46%[1]	
Government borrowing rate	86.3%	
Civil procurement: billion TL	32 299[2]	4 674.2 (1989 prices)
Military procurement	–	
Support to labour and training: billion TL (real NCG)		358.61 (1989 prices)
R&D contracts: billion TL	28.29	4.1 (1989 prices)
– *of which:* Manufacturing		
Financial support to R&D institutions: billion TL	35.3	5.1 (1989 prices)
Public space programmes	–	–

1. Lowered to 25 per cent in 1994.
2. Central only.

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN TURKEY

Since the 1980s, Turkey has embarked on an ambitious development programme based on the principles of the market economy. Much of the effort over the past decade has been directed at changing the economic and regulatory environment to encourage, in particular, the expansion and the modernisation of the manufacturing sector. During the period from 1989 to 1993, the average annual growth rate of manufacturing output increased by 6.8 per cent in real prices.

A series of reforms has been introduced in order to implement an export-oriented development strategy. The basic aims of this strategy were to abandon protectionist economic policies and to minimise state intervention.

Within the context of this strategy the basic policies in this period were:

– establishing a competitive external market-oriented structure;

– attaining continuity in exports and increasing production diversity;

– providing inputs at world market prices;

– promoting a climate conducive to fair competition; and

– increasing the role of the private sector in manufacturing industry.

A number of changes affecting the financial position of business firms were included in a new tax law which went into effect on 1 January 1994. The general tax rate was lowered from 46 to 25 per cent.

Support policies in Turkey specifically addressed the promotion of manufacturing, investment and exports. Thus, sectoral aid schemes, investment and export incentives constituted the core of financial support measures applied by the Turkish Government in the period under review.

As regards measures specifically targeting investment activity, the legal rate of the investment allowance was lowered, as from the beginning of 1994, from 30 to 20 per cent. However, the rate can be raised to as high as 70 per cent by the Council of Ministers in line with regional and sectoral priorities.

In order to adjust to the obligations imposed by the WTO Agreement on Subsidies and Countervailing Measures and the common commercial and competition policies of the European Union, Turkey has adapted its legislation to ensure the smooth operation of trade and state-aid policies under these international frameworks.

In the period from 1989 to 1995, both inflation and the devaluation of the Turkish lira remained stubbornly high. The growth rate of the general price index lay between 52.3 per cent in 1990 and 120.7 per cent in 1994, and the nominal exchange rate of the Turkish lira *vis-à-vis* the US dollar declined from TL 2 120 in 1989 to TL 45 738 in 1995. Against this background, the analysis of public support to manufacturing industry in Turkey will focus on quantitative developments in terms of real prices or nominal US dollars.

Turkey is a centrally structured country. Responsibility for public support policies lies strictly with the central government and at the level of some nation-wide operating public institutions.

II. THE STRUCTURE OF PUBLIC SUPPORT IN TURKEY

The data provided by the Turkish Government cover the period from 1989 to 1996. To keep this monograph in the perspective of other monographs, for which data are only available until 1995, the analysis has not been extended to 1996.

In Turkey, public support to industry showed a strong increase in the period from 1989 to 1995. Expressed in nominal US dollars, growth in expenditure amounted to 69 per cent. In 1989 prices, real public support increased from TL 3 541 billion in 1989 to TL 4 832 billion in 1995, a 36 per cent increase. While real support consistently declined from 1989 to 1991/92, it peaked in the crisis year of 1994 at TL 6 016 billion, before shrinking again in subsequent years.

Turkey is one of 15 OECD Member countries in which public support increased, when the beginning and the end of the period from 1989 to 1993 are compared. Moreover, the manufacturing support rate, which measures public support to industry as a share of manufacturing GDP, also went up when the rates for 1993 and 1995 are compared with the 1989 rate. The extraordinarily high level of Turkish manufacturing support rate and the widening gap between this rate and the OECD average rate are a matter of concern and point to a particular challenge to tackle spending on industrial support programmes. Turkey is currently implementing an ambitious privatisation programme which will lower support to manufacturing industry. As a result, the gap between these rates is expected to narrow in the coming years.

Table 64. **Real NCG expenditure and the manufacturing support rate**

	Billion TL, in 1989 prices; nominal US$						
	1989	1990	1991	1992	1993	1994	1995
Real NCG[1]	3 541	3 226	3 082	3 085	4 519	6 016	4 832
NCG in US$ million, current	1 670	1 964	1 859	1 854	2 848	2 889	2 824
Manufacturing support rate (%)	6.7	5.9	5.6	5.4	7.6	10.1	7.4
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*		

Source: OECD Industrial Support Database (May 1998).

On average, 93 per cent of total expenditure was spent under the policy objectives of sectoral aid, export promotion and investment incentives although sectoral support largely expanded its share towards the end of the reporting period at the expense of both and investment promotion. Horizontal supports such as R&D, SMEs and regional development slightly augmented their combined share from 7.5 per cent in 1989 to 10 per cent in 1995. In spite of the increase of horizontal supports, their share in total expenditure remained fairly low.

Turkey is one of the rare OECD Member countries in which sectoral support continued to grow in the 1990s. The growing significance of sectoral support in both absolute and relative terms was the result of accelerating net spending on state enterprises in manufacturing industry. On average, such expenditure represented almost 40 per cent of total public support to manufacturing industry in the period under review. Financial aid to state-owned manufacturing absorbed a high share of sectoral support in Turkey. The defence and the construction materials industries were particularly targeted by sectoral support programmes.

More than 40 per cent of the programmes reported provided support to the promotion of manufacturing investment. In terms of real expenditure and as a share of total support, general investment incentives decreased from 1989 to 1995. However, the promotion of industrial investment in Turkey, viewed more broadly in the light of secondary policy objective and economic activity supported has received considerable support. Combined support to physical investment amounted to more than 70 per cent in 1992.

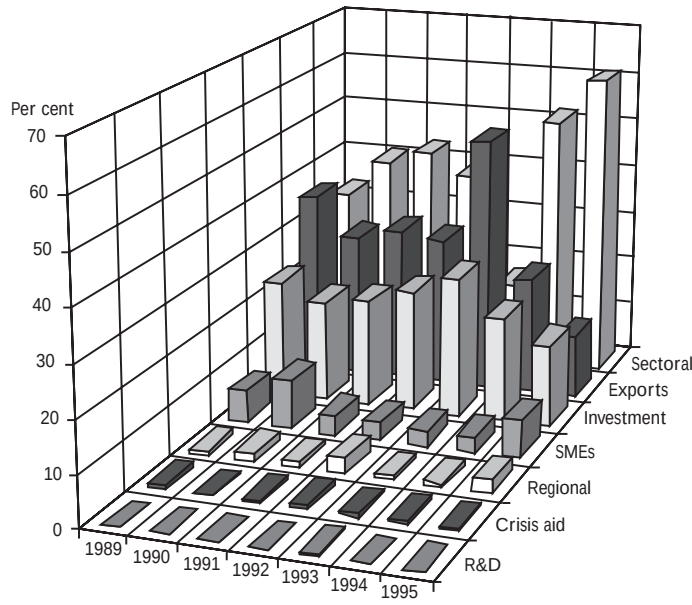
Under the policy objective of exports and foreign trade, public support to manufacturing firms focused on price support for export goods. Export credits and export credit guarantees – unlike in most other OECD Member countries – accounted for only a minor share of expenditure under this policy objective. Export promotion qualified as the second most important objective of public support to manufacturing industry in the period under review.

A broad variety of financing instruments were used in Turkish support policies. One programme using equity capital infusions as financing instrument channelled on average more than 35 per cent of total net expenditure to the manufacturing sector. Grants and loans financed almost two-thirds of the programmes reported, but their combined share of total net expenditure accounted for only 40 per cent.

Table 65. **Reported expenditure and programmes by policy objective**

	Programmes	Real NCG: billion TL, in 1989 prices						
		1989	1990	1991	1992	1993	1994	1995
Sectoral	3	1 142	1 292	1 318	1 193	728	3 117	2 944
% share	*9.7*	*32.3*	*40.1*	*42.8*	*38.7*	*16.1*	*51.8*	*60.9*
Crisis aid	1	31	3	16	28	27	41	17
% share	*3.2*	*0.9*	*0.1*	*0.5*	*0.9*	*0.6*	*0.7*	*0.3*
R&D	2	1	1	0	0	21	0	3
% share	*6.5*	*0.0*	*0.0*	*0.0*	*0.0*	*0.5*	*0.0*	*0.1*
Regional	2	34	54	35	94	37	38	122
% share	*6.5*	*1.0*	*1.7*	*1.1*	*3.0*	*0.8*	*0.6*	*2.5*
Investment	13	820	644	654	744	1 266	1 239	790
% share	*41.9*	*23.2*	*20.0*	*21.2*	*24.1*	*28.0*	*20.6*	*16.4*
SMEs	2	230	314	117	114	135	180	364
% share	*6.5*	*6.5*	*9.7*	*3.8*	*3.7*	*3.0*	*3.0*	*7.5*
Export	8	1 283	917	941	912	2 305	1 402	593
% share	*6.5*	*36.2*	*28.4*	*30.5*	*29.6*	*51.0*	*23.3*	*12.3*
Total	31	3 541	3 226	3 082	3 085	4 519	6 016	4 832

✦ Graph 20. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 66. **Reported real expenditure by financing instrument**

	Programmes	Billion TL						
		1989	1990	1991	1992	1993	1994	1995
Regular grant	9	684	673	692	611	480	672	59
% share	*29.0*	*19.3*	*20.9*	*22.5*	*19.8*	*10.6*	*11.2*	*1.2*
Regular loan	11	740	675	475	611	2 123	1 616	1 331
% share	*35.5*	*20.9*	*20.9*	*15.4*	*19.8*	*47.0*	*26.9*	*27.5*
Guarantee	1	0	0	0	0	0	0	0
% share	*3.2*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Equity capital	1	753	863	976	1 092	683	3 079	2 926
% share	*3.2*	*21.3*	*26.8*	*31.7*	*35.4*	*15.1*	*51.2*	*60.6*
Tax concession	6	949	536	566	581	1 132	575	374
% share	*19.4*	*26.8*	*16.6*	*18.4*	*18.8*	*25.0*	*9.6*	*7.7*
Mixed	3	415	478	373	191	101	75	141
% share	*9.7*	*11.7*	*14.8*	*12.1*	*6.2*	*2.2*	*1.2*	*2.9*
Total	31	3 541	3 226	3 082	3 085	4 519	6 016	4 832

Among the 31 programmes reported (Annex 1), three were identified which limit access to public support to national enterprises. The remaining 28 programmes are accessible by all domestically established firms. In this respect, support policies in Turkey appear to be less advanced when compared with the OECD average. However, there is no limitation or discrimination towards firms established by foreign capital in terms of access to support to industry. They enjoy identical benefits to those provided to national enterprises.

Fifty-three per cent of the programmes reported were applied throughout the period under review, thus having a lifetime of eight years or more; 47 per cent were implemented in 1990 or later or expired prior to the end of the reporting period. This points to a relatively high turnover in the stock of support programmes in Turkey.

Only one programme was applied in Turkey under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting public support to manufacturing industry, such programmes were removed from the final list of programmes and assigned to a second annex (Annex 2).

III. FUTURE ORIENTATIONS OF PUBLIC SUPPORT IN TURKEY

Over the next five years, industrialisation will rank as a priority objective on the agenda for further development of the Turkish economy. The basic aims of the policies related to this objective comprise:

– improvement of productivity, quality and standardization;

– diffusion of modern production technologies;

– strengthening the role of industrial SMEs; and

– increasing the share of high-value-added products in manufacturing output.

These objectives, taken from the seventh Five-year Development Plan covering the period from 1996 to 2000, underline the shift towards a horizontal orientation of future industrial policies in Turkey. The implications for future support policies of this new direction for industrial policy will be two-fold: first, the role of support schemes as a policy instrument will diminish and, second, financial support will increasingly focus on horizontal objectives such as R&D, SMEs and regional development.

Privatisation will be speeded up with a view to offering new business opportunities for the private sector and, at the same time, reducing in the short and the long term the burden on the public budget. Faster privatisation has long been regarded as a litmus test of the government's ability to deliver reform. More than one-third of the value of privatisations since 1985 was realised after November 1996, and tenders for more companies, including high-profile firms, are under way.

Public support to R&D and technological innovation, including support to intermediary R&D institutions, support to small and medium-sized businesses and support to infrastructural investments will increase in total expenditure in the coming years.

The design of public support programmes in Turkey will be developed according to the obligations of the Customs Union of the EU, which entered into force in 1996.

Annex 1: **List of industrial support programmes reported by Turkey**

Programme code	Programme title
2701001	Support to Defence Industry
2701002	Support to Housing Construction Materials and Equipment
2701003	Equity Capital for State Economic Enterprises in the Manufacturing Sector
2702001	Turkish-German Special Credit Fund
2703001	Tax Instalments for R&D Expenditures
2703002	Promotion of Research and Development Activities
2704001	Support to Economic Activities and New Investment in Priority Development Areas
2704002	Support to Use of Local Savings in Investments in Priority Development Areas
2705001	General Investment Allowance
2705002	Interest Differential Refund Scheme
2705003	Resource Utilisation Support Premium (RUSP) to Investments
2705004	Incentive Premium for Investments for Purchases of Locally Produced Machinery and Equipment
2705005	Tax, Duty and Charge Exemptions for Investment Credits
2705006	Foreign Exchange Risk Insurance Scheme
2705007	Resource Utilisation Support Credits for Investments
2705008	Fund Sourced Credits for Investments
2705009	Social Security Premium, Compulsory Savings and Housing Fund Deductions for Investments
2705010	Employment Incentive
2705011	Energy Incentive for Investments
2705012	Investment Finance Fund
2705013	Rediscount Credit for Investments
2706001	Support to the Construction of Small Industrial Sites and Organised Industrial Zones for SMEs
2706002	Credit Support to SMEs
2708001	Tax Rebates for Exports
2708002	Support and Price Stabilisation Premium to Exports
2708003	Corporate Tax Exemption for Exports
2708004	Pre-Shipment Export Credit Programme
2708005	Export Credit Guarantee Programme
2708006	Energy Incentive for Exports
2708007	Target Market Credit Programme of Eximbank
2708008	Overseas Investment Insurance

Annex 2: **List of labour and training programmes reported by Turkey**

Programme code	Programme title
2707001	Skill Development Programme

UNITED KINGDOM

UNITED KINGDOM 1993

GDP : billion £ (current prices)	628.6
Manufacturing GDP : billion £ (current prices)	113.9
Unemployment rate	10.3
Corporate tax rate	34%
Government borrowing rate	7.47%
Civil procurement : billion £	9 725
Military procurement : billion £	9 915
Support to labour and training : million £	36.18
R&D contracts: billion £	1 499
– *of which:* Manufacturing	
Financial support to R&D institutions	
– *of which:* United Kingdom contribution to ESA: million £	109

I. SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRY IN THE UNITED KINGDOM

It is now widely accepted that the allocation of resources is normaly best left to the free working of market forces. The role of microeconomic or supply-side policies is seen as improving the efficiency with which market forces work and in extending the area over which they apply. Nevertheless, there are cases where defects in market mechanisms cannot be sufficiently improved, or where the required degree of improvement can only be achieved over a long period of time. Moreover the effectiveness with which markets work depends on a framework of institutions including organisations, networks, customs and beliefs. Where either market mechanisms or institutions unnecessarily inhibit the ability of the economy to prosper and compete, then the United Kingdom Government may intervene in order to improve the working of institutions and counteract market failure.

The tax system aims to be broadly neutral between investment in different sectors. There is no special status for manufacturing over other sectors or for plant and machinery over other types of investment. Apart from a short period in 1991-92, there have been no accelerated allowances or other financial incentives to support investment machinery. Otherwise depreciation allowances on capital equipment roughly reflect average useful capital life.

During the 1980s many government-owned manufacturing businesses were privatised. Some of these sectors continued to receive limited aid over the late 1980s to help the adjustment process, but even these have mostly now expired. Industries such as steel and shipbuilding are now in a stable and profitable position in the private sector. There is now very little aid with a specific sectoral goal. The only remaining sectoral programmes are in shipbuilding and aerospace/defence, although some more recent R&D programmes have a sectoral bias (*e.g.* biotechnology).

Regional policy in the United Kingdom is used to address the problems of persistent high unemployment, by providing aid to redress disparities in employment opportunities. These regions tend to have been associated with traditional manufacturing industry, for example South Wales, the West Midlands, Northern England and Central Scotland. Areas eligible for assistance are revised over time

and, following the 1991-92 recession, areas are more widely scattered throughout the United Kingdom. Aid is not concentrated on any particular sectors. There were substantial reductions in the regional budget in the late 1980s.

Support for capital goods exports is provided by ECGD (Export Credits Guarantee Department) through insurance given to exporters to cover them against non-payment for commercial or political risks; guarantees against non-payment are also given to banks to help mobilise finance over the long credit periods which are typical in such contracts. ECGD, like all its international counterparts, suffered losses in the 1980s as a result of the world debt crisis, when many developing countries rescheduled their debt on a multilateral basis through the Paris Club. This position was reversed when the trading climate improved.

Official export credit support is provided in accordance with the OECD Consensus Arrangement which has progressively phased out trade-distorting subsidies by providing a framework regulating, *inter alia*, credit terms, officially supported interest rates and tied aid. New rules to be introduced in 1999 set benchmarks for sovereign risk premium in accordance with the WTO (World Trade Organisation) remit that premia should not be inadequate to cover long-term operating costs and losses.

Most schemes are devised and run by central government, although there is a network of regional Government Offices in England that are often heavily involved in administering programmes. Scotland, Wales and Northern Ireland have their own government departments that run policy in those areas and they sometimes devise their own schemes to meet local needs.

II. THE STRUCTURE OF PUBLIC SUPPORT IN THE UNITED KINGDOM

The data provided by the Government of the United Kingdom cover the period from 1989 to 1996. To keep this monograph in the perspective of other monographs, for which figures are only available until 1995, the analysis has not been extended to 1996.

In the United Kingdom, public support to manufacturing industry was cut by 36.5 per cent when the figures for 1989 are compared with those for 1995. Total public support which amounted to £1.41 billion in 1989 reached a level of £897 million in 1995. However, the turning points in the development of net expenditure were marked in 1990 when expenditure peaked at £1.76 billion, and in 1994, when the lowest level of support in the period under review – £737 million – was reached. In real terms, public support declined by 50 per cent from 1989 to 1995.

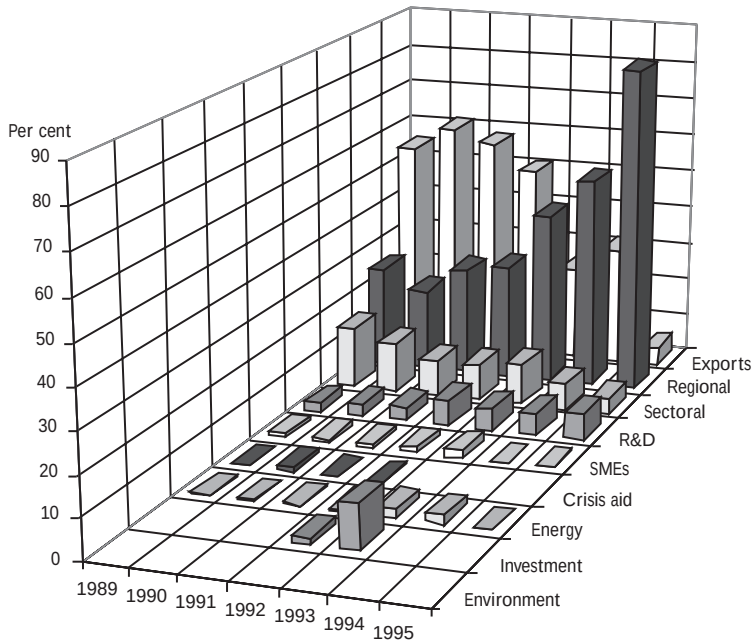
The United Kingdom is one of the nine OECD Member countries in which public support declined when the 1989 and 1993 levels are compared. The manufacturing support rate, which measures public support to manufacturing as a share of manufacturing GDP, was above the OECD average until 1991. As a result of the efforts to curb expenditure, this rate lay below the average in 1992 and 1993. For the following years, when the British manufacturing support rate further declined, OECD averages do not exist.

At the beginning of the reporting period, export promotion, regional development and sectoral aid absorbed almost 97 per cent of total net expenditure. No or negligible expenditure was reported under the policy objectives of crisis aid, environmental protection and general investment incentives. Such a strong concentration of public support on three policy objectives contrasts with the feature of many other OECD Member countries which spans spending under almost all of the nine policy objectives. Towards the end of the reporting period, net expenditure to manufacturing industry was strongly focused on spending under regional development, representing 84 per cent of total public support. Against the generally declining trend, the significance of spending under the policy objectives of regional development and R&D grew, while export promotion and sectoral aid were clearly cut.

The decline of sectoral aid can be traced both to the termination of schemes supporting the shipbuilding and aircraft industries in a particular region, and to reduced spending under aircraft and shipbuilding schemes available all over the United Kingdom.

Public support to industrial R&D efforts consistently extended its share in total public support from 1989 to 1993. The increase from 2 per cent in 1989 to 7 per cent in 1995 was the result of enhanced incentives to project-oriented R&D efforts, particularly of small and medium-sized firms. However, in

✦ Graph 21. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

Table 67. **Nominal and real NCG expenditure and the manufacturing support rate**

	Million £							
	1989	1990	1991	1992	1993	1994	1995	1996
Nominal NCG	1 411	1 763	1 545	1 255	839	737	897	970
Real NCG	1 411	1 657	1 364	1 061	686	594	710	749
Manufacturing support rate (%)	1.3	1.6	1.5	1.2	0.7	0.6	0.7	0.7
OECD manufacturing support rate: (%)	*1.09*	*1.12*	*1.18*	*1.10*	*1.10*			

Source: OECD Industrial Support Database (February 1998).

the United Kingdom, the expenditure reported under the policy objective of R&D and technological innovation is only a small fraction of the amounts that were channelled to manufacturing industry by indirect means of R&D support, such as R&D contracts and R&D defence procurement expenditures.

Under the policy objective of regional development, expenditure trends were widely determined by three big schemes in favour of Wales, Northern Ireland and Scotland. Particularly the increase of expenditure of the Scottish Enterprise scheme starting in 1994, accounted for a large share of extended spending under this policy objective.

In the United Kingdom like in many other OECD Member countries, the export credit and guarantee schemes were under high pressure in the years 1990 and 1991, when unusually important claims were paid or written off. This explains the significance of support to exports and foreign trade in these years and, to a lesser extent, in 1992. Concerning the expenditure reported for 1994 and 1995, it should be stressed that the reporting on the export credit and guarantee schemes had not been updated.

Table 68. **Reported expenditure and programmes by policy objective**

	Programmes	Nominal NCG: million £							
		1989	1990	1991	1992	1993	1994	1995	1996
Sectoral	9	224	231	145	116	89	48	35	61
% share	*11.5*	*15.8*	*13.1*	*9.4*	*9.3*	*10.6*	*6.5*	*3.9*	*6.3*
Crisis aid	*1*	1	13	3	0	0	0	0	0
% share	*1.3*	*0.1*	*0.7*	*0.2*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
R&D	12	28	51	57	84	48	43	59	56
% share	*15.4*	*2.0*	*2.9*	*3.7*	*6.7*	*5.7*	*5.8*	*6.6*	*5.8*
Regional	24	368	373	426	371	373	404	760	754
% share	*30.8*	*26.1*	*21.2*	*27.6*	*29.6*	*44.4*	*54.8*	*84.7*	*77.7*
Investment	3	0	0	0	19	92	0	0	4
% share	*3.8*	*0.0*	*0.0*	*0.0*	*1.5*	*11.0*	*0.0*	*0.0*	*0.4*
SMEs	10	14	16	18	18	16	0	1	46
% share	*12.8*	*1.0*	*0.9*	*1.2*	*1.4*	*1.9*	*0.0*	*0.1*	*4.8*
Exports	15	773	1 072	890	639	203	226	42	39
% share	*19.2*	*54.7*	*60.8*	*57.6*	*51.0*	*24.2*	*30.7*	*4.7*	*4.0*
Energy	2	4	6	7	8	19	15	1	4
% share	*2.6*	*0.3*	*0.3*	*0.4*	*0.6*	*2.2*	*2.1*	*0.1*	*0.4*
Environment	2	0	0	0	0	0	0	0	6
% share	*2.6*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
Total	78	1 411	1 763	1 545	1 255	839	737	897	970

With 26 per cent of programmes terminating within an eight-year period, and a share of 28 per cent of programmes implemented in 1990 or later, the turnover in the stock of programmes appears to be comparatively dynamic. Only 46 per cent of the programmes reported have a duration of eight years and more. It is interesting to note that under the policy objective of export promotion, 13 of the 15 programmes reported belong to the latter category. However, the strong cuts in expenditure, and the shift in policy focus of public support in the United Kingdom can be traced to modified financial flows in ongoing schemes, rather than to the implementation of new or the phasing out of existing programmes.

Of the 78 programmes reported (Annex 1), four are accessible even for firms from abroad and 73 are accessible for firms established in the United Kingdom. Only one programme was identified which limits access to public funds to national enterprises only. In this respect, support policies in the United Kingdom appear to be more open when compared with the OECD average.

Support policies in the United Kingdom make use of the broad variety of financing instruments. While guarantees and interest rate subsidies were the predominant financing instruments until 1990, grants emerged as the new cornerstone of support financing towards the end of the reporting period. Tax concessions, which played a minor role in the financing of schemes until 1993, have been phased out since.

The period from 1989 to 1995 was characterised by a centrally structured management of public support with funding made available from central government sources. While in terms of the expenditure reported, the regional management of support schemes became more important in the course of the 1990s, these agencies did not operate independently, nor did they have proper fund-raising capacities.

Five programmes were applied in the period under review under the policy objective of labour and training. Because many countries do not consider their labour and training programmes as constituting support to manufacturing industry, such programmes were removed from the final list of support programmes (Annex 1) and assigned to a second annex (Annex 2).

Table 69. **Reported expenditure by financing instrument**

	Programmes	Million £							
		1989	1990	1991	1992	1993	1994	1995	1996
Regular grant	51	331	364	412	419	414	391	382	429
% share	*65.4*	*23.4*	*20.7*	*26.7*	*33.4*	*49.4*	*53.0*	*42.6*	*44.2*
Reimbursable grant	2	90	101	1	1	2	0	0	17
% share	*2.6*	*6.4*	*5.7*	*0.1*	*0.1*	*0.3*	*0.0*	*0.0*	*1.7*
Interest rate subsidy	4	353	417	240	113	2	3	25	19
% share	*5.1*	*25.0*	*23.6*	*15.5*	*9.0*	*0.3*	*0.5*	*2.8*	*1.9*
Regular loan	5	1	1	0	0	0	0	0	6
% share	*6.4*	*0.1*	*0.1*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.6*
Guarantee	3	408	643	642	520	191	209	0	0
% share	*3.9*	*28.9*	*36.5*	*41.5*	*41.4*	*22.8*	*28.4*	*0.0*	*0.0*
Equity capital	1	4	4	2	1	1	1	0	0
% share	*1.3*	*0.3*	*0.2*	*0.1*	*0.1*	*0.1*	*0.1*	*0.0*	*0.0*
Tax concession	2	56	50	47	32	102	0	0	0
% share	*2.6*	*4.0*	*2.8*	*3.1*	*2.5*	*12.2*	*0.0*	*0.0*	*0.0*
Mixed	7	169	184	200	168	125	133	490	500
% share	*9.0*	*12.0*	*10.4*	*13.0*	*13.4*	*14.9*	*18.3*	*54.6*	*51.6*
Unclassified	3	0	0	0	0	0	0	0	0
% share	*3.9*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*	*0.0*
Total	78	1 411	1 763	1 545	1 255	839	737	897	970

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES IN THE UNITED KINGDOM

Since 1993 the levels of government support to industry and regional development remained fairly constant. Given the improved trading climate in recent years and significant levels of recoveries of past claims, ECGD currently has a healthy trading surplus.

One area of limited expansion has been in the level of support aimed at small firms. This was provoked by the results of a series of *Competitiveness White Papers* which reviewed the position of UK industry. The main innovation in business support has been the establishment of local Business Links which will increasingly act as the first port of call for any firm seeking government advice. New government services (partly subsidised), such as diagnostics, networking and benchmarking have also been established at Business Links. Business Links form part of a general aim to simplify the range of government support available in order to make services more easily accessible.

The other main changes have been in R&D support. Many of the programmes supporting collaborative research were reduced. These were replaced by a growing number of schemes promoting technology transfer and the dissemination of existing best practice. Overall, however, there has been little change in the value of the budget for industrial research.

The new government set up a consultative body, the Export Forum, comprising representatives from both the public and private sector bodies. The Export Forum undertook an assessment of the strengths and weaknesses of export promotion activities. The Forum concluded in its report "Towards an Export Initiative", that government action should concentrate on areas which the private sector cannot or will not address, where the problems identified are of a kind which government can tackle effectively, making a real difference, and where the benefits of such support exceed the costs.

Further reviews of industrial support programmes are currently being undertaken by the new government. The direction of United Kingdom policy will continue to be influenced by developments within the European Union and the WTO. This is likely to result in further policy convergence towards internationally agreed standards.

Annex 1: **List of industrial support programmes reported by the United Kingdom**

Programme code	Programme title
2801001	Civil Aircraft Research & Demonstration Programme (CARAD)
2801002	New & Renewable Energy
2801003	Offshore Supplies and Service Company Assistance for Research
2801004	Shipbuilding Industry Intervention Aid (Northern Ireland)
2801005	Restructuring of the Northern Ireland Aircraft Industry
2801006	Launch Aid
2801007	Home Shipbuilding Credit Guarantee Scheme
2801008	Shipbuilding Intervention Fund
2801009	Sector Challenge
2802001	Rescue Aid (Northern Ireland)
2803001	Clean Coal Technology
2803002	Science & Technology Programme (Northern Ireland)
2803003	Product & Process Development Programme (Northern Ireland)
2803004	LINK Initiative
2803005	EUREKA Initiative
2803006	Advanced Technology Programme
2803007	General Industrial Collaborative Projects (GICP)
2803008	Small Firms Merit Award for Research and Technology (SMART)
2803009	Support for Products Under Research (SPUR)
2803010	WDA Technology Growth Fund
2803011	Environmental Technology Best Practice Scheme
2803012	Science and Technology Programme (START) (Northern Ireland)
2804001	Company Development Programme
2804002	Inner Urban Area Grants – Urban Programme
2804003	Regional Enterprise Grants
2804004	Regional Selective Assistance (RSA)
2804005	WDA Rent Concessions
2804006	Valleys Enterprise Loan Scheme
2804007	Valleys Small Loan Scheme
2804008	DRIVE (Development of Rural Initiative, Venture and Enterprise)
2804009	WDA Equity Investment
2804010	Loans financed by the National Loans Fund (NLF)
2804011	Subsidised Rural Loans (SRL) and Rural Small Loan Scheme (RSLS)
2804012	Selective Financial Assistance
2804013	Enterprise Zones (EZs)
2804014	Local Enterprise Development Unit (LEDU), (Northern Ireland)
2804015	Highlands and Islands Enterprise: Finance for Business
2804016	Mid-Wales Development Grant
2804017	Scottish Enterprise
2804018	Cardiff Bay Development Corporation
2804019	Development Board for Rural Wales
2804020	LEADER II Programme in Wales
2804021	Northern Ireland Business Advisory Services
2804022	Welsh Development Agency Mortgage Guarantee Scheme
2804023	Welsh Development Agency Property Development Grant
2804024	Welsh Business Advisory Services
2805001	Capital Allowances
2805002	Redundant Building Grant
2805003	Special Support Scheme for Peace and Reconciliation in Northern Ireland
2806001	Technology Audit Scheme
2806002	Enterprise Training & Development
2806003	Property Development Scheme (Northern Ireland)
2806004	Local Enterprise Programme (Northern Ireland)
2806005	Diagnostic and Consultancy Service
2806006	Enterprise Initiative Consultancy Scheme
2806007	Small Firm Loan Guarantee Scheme
2806008	Local Challenge
2806009	SCEEMAS
2806010	Single Regeneration Budget
2808001	Overseas Projects Fund
2808002	Market Information Enquiry Service
2808003	Export Marketing Research Scheme
2808004	Marketing Development Grant Scheme (Northern Ireland)
2808005	Overseas Status Report Service
2808006	Trade Fair Support Scheme

Annex 1: **List of industrial support programmes reported by the United Kingdom** *(cont.)*

Programme code	Programme title
2808007	Outward Trade Mission Scheme
2808008	Overseas Seminar Scheme
2808009	Overseas Store Promotion Scheme
2808010	Inward Mission Scheme
2808011	DTI VIP Visit Scheme
2808012	Export Credit Insurance and Guarantees (Excluding Investment Insurance)
2808013	Fixed Rate Export Finance Scheme (FREF) – Interest Equalisation Scheme
2808014	Mixed Credit Matching Facility (Closed in 1988)
2808015	Overseas Investment Insurance Scheme
2809001	Energy Efficiency Best Practice Scheme
2809002	Energy Management Assistance Scheme (Northern Ireland)
2810001	Environmental Audit Support Scheme (Northern Ireland)
2810002	United Kingdom Coal R&D Programme

Annex 2: **List of labour and training programmes reported by the United Kingdom**

Programme code	Programme title
2807001	Youth Training Programme (Northern Ireland)
2807002	Job Training Programme
2807003	Youth Training (Great Britain)
2807004	Employer Investment in People (EIP)
2807005	Business Start-up Scheme
2807006	Open Learning Training Grants Scheme (Northern Ireland)

COMMISSION OF THE EUROPEAN COMMUNITIES

I. SPECIFIC FEATURES OF COMMUNITY SUPPORT TO INDUSTRY

During the period from 1989 to 1995 Community support to industry was aimed at continuing efforts to improve the Union's industrial competitiveness, a key factor for economic growth, job creation and greater economic and social cohesion. These efforts followed the general approach of a strategy of continuous adaptation based on the principle of free trade and the action of competitive forces on markets, as defined in the *White Paper* of 1993 on growth, competitiveness and employment and a communication in 1994 on an industrial competitiveness policy for the EU. The approach was based upon the principle of shared responsibility between the various economic groups involved and on the role of the public authorities in creating an environment favouring industrial activity, facilitating structural change and ensuring that the markets operate smoothly, by co-ordinating policies with an impact on industry.

The period under review witnessed major reforms and changes in Community funds and programmes. As a result of the impetus given by the signing of the Single European act, which introduced *inter alia* the objective of economic and social cohesion, the European Council agreed in 1988 to a doubling of the budget for structural funds by 1993. During the period a significant increase was also seen in Community support to R&D. In addition to the availability of extra funding for R&D, the hallmark of Community projects in this area became the extensive collaboration between partners from different countries, such as research organisms and institutes, enterprises, universities, etc. On average every project comprises nearly six partners from five countries.

Community support to industry is also predicated by external events, and one of the most important of recent European history occurred in November 1989 – the collapse of the Iron Curtain. The reunification of the Federal Republic of Germany and the transformation of centrally planned to market-oriented economies have been of particular importance for Community policies.

Partly as a result of enlargement, the overall Community budget has grown considerably over the past few years, from ECU 43 billion (or ECU 112 per person) in 1987 to ECU 80 billion ECU (or ECU 212 per person) in 1995. The whole of the Community budget is however equivalent in size to no more than 2 to 4 per cent of the sum of national budgets and accounts for about 1.2 per cent of Community GNP. Community support to industry therefore represents less than 0.05 per cent of Community GNP. Revenue for the Community budget comes from four sources:

– community value-added tax;

– customs duties on imports entering the EU;

– agricultural levies; and

– a fourth resource, based upon the size of each Member State's GNP.

All Community funding is targeted towards precise objectives and priorities under the various common policies, which in turn are based upon provisions of the Treaties. Some 80 per cent of the budget is spent on the common agricultural and the structural policies. The remainder is used to finance other policies (external actions like co-operation, internal policies like R&D, trans-European networks or education, etc.) and about 5 per cent of the budget meets all administrative costs. Community funding can be given in the form of grants (direct assistance, reimbursement, joint funding, help with interest), loans or guarantees.

The European Council and Parliament jointly determine how the various operations are to be implemented. This involves deciding on matters such as the scope, form of funding, degree of funding (total or partial), financial control, decision-making procedures and arrangements for financial management by the Commission. All these factors differ from one operation to another. For example, structural operations, aimed at increasing social and economic cohesion, usually form part of a multi-level, multi-annual plan. This is drawn up by the relevant national and regional authorities in partnership with the Commission. The programmes are published and are available to the public. Individuals, businesses and interest groups can apply to national or regional authorities or other designated organisations for funding under one of the programmes. For R&D programmes, beneficiaries are chosen following applications made directly to the Commission under the terms of calls for proposals published in the *Official Journal of the European Communities*. The projects that are considered are those which allow co-operation between the different actors in the field of R&D (institutes, laboratories, undertakings, universities, etc.).

Annual reporting and evaluation of Community programmes is an integral part of the activities, and the results are usually published on a regular basis.

II. THE STRUCTURE OF PUBLIC SUPPORT AT THE LEVEL OF THE EUROPEAN COMMUNITIES

Businesses established in the European Union have benefited directly or indirectly from the nearly two-fold increase in expenditure from Community funds and programmes when the beginning and the end of the reporting period are compared. During the same period the number and type of undertakings involved in Community actions increased as well as the level of collaboration between them. Therefore those specific programmes of the R&D Framework Programme and activities of the Regional Development fund most orientated towards industry were chosen for consideration. The resulting figures are therefore estimates and should be examined with care; it is more important to consider the trends over the reporting period. The increase in estimated NCG expenditure in real terms from ECU 1.2 billion in 1989 to ECU 2.3 billion in 1995 is mainly a result both of the enlargement of the Community in 1995 and a shift of competence from the national to the European level.

Table 70. **Nominal and real NCG estimated expenditure**

	Million ECU						
	1989	1990	1991	1992	1993	1994	1995
Nominal NCG	1 243	1 401	2 131	2 606	2 778	2 741	2 975
Real NCG	1 243	1 330	1 918	2 247	2 309	2 218	2 338

Source: OECD Industrial Support Database (February 1998).

The strong upward trend in public support from 1989 to 1992 can be traced to the increased spending under the policy objectives of regional development, R&D and sectoral support, while the reductions from the 1992/93 levels to the 1994 level were the result of cuts in the area of sectoral policy and R&D.

The emphasis of public support to manufacturing industry by the Commission lay in the areas of regional development and R&D, which accounted for between 93 and 96 per cent of total estimated expenditure throughout the reporting period. Since 1992, support to regional development has continuously emerged as the dominant area of public support covering more than 70 per cent of the total expenditure reported. Support to SMEs and for environmental protection has grown considerably from 1989 to 1995. Moreover, when accounting for important secondary policy objectives (R&D for example includes support for research for energy, environmental protection and SMEs, the latter receiving 21 per

Table 71. **Reported estimated expenditure and programmes by primary policy objective**

	Programmes	Nominal NCG: million ECU						
		1989	1990	1991	1992	1993	1994	1995
Sectoral	6	49	53	52	83	75	18	20
% share	*16*	*3.9*	*3.8*	*2.5*	*3.2*	*2.7*	*0.7*	*0.7*
R&D[1]	21	372	431	480	681	630	616	639
% share	*57*	*30*	*31*	*23*	*26*	*23*	*22*	*22*
Regional[1]	5	786	880	1 559	1 781	2 019	2 016	2 204
% share	*13*	*63*	*63*	*73*	*68*	*73*	*74*	*74*
Investment	1	0	0	1	9	15	27	23
% share	*3*	*0.0*	*0.0*	*0.0*	*0.3*	*0.5*	*1.0*	*0.8*
SMEs	1	12	18	19	28	21	22	23
% share	*3*	*1.0*	*1.2*	*0.9*	*1.1*	*0.8*	*0.8*	*0.8*
Energy	1	20	15	20	22	10	12	8
% share	*3*	*1.6*	*1.1*	*0.9*	*0.8*	*0.4*	*0.4*	*0.3*
Environment	2	4	3	0	2	8	30	58
% share	*5*	*0.3*	*0.2*	*0*	*0.1*	*0.3*	*1.1*	*1.9*
Total	37	1 243	1 401	2 131	2 606	2 778	2 741	2 975

1. Estimation of expenditure to private sector undertakings and not only industrial firms.

cent of Community contributions under the Third R&D Framework Programme), the figures presented under the last three objectives are underestimated. Sectoral support, which accounted for 2.5 to 4 per cent of the total between 1990 and 1993, was cut to less than 1 per cent in subsequent years, representing a residual significance as is the case for general investment incentives. Schemes providing financial support to manufacturing industry under the policy objectives of crisis aid or exports and foreign trade were not applied by the Commission of the European Communities.

Of the 37 programmes reported (Annex 1), six new programmes were introduced in the course of the period under review, and 11 were sunsetting. The remaining 20 programmes have a duration of seven years or more. It appears that financial flows in existing programmes were adapted in order to respond to changes in the focus of support policies.

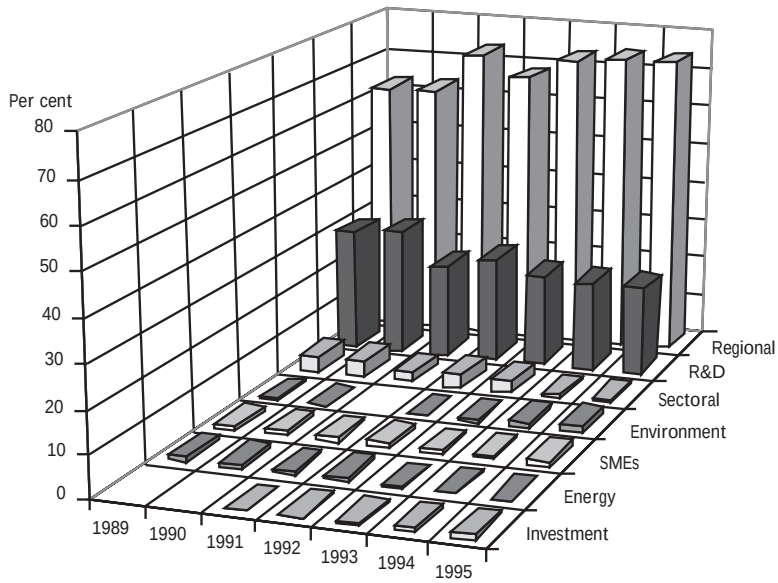
Access to the programmes of the European Communities in general is open to all enterprises established in the European Union. Moreover, some programmes explicitly encourage worldwide industrial co-operation. No programme was identified which *de jure* limits access to enterprises in EU ownership.

Public support provided by the Commission was almost exclusively financed through grants, with 80 per cent of programmes using this type of financing instrument, 10 per cent being financed by loans, and the remaining 10 per cent using mixed-instrument financing. The limited use of other financing instruments reflects the special situation of this supranational body: in the absence of proper Community taxes, or manufacturing enterprises under the ownership of the European Commission, tax concessions and equity capital infusions logically do not play any role in the financing of Community support programmes.

III. FUTURE ORIENTATIONS OF SUPPORT POLICIES OF THE EUROPEAN COMMUNITIES

In July 1993, the second reform of the Structural Funds (EAGGF-Guidance, Regional Fund, Social Fund, FIFG) took place, thereby the basic principles which inspired the first reform in 1988 and introducing a number of operational improvements. A further innovation was that, in accordance with the conclusions of the Edinburgh European Council, the resources of the Structural Funds allocated to

✦ Graph 22. ***Percentage distribution of NCG expenditure by policy objective***



Source: OECD Industrial Support Database, February 1998.

four Member States (Greece, Spain, Ireland and Portugal) would double in real terms between 1992 and 1999 and that total funding for the Structural Funds over the period 1994-99 would amount to ECU 141 billion (at 1992 prices).

Close on the heels of the second Structural Funds reform, the fourth Framework Programme for Research and Technological Development was adopted for the period 1994-98. This new Framework Programme now includes all the Community research and development activities. Its total budget is ECU 13.1 billion. As specified above, the fraction received by undertakings, in all sectors (33 per cent of the R&D Framework Programme in 1996), is attributed on the basis of calls for proposals and generally through projects in which entities from several Member States co-operate.

In other areas, such as energy, environmental protection and SMEs, new programmes have been adopted which will contribute to the consolidation of past successes and address future needs. Fine tuning of all programmes will continue in order to ensure optimum use of resources. Lastly, accompanying measures necessary to ensure that the objectives of the various Community policies are met will continue. For example, the Single Market Action plan, announced in the conclusions of the Dublin European Council, has the clear objective of improving the performance of the Single Market in the years ahead.

Annex: **List of programmes reported by the CEC with a participation of manufacturing industry**

Programme code	Programme title
9101001	Improvement of the Conditions under which Fishery and Aquaculture Products are Processed and Marketed (this programme is now included in the FIFG)
9101003	ECSC – European Coal and Steel Community LOANS to Sectors Other than Coal or Steel
9101004	ECSC – European Coal and Steel Community LOANS to finance industrial investment in the Steel Industry
9101005	ECSC – European Coal and Steel Community Industrial Conversion Programmes
9101006	ECSC – European Coal and Steel Community-Social Research
9101008	Restructuring of the Sardine-processing Industry (this programme is now included in the Community Initiative, PESCA)
9103001	Telematics Applications of Common Interests
9103002	Research in Advanced Communications in Europe (RACE)
9103003	Eurotech Capital – European Venture capital for SMEs
9103004	ECSC – European Coal and Steel Community – Steel Research and Demonstration
9103005	Measurements and Testing (*e.g.* B.C.R.)
9103006	Agriculture (*e.g.* ECLAIR, FLAIR, FAR, FOREST)
9103007	Biotechnology (*e.g.* BAP and BRIDGE)
9103008	Industrial and Materials Technology (*e.g.* BRITE/EURAM)
9103009	ESPRIT (European Strategic Programme on Information Technologies)
9103010	Non-nuclear Energy (JOULE)
9103011	SPRINT – Strategic Programme for Innovation and Technology Transfer
9103012	IMPACT – Information Market Policy ACTions
9103013	TEDIS – Trade Electronic Data Interchange System
9103014	High Definition TV Programme Production
9103015	High Definition TV 16/9
9103016	MEDIA – Measures to Develop the Audiovisual Industry
9103017	Dissemination and Exploitation of Knowledge (Value)
9103018	Dissemination and Exploitation of the Results of Community RD and TD
9103019	Action Plan for Information Technology
9103020	Definition and Implementation of Community Policy in the Field of Telecommunications
9103021	EURET (European Research for Transport)
9104001	European Regional Development Fund (ERDF)
9104002	PEDIP – The Development of Portuguese Industry
9104003	Community Initiatives and Innovative Measures
9104004	Business and Innovation Centres
9104005	Perifra
9105001	Joint Venture PHARE Programme (JOPP)
9106001	Improvement of the Business Environment and the Promotion of SMEs
9109001	Promotion of Energy Technology in Europe (THERMIE Programme)
9110001	ACE – Clean Technologies (1989-91)
9110002	LIFE – A Financial Instrument to Support Community Environmental Policy

Part IV

PUBLIC SUPPORT TO INDUSTRIAL R&D EFFORTS

GENERAL FEATURES OF INDUSTRIAL R&D IN THE OECD AREA

The creation of new products and the adoption of more efficient methods of production are the main driving forces behind economic growth and enhanced quality of life. Technological progress is influenced by governments at different levels, indirectly through the provision of a macroeconomic environment and regulatory frameworks in which technological progress can flourish and, directly, through a mix of financial support measures aiming to improve the capability and incentives of firms to innovate, and to accelerate the diffusion of new technologies. In the domain of R&D and technological innovation, the mix of financial support measures constitutes the predominant type of governmental policies.

In current prices, gross domestic expenditure on research and experimental development (GERD),[14] which covers all R&D carried out on national territory, consistently increased in the OECD area in the period from 1989 to 1995. Measured in purchasing power parities, expenditure which equalled US$317 billion in 1989 rose to US$409 billion in 1995. This overall development mirrors the steady growth of expenditure in the main zones of OECD membership.

In constant prices, the compound annual growth rate of GERD was negative from 1992 to 1994. High growth rates in 1990 and 1995 – for 1991 a total OECD figure is not available due to a break in series with the previous year – have outweighed the interim decline. Even in constant prices GERD has increased when the beginning and the end of this period are compared.

Table 72. **Gross domestic expenditure on R&D**

GERD (million current PPP $)

	1989	1990	1991	1992	1993	1994	1995
Total OECD[2, 3]	317 403.4	344 973.6	363 034.1[1]	377 022.5	379 847.7	387 827.9	409 120.2[4]
GERD – Compound annual growth rate in % (constant prices)	3.9	4.2	–[1]	0.1	1.4	0.1	3.5
North America[3]	150 529.4	161 952.6	169 661.4[1, 2]	174 585.3[2]	176 078.2	180 346.0	191 526.2[4]
European Union[2]	101 568.6	109 449.3	114 927.8	120 774.0	121 685.6	124 461.0	127 634.3
Nordic countries	7 954.7	–	8 718.9	–	10 187.9[1]	–	12 049.9[2]

1. Break in series with previous year for which data is available.
2. Secretariat estimate or projection based on national sources.
3. Excludes most or all capital expenditure.
4. Provisional.

Source: OECD, EAS (MSTI database), November 1997.

GERD as a share of GDP fell from 2.34 per cent in 1989 to 2.15 in 1995. This downward trend raised concerns not only in OECD Member countries in which GERD as a share of GDP declined, but also in those which failed to increase this percentage share.

In the OECD area, the percentage of gross domestic expenditure on R&D financed by industry grew from 56.7 per cent in 1989 to 59.1 per cent in 1995. In the Czech Republic, Germany, Ireland, Japan and the United States, industry is particularly active in financing R&D activities, while in Iceland, Mexico, Portugal, Poland and Turkey, industry is not the main funder of R&D.

The percentage of gross domestic expenditure on R&D financed by government declined in the OECD area when the beginning and the end of the period from 1989 to 1995 are compared. However, an increase in public expenditure is responsible for the respective shares of 38.8 per cent in 1989 and 34.5 per cent in 1995. The shift towards stronger self-financing of R&D activities by industry can be explained by increased international competition at the firm level in a globalising world economy. At the same time, a deteriorating budgetary situation in almost all OECD Member countries in recent years may have forced governments to limit the expansion of public R&D expenditure below the level that would have been carried out in the absence of budgetary constraints.

Table 73. **GERD as a percentage of GDP**

	1989	1990	1991	1992	1993	1994	1995
Australia	–	1.38	–	1.60	–	1.62	–
Austria	1.37	1.42[3]	1.49	1.47[3]	1.49	1.55[3]	1.54[3]
Belgium[3]	1.70[1]	–	1.65[3]	–	1.60[8]	1.58[1, 8]	1.61[8]
Canada	1.37	1.47	1.53	1.57	1.63	1.64	165
Czech Republic[9]	–	–	2.12[9]	1.83[9]	1.35[9]	1.25[9]	1.15[1]
Denmark	1.55	1.63	1.70	1.74	1.79	–	1.92
Finland	1.83	1.91[3]	2.07[1]	2.18[3]	2.21	2.34	2.37
France	2.33	2.41	2.41	2.42	2.45	2.38	2.33
Germany	2.87	2.75[3]	2.61[1]	2.48[1, 3]	2.43	2.33	2.30[3]
Greece	0.47[1]	–	0.37	–	0.48	–	–
Hungary	–	–	1.07[9]	1.05[9]	0.98[9]	0.89[1]	0.75
Iceland	1.02	0.99	1.16	1.33	1.34	1.39	1.54
Ireland[3]	0.83	0.86	0.96	1.06	1.21	1.35	1.40[8]
Italy	1.24	1.30	1.24[1]	1.20	1.14	1.16[1, 10]	1.14[8, 10]
Japan[6]	2.98	3.04	3.00	2.95	2.88	2.84	2.98
Korea	–	–	–	–	–	–	2.68
Mexico	–	–	–	–	0.22[3]	0.29	0.31[8]
Netherlands	2.12	2.15[1]	2.05	1.98	2.00	2.04[1]	2.09
New Zealand	0.87	1.00[1]	0.99	1.01	1.03	–	0.98
Norway	1.86	–	1.65	–	1.73	–	1.71[1, 3]
Poland	–	–	–	–	–	0.82	0.75
Portugal	–	0.54	–	0.65	–	–	0.61[2]
Spain	0.75	0.85	0.87	0.91[1]	0.91	0.85[3]	0.85
Sweden[7]	2.94	–	2.89[7]	–	3.39[1, 7]	–	3.60[1, 3]
Switzerland	2.86[1]	–	–	2.66	–	–	–
Turkey	–	0.32	0.53	0.49	0.44	0.36	0.38
United Kingdom	2.20	2.18	2.11	2.13	2.15	2.11	2.05
United States[5]	2.76	2.81[4]	2.81[1, 4]	2.74[4]	2.61[4]	2.51[4]	2.55[4, 8]
Total OECD[2, 5]	2.34	2.38	2.29[1]	2.23	2.18	2.12	2.15[8]
North America[5]	2.64	2.70	2.52[1, 2]	2.42[2]	2.32	2.24	2.29[8]
European Union[2]	1.98	1.99	1.95[1]	1.93	1.92	1.87	1.85
Nordic countries	2.19	–	2.19	–	2.41[1]	–	2.55[1]

1. Break in series with previous year for which data is available.
2. Secretariat estimate or projection based on national sources.
3. National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms.
4. National results adjusted by the Secretariat to meet OECD norms.
5. Excludes most or all capital expenditure.
6. Overestimated or based on overestimated data.
7. Underestimated or based on underestimated data.
8. Provisional.
9. Do not correspond exactly to the OECD recommendations.
10. Including extramural R&D expenditure.

Source: OECD, EAS (MSTI database), November 1997.

Table 74. **The financing of Gross Domestic Expenditure on R&D**

Percentage of GERD financed by industry

	1989	1990	1991	1992	1993	1994	1995
Australia	–	41.1	–	44.0	–	46.3	–
Austria	53.0	52.0[3]	50.2[3]	49.3[3]	49.0	47.3[3]	48.0[3]
Belgium[3]	63.9[1]	–	64.8[3]	–	62.7[8]	63.4[1, 8]	64.2[8]
Canada	42.0	41.5	41.3	–	44.7	–	46.8
Czech Republic	–	–	–	–	–	–	63.1
Denmark	46.8	49.3	51.4	50.7	50.0	–	46.7
Finland	62.2	–	56.3[1]	–	56.6	–	59.5
France	43.9	43.5	42.5	46.6[1]	47.0	48.7	48.3
Germany	63.3	63.4[3]	61.7[1]	61.6[1, 3]	61.4	60.9	60.5[3]
Greece	19.4[1]	–	21.7	–	20.2	–	–
Hungary[9]	–	70.1[6]	56.0[10]	52.5[10]	53.1[10]	38.0[1, 7]	43.0[7]
Iceland	23.9	23.9	24.5	24.4	31.6	31.6	34.6
Ireland[3]	55.4	59.1[3]	60.6	64.3	61.7	67.9	67.4[8]
Italy	46.4	43.7	44.4[1]	47.3	44.3	48.0[1, 11]	48.7[8, 11]
Japan	72.3	73.1	72.7	71.1	68.2	68.2	67.1
Korea			–	–	–	–	76.3
Mexico	–	–	–	–	14.3[3]	19.0	17.6[8]
Netherlands	53.4	48.1[1]	47.8	47.0	44.1	44.8[1]	46.0
New Zealand	33.2	29.3[1]	27.4	29.7	33.9	–	33.7
Norway	45.6	–	44.5	–	44.3	–	49.9[1, 3]
Poland	–	–	–	–	–	32.8	31.5
Portugal	–	27.0	–	20.2	–	–	18.9
Spain	47.8	47.4	48.1	43.7[1]	41.0	40.3[3]	44.5
Sweden	58.6[6]	–	61.9[6]	–	61.2[1]	–	–
Switzerland	73.9[1]	–	–	67.4	–	–	–
Turkey	–	27.4	28.5	33.8	31.8	33.0	30.8
United Kingdom	51.3	49.6	49.6	50.6	51.2	49.8	48.0
United States[4, 5]	52.2	54.0	57.6[1]	58.5	58.4	59.0	59.9[8]
Total OECD[2, 5]	56.7	57.5	58.7[1]	59.1	58.4	58.7	59.1[8]
North America[5]	51.7	53.4[2]	56.5[1, 2]	57.3[2]	57.4	57.8[2]	58.7[8]
European Union[2]	53.3	52.3	51.9[1]	52.9[1]	52.4	52.6	52.7
Nordic countries	55.3	–	56.1	–	55.6[1]	–	58.6[1, 2]

1. Break in series with previous year for which data is available.
2. Secretariat estimate or projection based on national sources.
3. National estimate or projection adjusted, if necessary, by the Secretariat to meet OECD norms.
4. National results adjusted by the Secretariat to meet OECD norms.
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7. Underestimated or based on underestimated data.
8. Provisional.
9. Unrevised breakdown not adding to the revised total.
10. Do not correspond exactly to the OECD recommendations.
11. Including extramural R&D expenditure.

Source: OECD, EAS (MSTI database), November 1997.

In Iceland, Portugal, Poland and Turkey, governments were the driving forces in financing R&D. Governments of these countries financed more than 60 per cent of national R&D expenditure. On the other hand, this share was below the OECD average in the Czech Republic, Ireland, Japan and the United Kingdom.

The combined shares of GERD financed by industry and by government varied between 95.5 per cent in 1989 and 93.6 per cent in 1995. The remaining small fraction of GERD was financed either by foreign sources or other national sources such as private non-profit organisations.

More specific information on the financing of R&D activities reveals that the percentage of expenditure on R&D in the Business Enterprises Sector (BERD) financed by governments has been below 10 per cent in a large majority of OECD Member countries. When 1989 and 1995 figures are compared,

Table 75. **The financing of Gross Domestic Expenditure on R&D**

Percentage of GERD financed by government

	1989	1990	1991	1992	1993	1994	1995
Australia	–	54.9	–	50.2	–	47.5	–
Austria	43.4	44.6[3]	46.5[3]	47.4[3]	48.0	49.8[3]	49.1[3]
Belgium[3]	32.0[1]	–	31.3[3]	–	32.5[8]	26.9[1, 8]	26.4[8]
Canada	44.1	44.3	43.4	–	39.8	–	35.1
Czech Republic[7]	–	–	–	–	–	–	32.3
Denmark	45.5	42.3	39.7	38.6	37.7	–	39.2
Finland	35.3	–	40.9[1]	–	39.8	–	35.1
France	48.1	48.3	48.8	43.5[1]	43.5	41.6	42.3
Germany	34.1	33.9[3]	35.8[1]	36.0[1, 3]	36.7	37.0	37.4[3]
Greece	68.9[1]	–	57.7	–	46.9	–	–
Hungary[9]	–	28.9[6]	40.0[10]	41.6[10]	40.5[10]	53.4[1, 7]	47.9[7]
Iceland	65.8	65.8	69.7	69.8	62.9	62.9	57.3
Ireland[3]	34.0	30.1[3]	27.8	25.3	28.8	22.1	22.6[8]
Italy	49.5	51.5	49.6[1]	48.5	51.3	46.4[1, 11]	47.4[8, 11]
Japan	18.6	18.0	18.2	19.4	21.6	21.5	22.8
Korea	–	–	–	–	–	–	19.0
Mexico	–	–	–	–	73.4[3]	63.6	66.2[8]
Netherlands	41.8	48.3[1]	48.6	48.9	48.5	43.8[1]	42.1
New Zealand	64.7	60.3[1]	61.8	58.9	54.8	–	52.3
Norway	50.8	–	49.5	–	49.1	–	43.5[1, 3]
Poland	–	–	–	–	–	64.0	64.7
Portugal	–	61.8	–	59.4	–	–	65.2
Spain	46.8	45.1	45.7	50.2[1]	51.6	52.4[3]	43.6[1]
Sweden	38.1[7]	–	34.0[7]	–	33.0[1]	–	–
Switzerland	23.2[1]	–	–	28.4	–	–	–
Turkey	–	71.4	70.1	64.0	65.2	62.9	64.5
United Kingdom	35.7	35.5	35.0	34.3	33.4	33.5	33.3
United States[4]	45.6	43.8	38.7[1]	37.7	37.7	36.9	36.1[8]
Total OECD[2]	38.8	37.8	35.8[1]	35.2	35.7	34.9	34.5[8]
North America	45.6	43.8[2]	39.2[1, 2]	38.2[2]	38.1	37.3[2]	36.4[8]
European Union[2]	40.4	40.9	41.2[1]	40.0[1]	40.2	39.3	39.1
Nordic countries	40.8	–	38.8	–	37.9[1]	–	34.1[1, 2]

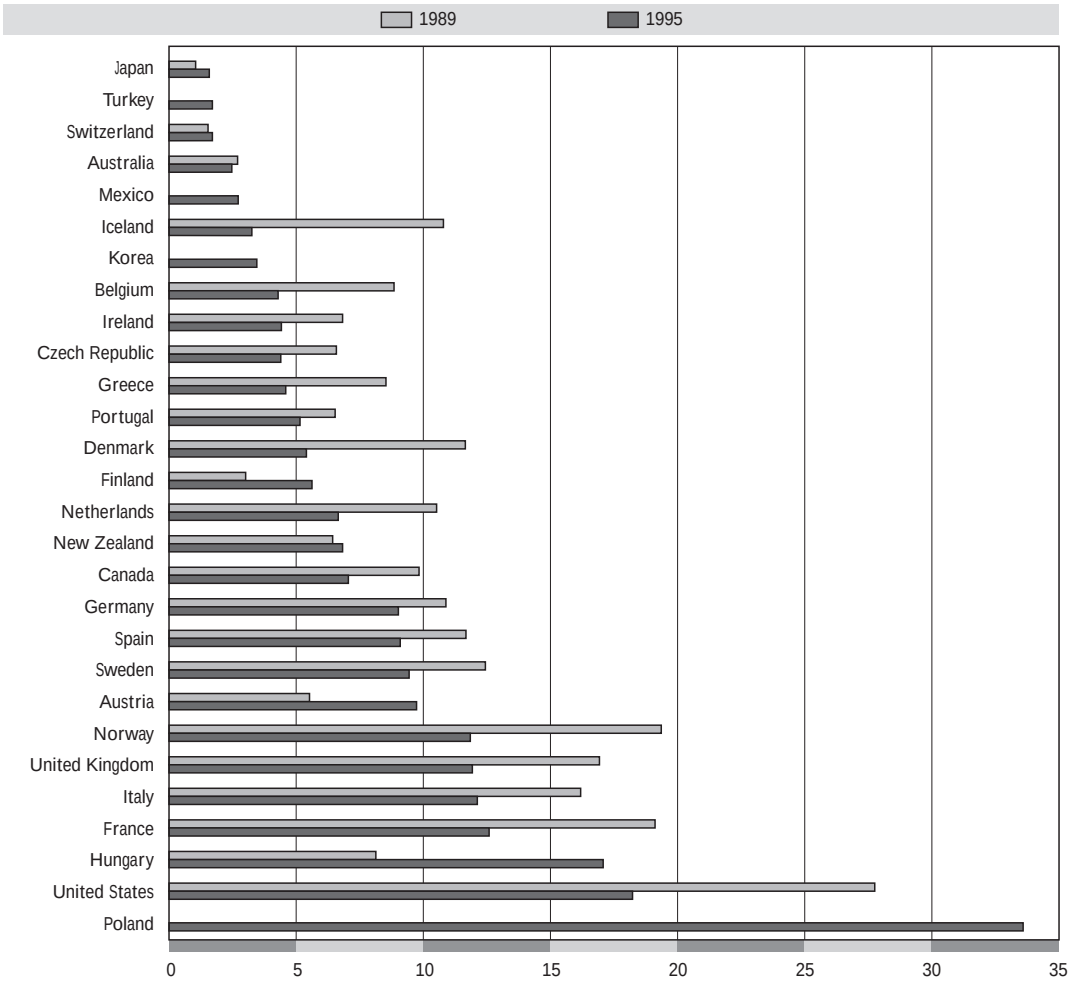
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7. Underestimated or based on underestimated data.
8. Provisional.
9. Unrevised breakdown not adding to the revised total.
10. Do not correspond exactly to the OECD recommendations.
11. Including extramural R&D expenditure.

Source: OECD, EAS (MSTI database), November 1997.

such percentage shares increased only in seven Member countries, but decreased in seventeen. On average, the percentage of BERD financed by governments declined from 15 per cent in 1989 to 12.2 per cent in 1995 (Graph 23).

These general features of industrial R&D in the OECD area point to the important role of governments in financing technological progress. A detailed and comprehensive analysis of the various components of public R&D support including public support to industrial innovation, and of the relationship between these components, is provided in the following chapters.

✦ Graph 23. ***Percentage of BERD financed by government, 1989 and 1995***



Note: Total OECD: 1989 = 15; 1995 = 12.2.
Source: OECD, *Main Science and Technology Indicators* 1997-2.

OVERALL ANALYSIS OF PUBLIC SUPPORT TO INDUSTRIAL R&D EFFORTS

A. THE SCOPE OF THE REVIEW

In the OECD's project "Public Support to Industry", the reporting on public support to industrial R&D efforts covers five main categories of measures:

- direct financing measures to support R&D activities of manufacturing enterprises;
- support to intermediary R&D institutions serving the manufacturing sector;
- civilian and defence-related R&D contracts awarded to manufacturing enterprises;
- contracts awarded by and procurement of space agencies; and
- defence-related R&D procurement.

Support by means of direct financing measures (fiscal incentive or expenditure programmes) was reported both in terms of Gross Government Budget Expenditure (GGBE) and Net Cost to Government (NCG) with the latter referring to the subsidy element inherent in a given programme. The reporting on intermediary R&D institutions, procurement and contracts – which are considered as indirect means of public R&D support – was only in terms of gross values. A methodology for measuring NCG for indirect means of financial R&D support has not yet been developed. Due to the distinct quality of NCG figures for direct support and gross values for indirect means of support, and the specific nature of each category of indirect support, the calculation of a total figure covering the five main categories of public R&D support measures would be misleading.

The terms of "direct" and "indirect" support developed for the purposes of this project have a different meaning when compared with the terminology of the *Frascati Manual* which is the reference for most standard R&D reporting. Differences stem particularly from the classification of fiscal incentives as direct support, and R&D contracts as indirect R&D support in this review.

While direct R&D support programmes provide selective financial transfer payments to firms, groups of firms, or industries, the support element of indirect means of public R&D support, and the competitive advantages they provide to beneficiaries are less visible and clear. The prices for services provided to industry by intermediary R&D institutions usually do not cover the costs they generate. In the case of R&D contracts, the rules governing the appropriation of intellectual property rights that result from such contractual research are often attributed to the contracting firm or shared with the public contractor. Defence equipment and defence R&D contracts can give supplying firms a competitive advantage in various ways. In particular, spillover effects of defence research and dual-use possibilities of equipment procured for defence purposes can strengthen the competitiveness of suppliers in technological, financial and commercial terms. The rules governing the contracting and the procurement of space agencies differ among Member countries. However, for all the member countries of the European Space Agency, the ESA statutes guarantee, at least in terms of overall return coefficients, that a sum equivalent to national contributions to its Scientific Programme will be contracted out to national manufacturers. Thus, the return coefficient is, in effect, an instrument for supporting national suppliers.

The figures presented in this review generally refer exclusively to support received by manufacturing firms, both directly or through intermediary institutions and agencies. Whenever actual data were not available, the relevant figures were generated from estimations by the agency managing the programme or from arithmetic estimations based on manufacturing percentage shares.

Reporting gaps, in particular with respect to the figures for the most recent years, have a bearing on the quality of this review. In order to minimise the resulting bias, cross comparisons with other relevant OECD sources were made.

This thematic review of public support to industrial R&D efforts is closely linked to work undertaken in the framework of the horizontal activity on "Technology, Productivity and Job Creation – Phase II". Its main findings contributed to the analysis of best practices in technology and innovation policy [OECD (1998), *Technology, Productivity and Job Creation – Best Policy Practices*].

B. OVERALL DEVELOPMENTS

The overall analysis shows that public support to R&D and technological innovation is a domain in which the financial flows from governments to manufacturing industry increased when the beginning and the end of the reporting period are compared. R&D contracts are the only category of support with a declining expenditure. The relative importance of each of these categories changed only slightly over the period under review. While expenditure under the big blocks of R&D defence procurement and R&D contracts remained relatively stable in this period – the former growing by 2 per cent, and the latter declining by 10 per cent – direct support grew by almost 30 per cent, contracts awarded by and procurement of space agencies grew by approximately 30 per cent and support to intermediary institutions progressed by 25 per cent.

In real terms, direct R&D support and public support to space agencies increased slightly, public support to intermediary R&D institutions remained stable, and combined expenditure reported on R&D contracts and R&D defence procurement decreased by US$10 billion from 1989 to 1993.

Table 70 illustrates the importance of financial flows to manufacturing industry by direct and indirect means of public R&D support. More specifically, this table underlines the strong weight of R&D contracts and R&D defence procurement expenditures in OECD Member countries' public financing of R&D and technological innovation. Indirect measures channel much more financing to manufacturing industry than do direct programmes. Moreover, both direct and indirect measures channel more public expenditure to manufacturing industry than is spent under any other policy objective. Under the policy objective of regional development, which ranked as the most important area of direct support in the period from 1989 to 1993, expenditures in the order of US$57 billion were reported by Member countries.

When looking at the patterns of direct and indirect R&D support in OECD Member countries, the following observations should be noted:

– Australia, Denmark, Finland, Ireland, Italy, the Netherlands, Portugal, Spain and Turkey belong to the group of countries in which direct support played an important role in the financing of R&D activities.

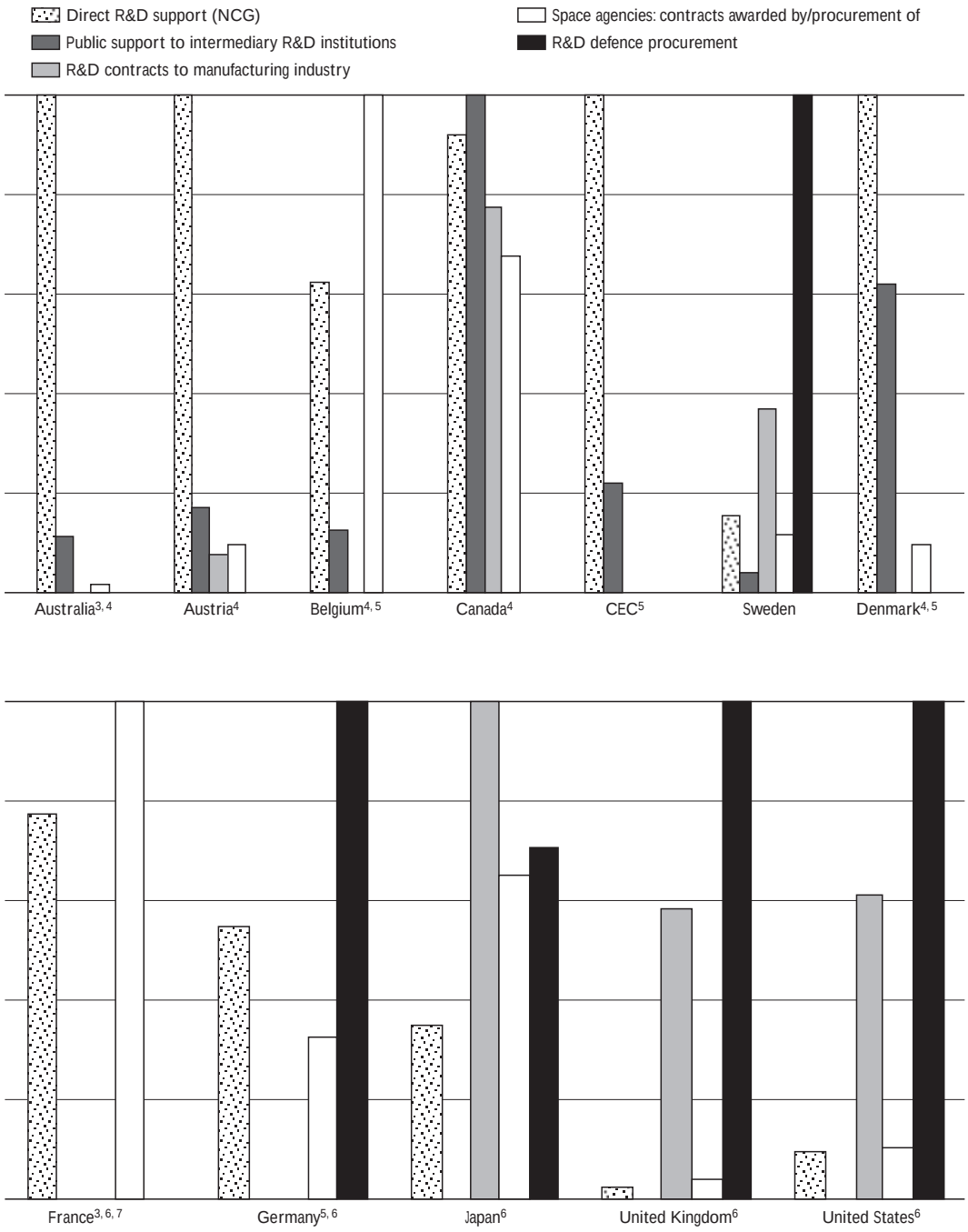
– France, Germany, Japan, Norway, Sweden, Switzerland, the United Kingdom and the United States have a strong focus in the financing of defence-related industrial R&D by means of both military procurement and defence-related R&D contracts.

Table 76. **Direct and indirect R&D support to manufacturing industry**

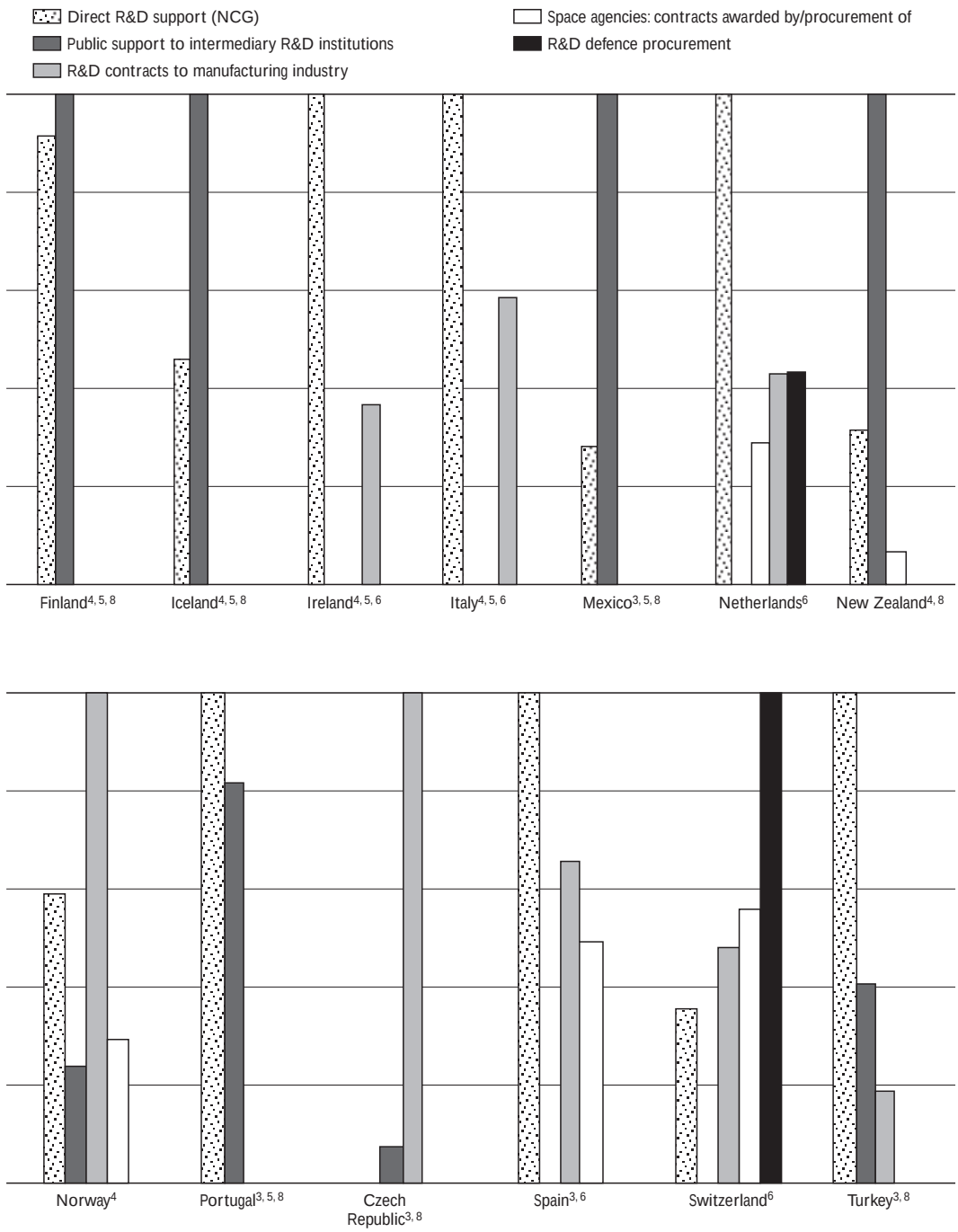
	Reported expenditure in billion US$[1]					
	1989	1990	1991	1992	1993	Total 1989-93
Direct R&D support (282 programmes) (NCG)	6.4	7.4	8.7	9.2	8.3	40.0
R&D contracts to manufacturing industry	19.3	17.8	17.5	16.7	17.2	88.5
Space agencies: contracts awarded by/procurement of	4.9	5.9	5.6	6.5	6.4	29.3
Public support to intermediary R&D institutions	0.8	0.9	0.9	1	1	4.6
R&D defence procurement expenditure	28.9	30	28.4	29	29.5	145.8

1. In current US$ – average of daily rates.

❖ Graph 24. ***The structure of direct and indirect R&D support in OECD Member countries***[1, 2]



❖ Graph 24 *(cont.).* ***The structure of direct and indirect R&D support in OECD Member countries***[1, 2]



1. For each country the values for the different categories are expressed as a percentage of the largest category of support. The values are based on total expenditure under each category in the period from 1989 to 1993.
2. For the Czech Republic no data were reported for direct or indirect R&D support.
3. R&D defence procurement not reported.
4. Breakdown of R&D defence procurement expenditures not possible.
5. R&D contracts not used as a financing instrument.
6. Public support to intermediary R&D institutions not used as a financing instrument.
7. R&D contracts not reported.
8. No contribution to space agencies made.

Source: OECD Industrial Support Database, February 1998.

C. THE ANALYSIS OF DIRECT SUPPORT PROGRAMMES

There were 282 support programmes reported under the policy objective of R&D and technological innovation, representing 19 per cent of all programmes. Net expenditure increased strongly between 1989 and 1992 from US$6.4 billion to US$9.2 billion, but decreased to US$8.3 billion in 1993, partly owing to reporting gaps. The share of R&D expenditure in total public support rose from 17.3 per cent in 1989 to almost 19 per cent in 1993. The average value for the latter year spans country-specific values which range between 1 per cent and 57 per cent. In terms of both programmes and expenditure reported, public support to R&D and technological innovation ranked as the second most important area of direct support at the end of the reporting period.

The information available for the years 1994 and 1995 shows that in the twelve countries concerned – Canada, Denmark, Finland, France, Iceland, Japan, the Netherlands, Norway, Spain, Sweden, Switzerland and the United Kingdom – and at the level of the Commission of the European Communities, the upward trend in direct public R&D support, after a pause during 1993 and 1994, continued in 1995. Expenditure which remained at the level of US$3.7 billion in 1993 and 1994, increased to US$4 billion in 1995.

Regarding the design of programmes, more than half provided general incentives for R&D activities, and almost 90 programmes directly promoted selected technologies. The remaining programmes focused on research co-operation between firms and research institutes, including support for hiring R&D personnel or for temporary employment of R&D personnel from research institutes (26), international R&D co-operation (18) and the funding of technology parks or R&D venture capital (7).

When these programmes are analysed as to whether they provide support to the generation of new technological developments or whether they foster the diffusion of new technologies, the result is clearly in favour of the generation of new technological developments. Only a few programmes were identified which explicitly promote the diffusion of new technologies. However, as most of the tax incentive schemes would allow for the deduction or accelerated depreciation of the acquisition of extramural R&D investments, the observed bias concerning support to the diffusion of technology may not exist in terms of the expenditure involved.

Grants and tax concessions are the main financing instruments of public R&D programmes accounting on average for more than 76 per cent of total direct R&D support. Even under the category of programmes using more than one financing instrument, so called mixed programmes which represented close to 20 per cent of the total, many are built on grant or tax concession financing. This has implications for the comparative analysis of NCG flows and Gross Government Budget Expenditure: in the case of tax concessions and grants, NCG and GGBE are equal. NCG and GGBE differ in the event of reimbursable grants, but such reimbursements were reported only under four schemes. GGBE figures differed significantly from their respective NCG values only in a few countries in which the financing structure was very different from the OECD average. Therefore, the need for an analysis of GGBE figures is not obvious from the overall OECD perspective. Such analysis will be addressed in the country-specific context.

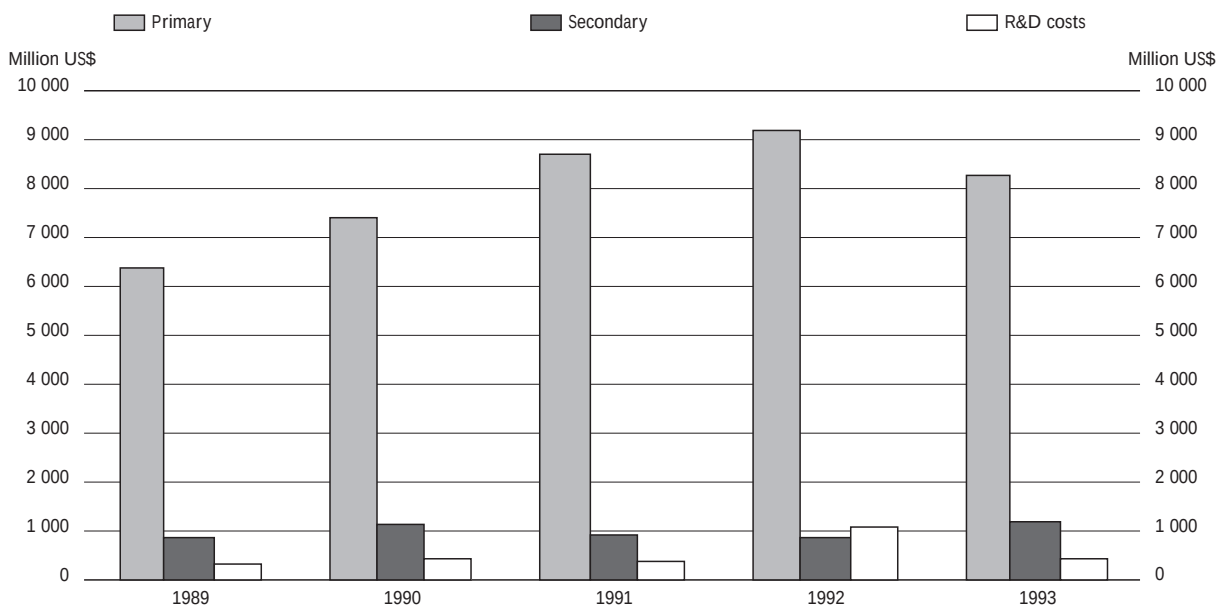
Eighty-nine programmes directly promote selected technologies. They focus on:

- microelectronics/information technology (21 programmes);
- energy saving (18);
- new materials (7);
- aeronautics (7); and
- biotechnology (6).

This picture changes when other R&D-related programmes are included: those having R&D as their secondary policy objective (90 programmes) – for example, a SME programme that provides R&D venture capital – and those having R&D as the economic activity supported (32) – for example, a sectoral programme for one or a few industries providing financial assistance to R&D activities. The inclusion of the latter groups of programmes extends the coverage of direct R&D support by 122 programmes and by 18 per cent in terms of average net expenditure over the period from 1989 to 1993.

Both secondary policy objective programmes and programmes reported under other policy objectives but supporting R&D activities reveal a number of new insights in public support to industrial R&D efforts. Firstly, such programmes are specifically targeted to small and medium-sized enterprises, or, *vice versa*, R&D support constitutes a major objective of SME policies. Some 40 programmes were identified which provide R&D support to SMEs. Secondly, the inclusion of these programmes particularly strengthens the relative weight of information technology and energy saving in the direct promotion of selected technologies. Moreover, 24 programmes were identified which directly support environmental technologies. Thirdly, it is interesting to note that almost 50 per cent of secondary policy objective programmes and programmes supporting R&D activities were implemented in 1990 or later. This means that recent shifts in the policy focus of public support to industrial R&D efforts are better reflected in these categories of direct R&D support than in programmes having R&D as their primary policy objective.

◆ Graph 25. ***R&D support in million US$:***
Primary, secondary policy objectives and R&D costs supported by other programmes



Source: OECD Industrial Support Database, February 1998.

D. THE ANALYSIS OF R&D CONTRACTS

Civilian and defence-related R&D contracts

The value of R&D contracts awarded to manufacturing industry represents a multiple of the direct support reported under the objective of R&D policies.

It is interesting to note that expenditure on R&D contracts, like contributions to intermediary R&D institutions (see following sub-section), did not change very much over the period under review, while direct support did.

A high share of reported R&D contracts are defence-related. In 1989 and 1991, for which figures were provided by the three countries that had specifically reported defence-related contracts, the share was 77 per cent and 71 per cent, respectively. Contracts awarded to the space industries are not included in Table 77. They are shown in the section, which deals with space agencies.

Table 77. **R&D contracts[1] to manufacturing industry[2]**

	Billion US$						
	1989	1990	1991	1992	1993	1994	1995
Expenditures	19.3	17.8	17.5	16.7	17.2	n.a.	n.a.

n.a. Not available.
1. The reporting covers R&D contracts reported by Austria, Canada, Italy, Japan, Norway, Spain, Sweden, Switzerland, the United Kingdom, the United States and the Slovak Republic. Military R&D contracts are also dealt with under Chapter 5.B.
2. The figures cover R&D contracts to manufacturing industry only, except for Japan, which reported R&D contracts for non-manufacturing also. Japan indicated that the manufacturing share accounted for almost 100 per cent of the figures reported.

Civilian R&D contracts focus on energy and information technology. As only three countries and the Commission reported the breakdown of R&D contracts by main technology area, this information may not be very meaningful. The rules governing the appropriation of intellectual property rights that result from such contractual research vary widely. In some countries, these rights are attributed to the public contractor, in others to the contracting firm. In one country, the appropriation of intellectual property rights is a contractual matter and may be attributed either to the public contractor or to the firm. Contracting firms may derive a sizeable competitive advantage from the appropriation of intellectual property rights.

These competitive advantages are, to a large extent, restricted to domestically established firms. Only two countries allow unrestricted access to public R&D contracts, but each had limited representation of firms from abroad.

The magnitude of support channelled through R&D contracts to the manufacturing industry, given the figures shown in Table 77, may be large even if the support element is only a very small percentage. However, there is no method for evaluating the support element in public R&D contracts.

E. PUBLIC SUPPORT TO INTERMEDIARY R&D INSTITUTIONS

Intermediary R&D institutions serving the manufacturing sector were reported by 13 Member countries and the Slovak Republic and at the level of the Commission. While three countries provided consolidated reporting on all such institutions, the others and the Commission reported in detail on their R&D institutions.

Total public support to these institutions increased steadily from US$848 million in 1989 to US$1.149 billion in 1995.

The services provided by these institutions cover a broad range of technological fields. In some countries, the R&D institutions cover all sectors; in others, several institutions specialise in technologies related to pulp and paper, fish-processing, computer science, or wood research. These services all include testing, secondment of R&D staff to manufacturing enterprises, training, consulting, and R&D co-operation with firms.

In many cases, intermediary R&D institutions restrict their services to domestically established firms. Moreover, in some cases, these services are restricted to firms that are co-financing members of the institution.

Table 78. **Public support to intermediary R&D institutions**[1]

	Million US$						
	1989	1990	1991	1992	1993	1994	1995
Total support	848.4	920.7	947.9	1 024.7	1 032.8	1 100[2]	1 149[2]

1. This table reflects information provided by Australia (1993), Austria, Belgium, Canada, Denmark, Finland, Iceland, Mexico, New Zealand, Norway, Portugal, Sweden, Turkey, the Slovak Republic and the European Commission.
2. Secretariat estimates.

Although intermediary R&D institutions are reported to price their services at market rates or to cover costs, contributions from government appear to play a regular and important role in balancing their budgets. Obviously, the combination of market pricing and regular contributions from public budgets, in every year of the period under review, warrants further investigation. Other countries, which reported such support as a direct financing measure may have, in fact, better reflected the nature of R&D services provided by intermediary R&D institutions.

F. CONTRACTS AWARDED BY SPACE AGENCIES

During the peer review, a discussion took place on the nature of financial contributions to the European Space Agency. Certain countries made it very clear that they do not regard such contributions as a subsidy, but would, in the spirit of co-operation and transparency, report on quantitative and qualitative information regarding ESA.

The ESA statutes guarantee, at least in terms of overall return coefficients, that a sum equivalent to national contributions to its Scientific Programme will be contracted out to national manufacturers or R&D institutions. Thus, the return coefficient is, in effect, an instrument for supporting national manufacturers. As it would be misleading to classify ESA contributions as grants or to include them under sectoral policy, it was decided to report on the values contracted by the ESA under a special section of the procurement chapter. R&D contracts awarded to the space industry have also been included here.

Table 79 shows the reported total amounts contracted out by European space agencies or procured and contracted by agencies in Australia, Canada, Japan and the United States under national space programmes.

Table 79. **Contracts awarded by and procurement of space agencies**

	Million US$						
	1989[1]	1990	1991	1992	1993	1994	1995
Contribution	4 885.4	5 883.7	5 624.6	6 497.5	6 383.5	n.a.	n.a.

n.a. Not available.
1. The figures for Denmark were not available for 1989.

G. DEFENCE PROCUREMENT EXPENDITURES ON R&D

The reporting on defence-related procurement confirms the economic importance of defence-related procurement in OECD Member countries. The figures, which are only available for 17 countries, carry some interesting messages. First, the expenditure reported over the period under review never

dropped below US$200 billion in any year. It is estimated that the actual defence procurement expenditures are of the order of US$250 billion per year. Despite the historic geopolitical changes that occurred during the period under review, defence procurement expenditure, contrary to expectations, remained almost stable in the OECD area. Second, one component of defence procurement expenditure, defence R&D, even shows a slight increase in current values (Table 80).

Table 80. **Defence procurement expenditure**[1]

	Billion US$						
	1989	1990	1991	1992	1993	1994	1995
Goods	169.1	178.2	188.7	168.9	166.9	n.a.	n.a.
R&D	28.9	30.0	28.4	29.0	29.5	n.a.	n.a.
Total[2, 3]	209.7	221.4	234.3	210.2	207.3	n.a.	n.a.

n.a. Not available.
1. The reporting covers defence procurement expenditure reported by Australia, Austria, Belgium, Canada (for 1991 only), Denmark, Finland, Germany, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Sweden, Switzerland, the United Kingdom and the United States.
2. Total also includes reported expenditure from countries that did not provide a breakdown by Goods and R&D.
3. Figures for Turkey could not be included as only shares as a percentage of the budget of the Ministry of Defence were reported.

In the breakdown of procurement of defence equipment by beneficiary sectors, which was only provided by a few countries, military hardware such as aerospace equipment, electronics and telecommunications equipment, weapons and explosives, and shipbuilding, account for the largest share of total equipment expenditure.

Regarding the breakdown of defence-related R&D contracts, aerospace, electronics and telecommunications play an even more important relative role than in equipment procurement.

Defence equipment and defence R&D contracts can give supplying firms a competitive advantage in various ways. In particular, spillover effects of defence research and dual-use possibilities of some equipment procured for defence purposes can strengthen the competitiveness of supplying firms in technological, financial and commercial terms.

The magnitude of the support channelled through defence procurement to manufacturing industry, given the figures shown in Table 80, may be large even if the support element represents only a very small percentage. Moreover, the strong concentration of such support in a few selected industries remains an issue for competition, trade and industrial policy.

THE GLOBALISATION OF R&D SUPPORT

A. THE GLOBALISATION OF INDUSTRIAL R&D ACTIVITIES

The internationalisation of industrial R&D activities can be considered a feature of worldwide industrial globalisation. Even though such activities are less internationalised than those relating to production, they have grown significantly over the past 15 years. The growing internationalisation of industrial R&D activities is resulting from both an increase in the number of R&D laboratories located abroad, and the rising number of co-operation agreements or alliances either between firms or between firms and government or university R&D institutions.

While all economists are unanimous in recognising that for host countries the spillover effects of international industrial R&D activities can create substantial positive externalities for firms and their environment, other express concern when a domestic firm's R&D potential is taken over by a foreign firm, considering that the control exerted by the new headquarters can reduce, for the residents of the country in question, the benefits previously enjoyed from such positive externalities.

The same doubts and uncertainties surround the implications for the home country: locating R&D resources on foreign sites is sometimes perceived as undermining its technological capability in the long term. On the other hand, locating R&D abroad may be crucial for diffusion of technology from home, or absorption of foreign technology, hence supplementing R&D in a country.

Against this background of increased globalisation of industrial R&D activities, foreign access and participation in national R&D programmes has emerged as a new issue of R&D support policies in OECD Member countries. Most governments undertook specific efforts to promote foreign participation in private industrial R&D activities, by reducing barriers to investment and trade, as a way of harnessing economic and technological benefits. At the same time, they have been more cautious with regard to foreign access to public R&D support programmes, at times for reasons of national security, but also partly for reasons of technological and economic competitiveness. As the rationale of R&D support programmes lies in correcting local market failures which lead to underinvestment in R&D and in capturing spillover benefits, governments may not want these spillovers to accrue to other countries.

This chapter aims at clarifying both from a legalistic and a factual perspective the significance of foreign access and participation in national R&D programmes.

B. THE CONCEPT OF NATIONAL, DOMESTIC AND FOREIGN ENTERPRISES

In reviewing the issue of foreign access and participation in national R&D support programmes, a distinction should be made between national, domestic and foreign enterprises:

- national enterprises are those which are indigenous or nationally owned;
- domestic enterprises are foreign-owned companies with an R&D and/or production site in the country; and
- foreign enterprises are companies established abroad without an R&D and/or production presence in the country.

According to this distinction, Member countries were invited to report on the criteria governing access to support programmes by making a choice in one of the following three options:

- all indigenous and nationally owned enterprises may apply on equal terms;
- all domestically established firms may apply on equal terms;

– all manufacturing enterprises, wherever established (including abroad) and whatever their ownership, may apply on equal terms.

Moreover, optional reporting was requested on the actual beneficiaries of support programmes. In addition to the information drawn from a report on the current status of foreign-firm participation in the major technology programmes of the United States, Europe and Japan, this optional reporting was exploited to illuminate the factual participation of domestic and foreign enterprises in national support programmes.

C. LEGAL PROVISIONS GOVERNING THE ACCESS OF DOMESTIC AND FOREIGN FIRMS TO NATIONAL SUPPORT PROGRAMMES

In the support policies of OECD Member countries, the Slovak Republic and the Commission of the European Communities, barriers for non-nationally owned enterprises, as a means of limiting the access to public support, have declined in importance. Such barriers, which were a source of concern in the reporting period 1986 to 1989 and which explains the inclusion of questions related to national treatment issues, concerned only 4 per cent of all R&D support programmes applied in the period from 1989 to 1993. In terms of participation in programmes and access to public support, 76 per cent of programmes were also open to domestically established, but foreign-owned enterprises, and 8 per cent had no restrictions on the geographic location of firms and provided support even to enterprises from abroad.

The analysis of the updated information on R&D support programmes including the years 1994 and 1995, underlines the continuation of this declining trend. Of the 404 R&D support programmes having R&D as their primary or secondary policy objective and those having R&D as the economic activity supported, only 4 per cent continue to restrict participation and access to public finance to nationally owned firms. Under the categories of "all domestic" and "worldwide", the shares changed to 79 per cent and 7 per cent, respectively.

Table 81. **R&D support programmes by national treatment, 1995**

Type of national treatment	Number of R&D programmes	Percentage of R&D programmes
All domestic	321	79
National only	16	4
World-wide	28	7
Unspecified	39	10

Source: OECD Industrial Support Database (February 1998).

These developments may be partly attributed to the unanimous pledge of all Member countries to refrain from introducing new exceptions to the "National Treatment Instrument" and its follow-up procedures as set out in the OECD Council Decision of December 1991. On the other hand, the revision of ongoing programmes and the expiry of some programmes reserved for nationally owned firms, may have contributed to the further opening of national R&D support policies.

However, access to programmes and, more specifically, access to public funding remained fairly restricted to non-domiciled foreign companies in the mid-1990s. Only domiciled foreign companies may participate in R&D programmes on a basis almost equal to that offered to indigenous or nationally owned firms. Moreover, it should be stressed that these findings reflect the "*de jure*" situation rather than the "*de facto*" participation by foreign companies.

D. THE FACTUAL PARTICIPATION OF DOMESTIC AND FOREIGN ENTERPRISES IN NATIONAL R&D SUPPORT PROGRAMMES

Data and information concerning the actual participation by domestic and foreign enterprises in national R&D support programmes are very limited. From the OECD's partial survey on ''Foreign Access to Technology Programmes'', the observation may be drawn that actual participation by domestic and foreign firms in such programmes remained modest.

Participation by domestic and foreign firms in the major technology programmes of the United States, Europe and Japan reveals increasing participation by domestic firms in 2 to 69 per cent of the projects and programmes under consideration. On average, and with no significant differences among countries, this survey points to a participation of domestic and foreign firms in *grosso modo* 10 per cent of the major technology programmes.

The findings drawn from the optional reporting on actual beneficiaries of R&D support programmes in OECD Member countries and at the level of the Commission of the European Communities underline that, as one would have expected, foreign participation becomes less evident when a broader scope of programmes, including small-scale support programmes, is analysed. In particular, R&D support programmes designed to provide financial assistance to industrial R&D efforts of small and medium-sized businesses rarely qualified for factual participation of domestic and foreign firms. Therefore, the share of total direct R&D support programmes in which such firms participate definitely lies below 10 per cent.

It is even more difficult to provide any estimations concerning the share of public R&D support going to domestic and foreign firms. In this context, further research is warranted to better clarify the globalisation of R&D support.

COUNTRY-SPECIFIC FEATURES OF PUBLIC SUPPORT TO INDUSTRIAL R&D

A. CANADA

Table 82. **Direct and indirect R&D support in Canada**

	Reported expenditure in millions of national currency: C$							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	2 271.20	2 131.60	1 918.79	1 268.87	1 365.82	n.a.	n.a.	n.a.
Direct R&D support (NCG)	576.12	586.88	628.77	819.64	944.08	943.73	976.76	5 475.98
Total direct R&D support (NCG)[1]	857.60	930.16	889.71	1 010.64	1 219.44	1 150.24	1 078.16	7 135.95
Public supoprt to intermediary R&D institutions	437.00	429.00	452.00	452.00	468.00	453.40	471.70	3 163.10
R&D contracts to manufacturing industry	262.00	251.00	399.00	406.00	415.00	n.a.	n.a.	n.a.
Space agencies:								
contracts awarded by/procurement of	143.00	251.00	298.00	408.00	377.90	318.90	471.70	2 268.50
R&D defence procurement expenditure	n.a.	n.a.	n.a.	n.a.	81.00	67.70	71.00	n.a.

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

In Canada, public support to manufacturing industry declined from 1989 to 1991. While the figures for 1992 and 1993 are biased by a few reporting gaps, estimations of the financial flows under the programmes concerned, resulting in totals of C$ 1 850 million for 1992, and C$ 1 800 million for 1993, point to the continuation of the declining trend in public support to manufacturing industry. Provincial support was not included in the Canadian reporting and total direct support figures for the years 1994 and 1995 are not available for Canada.

Direct R&D support in Canada consistently increased from C$ 576 million in 1989 to C$ 977 million in 1995. The strong growth of R&D expenditure in current terms, amounting to almost 70 per cent between the beginning and the end of the period under review demonstrates the strong commitment of the Canadian Government to pushing ahead technological progress. Total direct R&D support peaked in 1993 at a level of C$ 1 219 million, but shrank to C$ 1 150 million in 1994 and C$ 1 078 million in 1995. However, the share of total direct R&D expenditure in total public support to manufacturing industry rose from 38 per cent in 1989 to 89 per cent in 1993, underlining the strong shift in the focus of Canadian support policies towards the promotion of R&D and technological innovation.

In terms of the programmes reported, the emphasis of direct Canadian R&D support clearly lay on the promotion of selected technologies; 20 of the 32 Canadian R&D programmes fell into this category, and telecommunication technologies and microelectronics emerged as focal areas of technology-specific support in the period under review. However, in terms of expenditure, the promotion of horizontal R&D activities of firms, and, more specifically, tax credits and accelerated deduction of their expenditure on scientific research and experimental development absorbed the bulk of total R&D support.

Grants, reimbursable grants, loans and tax concessions were the financing instruments used in R&D support programmes. Fiscal incentives served as the main source of direct R&D financing, consistently increasing their share to almost 90 per cent in 1995. Due to the low financial volume of loan financed programmes and the limited amount of reimbursements under grant programmes, net expenditure and gross expenditure of total direct Canadian R&D support are nearly equal.

Indirect means of industrial R&D support had a roughly similar weight to that of direct measures. In 1993, the only year for which information is available for the various elements of direct and indirect R&D support, expenditure on direct R&D support represented C$ 1 219 million compared to C$ 1 342 million of indirect support.

Contributions to the Canadian Space Agency and expenditure on R&D contracts to manufacturing industry increased particularly strongly, while the remaining components of indirect industrial R&D support, intermediary R&D institutions and R&D defence procurement expenditures, showed flat growth or even declined towards the end of the period under review.

B. DENMARK

Table 83. **Direct and indirect R&D support in Denmark**

	Reported expenditure in millions of national currency: DKr							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	854.51	992.75	1 043.38	3 414.86	1 703.50	2 015.65	2 206.61	12 231.26
Direct R&D support (NCG)	376.42	395.83	555.90	2 338.99	427.26	328.17	349.81	4 772.38
Total direct R&D support(NCG)[1]	517.04	595.19	749.36	2 577.02	625.36	554.69	583.11	6 201.77
Public support to intermediary R&D institutions	581.80	553.10	558.70	548.20	564.40	565.00[2]	639.00[2]	4 010.20
R&D contracts to manufacturing industry								
Space agencies:								
contracts awarded by/procurement of	n.a.	99.00	108.00	97.00	131.00	137.00	98.00	n.a.
R&D defence procurement expenditure								

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.
2. Figures on sub-central government support are not included for these years.

In Denmark, public support to manufacturing industry consistently increased in the period from 1989 to 1995. Public support, which was DKr 855 million in 1989, had almost tripled by 1995, resulting in a net expenditure of DKr 2.2 billion. This underlines the growing importance of public support as a policy instrument in Denmark in the period under review.

The share of direct R&D support in total support to manufacturing industry diminished. While this share was 44 per cent in 1989, the figure for 1995 amounted to only 16 per cent. In 1992, when a new and important R&D fund was launched, this share reached the exceptionally high level of 68 per cent.

In nominal terms, the trend in R&D expenditure moved slightly downward. The amount of DKr 350 million for the year 1995 corresponds to 93 per cent of the 1989 level. However, the figures for total direct R&D support, including the expenditure of programmes which have R&D as their secondary policy objective or R&D as the economic activity supported, showed an upward trend. Here, the amount of DKr 583 million for the year 1995 exceeded the 1989 level by 13 per cent.

Of the 20 programmes reported, eleven provided support to horizontal R&D activities of manufacturing firms, and nine supported research and development in selected technologies. Technology-specific programmes particularly focused on environmental technologies and renewable energy. In terms of the expenditure involved the partition between horizontal and technology-specific support was fairly balanced.

Grants were the predominant financing instrument used in direct R&D support in Denmark. At the end of the period under review only one loan programme and one tax concession programme were applied. Nonetheless, due to this loan programme, the gap between net and gross spending widened towards the end of the period, representing a financial flow in the order of DKr 340 million in 1995.

In Denmark, the share of defence R&D expenditures in total military procurement is negligible. Moreover, civil R&D contracts were reported under the programme "Public Participation in R&D Activities". Therefore, indirect R&D support only comprised the funding of intermediary R&D institutions and spending under the space programme. Under both categories the trend in expenditure was stable with a slight tendency to decline towards the mid-1990s. With the exception of 1992, the split between direct and indirect R&D expenditure was fairly balanced.

C. FINLAND

Table 84. **Direct and indirect R&D support in Finland**

	Reported expenditure in millions of national currency: Mk							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	2 427.64	2 125.52	4 782.91	5 031.65	2 911.00	3 079.30	2 294.10	22 652.12
Direct R&D support (NCG)	224.50	232.20	255.60	275.60	351.00	364.30	529.80	2 233.00
Total direct R&D support (NCG)[1]	224.50	232.20	255.60	294.30	353.10	370.30	532.10	2 262.10
Public support to intermediary R&D institutions	250.20	264.70	292.00	328.30	324.50	296.00	326.40	2 082.10
R&D contracts to manufacturing industry								
Space agencies:								
contracts awarded by/procurement of	33.00	78.30	95.50	113.00	189.90	177.80	190.80	878.30
R&D defence procurement expenditure								

1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

In Finland, public support to manufacturing industry in the period from 1989 to 1995 declined by 6 per cent when the beginning and the end of the reporting period are compared. In the same period, expenditure on direct R&D programmes more than doubled, rising from Mk 225 million in 1989 to Mk 530 million in 1995. The inclusion of programmes having R&D either as their secondary policy objective or as economic activity supported adds only marginally to these levels: total direct R&D was Mk 225 million in 1989 and Mk 532 million in 1993. The share of total direct R&D expenditure in total support to manufacturing industry increased strongly from 9 per cent in 1989 to 23 per cent in 1995. These figures underline the dynamic growth of direct R&D support in Finland. At the same time, they reveal that these shares are still below OECD averages.

Finnish direct R&D support programmes focused on the promotion of horizontal R&D activities. Of the seven programmes reported, four provided public co-financing of industrial R&D projects representing on average more than 90 per cent of total direct R&D expenditure. Two technology-specific programmes were targeted on R&D in energy technologies and environmental technologies, while the remaining programme supported international R&D co-operation at the firm level.

Of the seven programmes reported, five used grants as financing instrument, one was financed by soft loans, and one was a guarantee programme. Particularly in 1991, 1993 and 1994 gross expenditure largely exceeded net expenditure. In these years, GGBE figures more than doubled their respective NCG. Tax concessions were not used as a financing instrument for R&D activities.

The figures available for indirect R&D support show a dynamic growth in expenditure under the Finnish space programme, including the Finnish contributions to the European Space Agency in the most recent years. Public support to intermediary R&D institutions also increased in the period under review. While civil R&D contracts were not awarded by Finnish Government authorities, funding was

provided through defence R&D measures but could not be identified in the global amount spent on military procurement. For this reason, the balanced spending on direct and indirect R&D support shown in Table 84 may be somehow biased.

D. FRANCE

Table 85. **Direct and indirect R&D support in France**

	Reported expenditure in millions of national currency: FF							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	21 531.00	17 138.00	19 429.00	19 120.00	23 143.00	17 760.00	12 018.00	130 139.00
Direct R&D support (NCG)	6 800.00	7 232.00	8 981.00	7 839.00	7 008.00	5 804.00	5 190.00	48 854.00
Total direct R&D support (NCG)[1]	6 800.00	7 232.00	8 981.00	7 839.00	7 008.00	5 804.00	5 190.00	48 854.00
Public support to intermediary R&D institutions								
R&D contracts to manufacturing industry								
Space agencies: contracts awarded by/procurement of	3 281.00	3 641.00	4 173.00	4 725.00	4 947.00	n.a.	n.a.	n.a.
R&D defence procurement expenditure								

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

Public support to manufacturing industry in France declined by 44 per cent between 1989 and 1995. Expenditure fell from FF 21.5 billion in 1989 to FF 12 billion in 1995. The strong cut in global spending on industrial support occurred in spite of extended direct R&D support at least until 1992. However, since 1993, direct R&D support has fallen continuously. When the 1989 and 1995 levels are compared, the decline from FF 6.8 billion down to FF 5.2 billion was almost 25 per cent.

In France, direct R&D support was exclusively channelled through programmes which had R&D and technological innovation as their primary policy objective. Therefore, in France, unlike in most other OECD Member countries, direct R&D support and total direct R&D support do not differ.

The share of direct R&D support in total support to manufacturing industry increased from 32 per cent in 1989 to 43 per cent in 1995. This shift in French support policies towards R&D objectives was the result of a strong cut in total support rather than increased public spending on industrial R&D efforts.

A relatively small number of industrial R&D programmes were applied by the French Government in the period under review: three programmes providing R&D support of a general and horizontal nature, and two programmes in support of specific technologies (microelectronics and oil technologies). In terms of expenditure, the emphasis was on the technology-specific programmes.

Grants, and in particular reimbursable grants, were the only financing instrument used in French support to industrial R&D efforts in the period from 1989 to 1995. Due to large reimbursements, gross expenditure in each year exceeded the net cost calculated by more than FF 1 billion.

A R&D tax credit scheme, involving a net cost of at least FF 2.5 billion per year throughout the 1989-95 period, is not considered by the French Government to be a support programme.

The reporting by France on indirect means of R&D support is not very conclusive. The French contributions to the European Space Agency consistently increased from 1989 to 1993 rising from FF 3 billion to FF 4.9 billion. More recent figures are not available. Regarding the other categories of direct R&D support, estimations made by the Secretariat show that mission-oriented R&D contracts and R&D procurement with respect to industrial firms peaked in 1991 at a level of FF 19.4 billion, and were close to FF 15 billion in both 1989 and 1993. Military R&D contracts and R&D defence procurement absorbed more than 80 per cent in each year. These figures point to the important role of indirect means of R&D support in financing industrial R&D efforts in France.

E. ICELAND

Table 86. **Direct and indirect R&D support in Iceland**

	Reported expenditure in millions of national currency: IKr							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	296.00	247.00	281.00	230.00	311.00	309.00	328.00	2 002.00
Direct R&D support (NCG)	119.00	128.00	177.00	146.00	173.00	166.00	179.00	1 088.00
Total direct R&D support (NCG)[1]	195.00	216.00	258.00	226.00	309.00	307.00	326.00	1 837.00
Public support to intermediary R&D institutions	166.00	175.00	189.00	183.50	187.00	187.00	194.50	1 282.00
R&D contracts to manufacturing industry								
Space agencies:								
contracts awarded by/procurement of								
R&D defence procurement expenditure								

1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

In Iceland, the trend in public support to manufacturing industry was downwards from 1989 to 1992, although it then picked up until the end of the period under review. When the beginning and the end of the period from 1989 to 1995 are compared, net expenditure grew by 14 per cent in current terms. The increase in public support to manufacturing industry from IKr 296 million in 1989 to IKr 338 million in 1995 was driven by extended spending on R&D programmes, including those having R&D as their secondary policy objective or as the economic activity supported.

Not only did direct R&D support increase by 50 per cent between 1989 and 1995, its share in public support to manufacturing industry rose by 13 per cent. With a share of 53 per cent at the end of the period under review, the R&D intensity of public support to manufacturing industry in Iceland is extraordinarily high. For total direct R&D support, which increased by 67 per cent from IKr 195 million in 1989 to IKr 326 million in 1995, the shares in total public support to manufacturing industry have been close to 100 per cent since 1992. No other OECD Member country had such a strong focus on R&D objectives in its support policies.

Of the eleven R&D programmes reported, ten were in support of horizontal R&D objectives. One technology-specific programme was fostering new developments in fishing technologies. The technology-specific programme absorbed a declining and very small portion of total direct R&D support.

Grants were the only financing instrument used in Icelandic R&D programmes. As a consequence, there was no difference between gross and net expenditure.

Among the four categories of indirect R&D support, only public support to intermediary R&D institutions played a role in Iceland. Such support increased by 17 per cent when the beginning and the end of the reporting period are compared. The share of expenditure which was spent on technology-specific issues (Icelandic Fishery Laboratories) was almost 50 per cent in each year. However, indirect R&D equalled only two-thirds of the expenditure on total direct R&D programmes.

F. JAPAN

Direct public support to manufacturing industry in Japan in the period from 1989 to 1993 was marked by strong increases in the years 1990 and 1991, when expenditure grew from ¥ 270.4 billion to ¥ 509.8 billion in 1990 and ¥ 616.1 billion in 1991. After peaking in 1991, expenditure declined in the subsequent years to the 1989 level. Direct public support equalled ¥ 288.1 billion in 1993. Total direct support figures for the years 1994 and 1995 are not available.

The trend in direct R&D support was relatively stable from 1989 to 1993 when expenditure oscillated between ¥ 47.4 and ¥ 52.8 billion. In 1994 and 1995 figures for direct R&D support and total

Table 87. **Direct and indirect R&D support in Japan**

	Reported expenditure in millions of national currency: ¥							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	270 400	509 818	616 108	276 226	288 058	n.a.	n.a.	n.a.
Direct R&D support (NCG)	47 413	51 963	52 820	50 773	48 544	20 869	18 420	290 802
Total direct R&D support (NCG)[1]	49 136	54 684	55 353	52 979	50 605	23 269	19 255	305 282
Public support to intermediary R&D institutions								
R&D contracts to manufacturing industry	126 803	139 211	143 178	148 554	162 631	169 863	178 297	1 068 536
Space agencies:								
contracts awarded by/procurement of	79 400	83 300	90 700	100 300	115 700	120 500	122 300	712 200
R&D defence procurement expenditure	75 500	100 400	101 400	113 600	118 900	124 920	135 357	770 077

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

direct R&D support were not finalised due to the unavailability of data for the most important R&D support programme. However, the trend from 1989 to 1993 would have continued in 1994 and 1995 if figures had been available for these years. Programmes having R&D as their secondary policy objective and those having R&D as the economic activity supported added on average ¥ 2 billion to total direct R&D support. The share of total direct R&D expenditure in total support to manufacturing industry lay between 18 and 19 per cent in 1989, 1992 and 1993, and accounted for 11 per cent in 1990 and 9 per cent in 1991, demonstrating that the focus of Japanese support policies in these years was not on direct support to R&D.

In terms of the programmes reported, the Japanese approach to direct R&D support is particularly technology-specific. Of 30 R&D programmes, 18 provide financial support to selected technologies. Energy technologies are the most important area of technology-specific R&D support. However, in terms of expenditure, the emphasis is on the promotion of horizontal R&D activities.

Direct R&D support programmes used grants, tax concessions, guarantees, loans and equity capital injections as financing instruments. The four tax concession programmes, including the important "Special Tax Deduction on Increased Expenditure for Research and Testing" which, in every year of the period from 1989 to 1993, provided funding in the order of ¥ 27 billion to ¥ 32 billion, were the main source of direct R&D expenditure.

Due to the variety of financing instruments used, GGBE and NCG expenditure on direct R&D support differered significantly. GGBE exceeded NCG by approximately ¥ 21 billion in each year of the reporting period. This difference can be traced to a mixed financing programme using loans and equity capital infusions as financing instruments and a guarantee scheme.

R&D contracts, the funding of space agencies and R&D defence expenditures channelled a multiple of the direct NCG expenditure to manufacturing industry. In each of these categories expenditure increased by almost 50 per cent when 1995 figures are compared with those for 1989. The dynamics of public funding of industrial R&D in Japan clearly stemmed from indirect means of public R&D support.

R&D contracts in Japan exclusively served non-military objectives. As under the category of direct support, the focus was on selected technologies, and on energy technologies in particular.

G. NETHERLANDS

In the Netherlands, the period from 1989 to 1993 was marked by a sharp decline in public support. In 1993, the total amount of public support to manufacturing industry accounted for only 41 per cent of its 1989 level. More recent figures on total public support are not available.

The trend in direct R&D spending in the Netherlands mirrored the development of total public support. Direct R&D support peaked in 1990 at a level of Gld 605 million and decreased in the following years to Gld 148 million in 1993. After 1993 strong increases resulted in a net expenditure of

Table 88. **Direct and indirect R&D support in the Netherlands**

	Reported expenditure in millions of national currency: Gld							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	1 407.91	1 612.23	848.20	614.27	579.38	n.a..	n.a..	n.a.
Direct R&D support (NCG)	481.90	605.22	406.32	235.25	140.70	315.35	430.20	2 614.94
Total direct R&D support (NCG)[1]	500.80	620.02	419.34	268.67	184.48	392.35	540.60	2 926.26
Public support to intermediary R&D institutions								
R&D contracts to manufacturing industry	8.10	38.10	84.50	197.10	114.40	111.10	107.50	660.70
Space agencies:								
contracts awarded by/procurement of	95.00	117.00	130.00	150.00	163.00	155.00	177.00	987.00
R&D defence procurement expenditure	126.00	131.00	131.00	142.00	136.00	136.00	139.00	941.00

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

Gld 483 million in 1995, above the 1989 level. This somehow erratic development in direct R&D support can be traced to specific developments under two programmes: the phasing out of wage-cost subsidies for research personnel starting in 1991, and the implementation of a fiscal scheme allowing for the deduction of wages for R&D employees from corporate tax and social insurance premiums in 1994. If the phasing-out of the subsidy scheme and the implementation of its fiscal substitute had been more coherent, direct R&D expenditure would have been less erratic in the period from 1989 to 1995, and would have shown an upward trend even in constant terms.

The significance of support programmes having R&D as their secondary policy objective or as the economic activity supported grew consistently towards the end of the period under review. These programmes, which added 5 per cent to direct R&D expenditure in 1989, represented 23 per cent of total direct R&D support in 1995.

Of the 14 R&D support programmes applied in the Netherlands in the period from 1989 to 1995, six focused on the promotion of specific technologies, seven provided financial support to horizontal R&D efforts of manufacturing firms and one programme supported international industrial R&D co-operation. However, horizontal R&D measures absorbed the major share of total direct R&D spending, representing, for example, more than 70 per cent of the expenditure reported for 1995, whereas the respective figure for sector-specific support was 25 per cent.

Grants, tax concessions and loans were the financing instruments used in the Dutch R&D support programmes. In spite of the high number of grant-financed programmes (10), the two tax concession programmes emerged as the most important source of financial support since 1993, with a share in the order of 70 per cent of total expenditure. GGBE and NCG values of total direct R&D support only differed by approximately Gld 100 million each year, as a result of lower NCG amounts involved in the loan programme.

Indirect R&D support to manufacturing industry in the Netherlands was provided by means of R&D defence procurement, R&D contracts and contributions to the ESA programme. Intermediary public R&D institutions serving the manufacturing sector did not exist in the Netherlands. While R&D defence expenditure remained stable throughout the period under review, contributions to ESA almost doubled and expenditure on R&D contracts grew even more dynamically. Under the latter category of indirect R&D support, information technologies were the main recipient. On average, expenditure on direct and indirect R&D support was balanced in the period from 1989 to 1995.

H. NORWAY

Public support to manufacturing industry in Norway showed a slight upward trend in the period from 1989 to 1995. Expenditure which was NKr 3.3 billion in 1989, increased by 8 per cent in nominal terms to NKr 3.6 billion in 1995. In the same period, expenditure on direct R&D support programmes

Table 89. **Direct and indirect R&D support in Norway**

	Reported expenditure in millions of national currency: NKr							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	3 325.25	4 431.10	4 197.78	4 394.99	3 829.10	3 703.04	3 595.63	27 476.89
Direct R&D support (NCG)	233.26	273.14	307.84	364.55	341.72	392.00	427.00	2 339.51
Total direct R&D support (NCG)[1]	636.36	683.83	860.30	904.20	781.67	861.22	1 013.88	5 741.46
Public support to intermediary R&D institutions	85.00	90.00	132.00	141.00	162.00	263.00	254.00	1 127.00
R&D contracts to manufacturing industry	99.00	98.50	893.00	908.00	575.00	n.a.	n.a.	n.a.
Space agencies: contracts awarded by/procurement of R&D defence procurement expenditure	115.00	126.00	146.00	175.00	191.00	n.a.	n.a.	n.a.

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

rose from NKr 223 million to NKr 427 million. Hence, the share of direct R&D support in total support to manufacturing industry consistently increased from 6.8 per cent in 1989 to 11.9 per cent in 1995. In spite of such dynamic growth in net expenditure, this share lay clearly below the OECD average.

R&D programmes which have R&D either as their secondary policy objective or as the economic activity supported channelled important and increasing amounts of public support into the manufacturing sector. Expenditure under such programmes represented more than twice the equivalent of direct R&D support. Therefore, the share of total direct R&D support in public support to manufacturing industry, which was 18 per cent in 1989 reached 28 per cent in 1995. These figures probably better reflect the Norwegian Government's role in industrial R&D support.

Of the eleven R&D programmes reported, seven provided incentives for industrial R&D activities of a horizontal nature. Of the three programmes supporting industrial research in selected technologies, two focused on environmental technologies and the third on new energy technologies. International R&D co-operation was specifically addressed in one programme. The predominance of the horizontal approach in direct R&D support was even more obvious in terms of expenditure: these programmes on average accounted for more than 90 per cent of total direct R&D spending in Norway.

Only two programmes were financed by instruments other than grants. As these two loan and guarantee programmes were relatively small and did not differ too significantly in gross and net expenditure, the difference between total GGBE and NCG values of direct R&D support are negligible. Norway belongs to the group of OECD countries that did not use specific fiscal R&D incentives during the period under review.

R&D contracts, support to intermediary R&D institutions and contributions to the European Space Agency were important channels of public R&D funding in Norway. Between 1989 and 1995, expenditure on R&D contracts and intermediary R&D institutions grew particularly strongly; contributions to ESA almost doubled. The share of R&D defence procurement expenditures in total defence procurement expenditures could not be identified. However, given the amounts involved – amounting on average to NKr 13.5 billion per year – R&D defence procurement expenditure may have been an important source of public R&D funding even if its share in total defence procurement represented only a small percentage. While the focus of R&D contracts clearly lay on defence-related research, support to intermediary institutions was provided to a broad range of research institutes, each specialising in a specific technology.

I. SPAIN

In Spain, public support to manufacturing industry consistently declined from 1989 to 1993. Support, which was Ptas 238 billion in 1989, was cut by almost 50 per cent over this period, resulting in a total expenditure of Ptas 128 billion in 1993. Totals for more recent years are not available for Spain.

Table 90. **Direct and indirect R&D support in Spain**

	Reported expenditure in million of national currency: Ptas							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	238 295.80	198 271.80	181 669.00	169 383.70	128 372.50	n.a.	n.a.	n.a.
Direct R&D support (NCG)	17 637.80	25 661.90	29 743.00	23 129.40	20 760.20	13 890.00	15 062.00	145 884.30
Total direct R&D support (NCG)*	22 426.80	34 277.20	39 899.00	29 672.50	28 436.20	14 640.00**	16 701.00**	186 052.70
Public support to intermediary R&D institutions	n.a.	n.a.	n.a.	n.a.	n.a.	27 239.00	23 564.00	n.a.
R&D contracts to manufacturing industry	15 150.00	16 763.00	16 948.00	15 019.00	13 061.00	n.a.	n.a.	n.a.
Space agencies: contracts awarded by/procurement of	8 041.00	9 958.00	12 526.00	14 489.00	12 742.00	14 930.00	16 633.00	89 319.00
R&D defence procurement expenditures***	n.a.	n.a.	n.a.	n.a.	n.a.	46 523.00	48 465.00	n.a.

* Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.
** Excluding regional R&D promotion programme.
*** Initial budget for the programme "Research and Studies for the Armed Forces".

Direct R&D support increased by 18 per cent over the period, but fell below its 1989 level in 1994 and 1995, representing expenditure of Ptas 17.6 billion in 1989 and Ptas 15.1 billion in 1995. The share of direct R&D support in total industrial support grew from 7 per cent in 1989 to 16 per cent in 1993. In spite of this development, the Spanish share of direct R&D support in total industrial support remained below the OECD average.

When programmes having R&D as their secondary policy objective and those having R&D as the economic activity supported are included the share of total direct R&D, support rises by 2 per cent on average. However, if figures had been available for the regional R&D promotion programmes for 1993 and later, total direct R&D expenditure may have been ESP 4 billion higher in these years.

Of the twelve programmes reported, the promotion of horizontal R&D activities in a wide range of sectors was the objective of eight programmes. These programmes represented almost 75 per cent of total direct R&D support. Four programmes supported R&D on specific technologies. Aeronautics and microelectronics gathered more than 90 per cent of technology-specific support.

With the exception of one loan-financed programme, all R&D programmes used grants as financing instrument. Fiscal R&D incentives were provided on a general basis, open to all sectors of the economy. They were not reported by the Spanish Government. Due to the loan programme, gross public R&D expenditure strongly exceeded net expenditure. Particularly in 1994 and 1995, GGBE values counted for almost the double of their NCG.

The figures reported point to a stronger significance of indirect R&D support when compared with total direct R&D expenditure. The procurement of the space agency more than doubled between 1989 and 1995. The slight upward trend in indirect R&D defence procurement in 1994 and 1995 was outweighed by declining expenditure on intermediary R&D institutions.

J. SWEDEN

In Sweden, total public support to manufacturing industry in current prices drastically declined from SKr 3 661 million in 1989 to Skr 1 461 million in 1995. This reduction, amounting to almost 60 per cent of the 1989 levels, underlines successful efforts of the Swedish Government to restrain from financial interventions in the manufacturing sector, and, at the same time, to curb the financial impacts on the national budget.

The trend in direct R&D support was relatively stable from 1989 to 1993, with the exception of 1991, when R&D support dropped due to reduced spending under the information technology programme. When the beginning and the end of the reporting period are compared, direct R&D support fell from

Table 91. **Direct and indirect R&D support in Sweden**

	Reported expenditure in millions of national currency: SKr							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	3 661.00	2 692.00	3 529.00	3 810.00	3 054.00	1 438.00	1 461.00	19 645.00
Direct R&D support (NCG)	530.86	524.24	439.42	500.18	533.76	287.26[2]	362.51[2]	3 178.23
Total direct R&D support (NCG)[1]	554.53	563.16	472.16	530.29	564.86	328.86[2]	404.95[2]	3 418.81
Public supoprt to intermediary R&D institutions	128.00	137.00	134.00	126.00	134.00	333.25	482.66	1 474.91
R&D contracts to manufacturing industry	3 156.00	n.a.	2 886.00	n.a.	2 985.00	n.a.	n.a.	n.a.
Space agencies:								
contracts awarded by/procurement of	307.00	289.00	393.00	412.00	489.00	571.00	573.00	3 034.00
R&D defence procurement expenditure	3 465.00	2 928.00	3 108.00	3 680.00	3 196.60	525.00[3]	575.00[3, 4]	17 477.60

n.a. Not available.
1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.
2. New reporting method, see note 3 to Table 59, page 155.
3. New reporting method referring to research and technology only.
4. Estimated figures drawn from the prolonged budget (18 months) for 1995/96.

SKr 531 million in 1989 to SKr 363 million in 1995. On the other hand, the share of R&D support in total support increased from 15 per cent in 1989 to 25 per cent in 1995.

This picture remains very much the same when other R&D-related programmes are included – those having R&D as their secondary policy objective and those having R&D as the economic activity supported. The combined share of such programmes in total support increased from 15 per cent in 1989 to 27 per cent in 1995.

The figures reported point to a sharp decrease in direct R&D support in Sweden in 1994 and 1995. However, before 1994 it was not possible to separate R&D support to manufacturing industry from support to universities and research institutes. Totals in 1994 and in 1995 would have amounted to SKr 538 million and SKr 462 million if the reporting method had remained unchanged, and the decline in direct R&D support to manufacturing industry should not have exceeded the order of 15 per cent.

R&D contracts, support to intermediary R&D institutions, military R&D procurement and contributions to the European Space Agency are important channels of public R&D funding in Sweden. Support to intermediary R&D institutions was relatively stable over the period from 1989 to 1993, but strongly increased in 1994 and 1995, when direct R&D support in Sweden was cut. The contribution of the Swedish Government to ESA increased, while the trend in military R&D expenditure and R&D contracts declined.

Sweden belongs to the group of OECD Member countries which did not use tax incentives to support R&D in manufacturing industry in the period under review. Grants and loans served as financing instruments in all the R&D programmes reported. In spite of loan financing, GGBE and NCG values did not differ significantly.

Of the 15 Swedish programmes having R&D as their primary or secondary policy objective or R&D as the economic activity supported, one particular programme, entitled Technological Research and Development, absorbs the major share of combined direct R&D expenditure. The respective ratio varied between 51 per cent in 1995 and 80 per cent in 1993.

Three programmes focused on the acquisition of R&D equipment and the appropriation of new technologies: their share in direct R&D support was 83 per cent in 1993. Nine programmes, three of which were sunsetting in the period under review, directly promote specific technologies; they represented 14 per cent of direct R&D expenditure in 1993. The remaining programmes supported international R&D co-operation or risky technological projects.

It appears that, in Sweden, support to specific technologies is provided by indirect categories of R&D support such as military R&D procurement (aircraft), intermediary R&D institutions (metallurgy, computers, pulp and paper) and ESA contracts rather than by direct support.

K. SWITZERLAND

Table 92. **Direct and indirect R&D support in Switzerland**

	Reported expenditure in millions of national currency: SF							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	240.00	258.00	447.00	342.00	301.00	187.00	223.10	2 027.00
Direct R&D support (NCG)	39.10	51.10	55.70	64.10	62.60	108.20	142.10	522.90
Total direct R&D support (NCG)[1]	39.10	51.10	55.70	64.10	62.60	108.20	142.10	522.90
Public support to intermediary R&D institutions								
R&D contracts to manufacturing industry	62.60	67.20	72.00	83.40	82.90	80.10	84.20	532.40
Space agencies:								
contracts awarded by/procurement of	59.00	77.00	86.00	97.00	111.00	101.00	76.00	607.00
R&D defence procurement expenditure	160.00	165.00	175.00	148.00	120.00	120.00	115.00	1 003.00

1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

In Switzerland, direct support to manufacturing industry dropped from SF 240 million in 1989 to SF 223 million in 1995, amounting to a 7 per cent reduction of the 1989 level. In the same period, direct R&D support consistently increased from SF 39.1 million to SF 142.1 million. The share of R&D support in total support grew from 16 per cent in 1989 to 56 per cent in 1995 which demonstrates the strong shift in the Swiss Confederation's support policy towards the promotion of strategic research and international R&D co-operation.

The participation of Swiss manufacturers in projects of the Third and Fourth R&D framework Programme of the European Communities absorbed almost 50 per cent of direct R&D support in 1994 and more than 60 per cent in 1995. The encouragement of applied research and financial support to the Swiss Electronics and Micro-Engineering Centre marked the other cornerstones of direct R&D support in Switzerland. In total, four programmes were reported by Switzerland under the policy objective of R&D and technological innovation.

Direct R&D support in Switzerland is exclusively financed through grants. This points to two features in Swiss innovation policies: first, there is no need for an additional analysis of gross flows, and, second, tax concessions were not used as a financing instrument of R&D support in the period under review.

Indirect R&D support was relatively stable when the beginning and the end of the reporting period are compared. While expenditure on R&D contracts and the contribution to the scientific programme of ESA increased when 1989 and 1995 are compared, defence procurement expenditure declined. Public support to intermediary R&D institutions has been reported as a direct support programme.

Defence-oriented R&D financing plays an important role in Switzerland. As almost 95 per cent of R&D contracts were awarded by the "Groupement de l'armement", the combined value of R&D defence procurement expenditures and military R&D contracts represents a multiple of direct support to manufacturing industry.

L. UNITED KINGDOM

In the United Kingdom, public support to manufacturing industry was cut by 36.5 per cent when the figures for 1989 are compared with those for 1995. Total public support, which amounted to £1.41 billion in 1989, reached £897 million in 1995. This strong cut in public support coincided with an increase in direct R&D expenditure in the order of 110 per cent in the same period. However, the nominal values

Table 93. **Direct and indirect R&D support in United Kingdom**

	Reported expenditure in millions of national currency: £							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	1 410.98	1 762.97	1 545.15	1 254.70	838.68	737.00	897.00	8 420.59
Direct R&D support (NCG)	27.73	50.99	56.54	83.49	47.75	43.00	59.00	368.50
Total direct R&D support (NCG)[1]	161.02	195.60	103.28	133.96	109.82	93.10	86.20	882.98
R&D contracts to manufacturing industry	1 285.00	1 330.00	1 506.00	1 281.00	1 499.00	1 374.00	1 508.00	9 783.00
Space agencies: contracts awarded by/procurement of	89.00	90.00	100.00	106.00	109.00	127.00	131.00	752.00
R&D defence procurement expenditure	2 302.00	2 337.00	2 557.00	2 038.00	2 629.00	2 032.00	2 107.00	16 002.00

1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

standing behind this increase, £28 million in 1989 and £59 million in 1995, underline that direct support to industrial R&D efforts was not a priority of national support policies in this period. The share of direct R&D support in total public support to manufacturing industry increased from 2 per cent in 1989 to 7 per cent in 1995, but remained significantly below the OECD average throughout the entire period.

Even when the expenditure on programmes which have R&D as secondary policy objective or R&D as economic activity supported is included, the nominal levels and shares in total public support to manufacturing industry were very low. Moreover, total direct R&D expenditure declined from £161 million in 1989 to £86 million in 1995.

Of the 15 R&D support programmes applied in the United Kingdom in the period under review, eight provided public support to horizontal R&D activities in the manufacturing sector. These programmes accounted for 50 per cent of total direct R&D expenditure spent between 1989 and 1995. Expenditure on five technology-specific programmes represented 39 per cent of this total; here the focus lay on civil aircraft and new and renewable energies. The remaining two programmes supported international R&D co-operation and collaborative R&D projects. The downward trend in total direct R&D expenditure can be traced to declining expenditure, particularly on horizontal R&D programmes.

While one of the programmes reported used loans as financing instrument, the gross and net flows involved in this programme were negligible. Total direct R&D expenditure was channelled to the manufacturing sector by grants. However, due to considerable reimbursements under some of the grant schemes, the gap between gross and net expenditure was in the order of 50 million in 1989 and 1990.

In total, indirect R&D support slightly increased from 1989 to 1995. The expenditure involved in indirect R&D measures was a multiple of direct R&D support. On average, the expenditure on total direct R&D support was only 5 per cent of indirect R&D expenditure. Of the R&D defence procurement and R&D contracts reported, the latter, which are exclusively awarded under the responsibility of the Department of Defence, demonstrate the importance of military purposes in public support to industrial R&D efforts. The aircraft and electronics sectors were the main beneficiaries of R&D defence procurement and contracts. Starting in 1993, the annual contributions to the European Space Agency increasingly outweighed total direct R&D expenditure.

M. COMMISSION OF THE EUROPEAN COMMUNITIES

Public support to manufacturing industry provided by the Commission of the European Communities more than doubled when the beginning and the end of the period from 1989 to 1995 are compared. Direct R&D support, in the same period, grew from ECU 372 million to ECU 639 million. As a result, the share of funding of industrial R&D in total support decreased from 30 per cent in 1989 to 21 per cent in 1995. Support provided under programmes having R&D as their secondary policy objective decreased from ECU 24 million in 1989 to ECU 8 million in 1995. Combined direct R&D support in 1995, accounting for ECU 647 million, was 10 per cent below the peak level of 1992.

Table 94. **Direct and indirect R&D support in the European Union**

	Reported expenditure in millions of ECU							
	1989	1990	1991	1992	1993	1994	1995	Total 1989-95
Total direct support (NCG)	1 243	1 401	2 131	2 606	2 778	2 741	2 975	13 475
Direct R&D support (NCG)	372	431	480	681	630	616	639	3 849
Total direct R&D support (NCG)[1]	395.5	449.4	500.3	702.8	640.0	628.3	647	3 963.3
Public support to intermediary R&D institutions	211.90	209.73	211.26	237.34	235.60	270.10	228.10	1 604.03

1. Including programmes having R&D as their primary and secondary policy objectives and those having R&D as the economic activities supported.

In addition to the availability of extra funding for R&D during this period, extensive collaboration between research partners became the hallmark of Community projects in this area. On average, every project comprises some six partners from five countries.

Research on information and communication technologies absorbed more than half of direct R&D expenditure throughout the reporting period. Research on industrial materials, agriculture, biotechnology and energy are other focal areas of Community R&D support.

With the exception of one mixed-financing programme, grants were the exclusive financing instrument in direct Community support to industrial R&D. Therefore, an analysis of gross expenditure is superfluous.

Indirect R&D support to manufacturing industry was provided through the Community's Joint Research Center (JRC). In the period under review this intermediary R&D institution particularly contributed to the implementation of the Second and Third Framework Programmes by providing services in the area of new materials, measurement and testing, environment and nuclear fission security. Community funding of the JRC consistently increased from 1989 to 1994 when expenditure peaked at ECU 270 million. In 1995 contributions amounted to ECU 228 million.

Part V

PUBLIC SUPPORT TO PHYSICAL AND INTANGIBLE INVESTMENT

INTRODUCTION

Physical investment in machines and equipment, construction and infrastructure is a key factor in expanding capacity, acquiring new technology, and generating productivity gains. In the era of the "knowledge-based economy", intangible investment in human capital and the competitive potential of firms emerged as an increasingly important complement to physical investment. Intangible investment is understood as expenditure on:

– research and development;

– education and training;

– acquisition of entrepreneurial and organisational skills;

– marketing and advertising; and

– software used in firms.

Dating back to the late 1980s, this concept of intangible investment calls for extension and refinement in order to better reflect actual investment in human capital and the competitive potential of firms. First, expenditure on quality assurance systems should be included, and, second, software used in firms may be too vague a description of the dynamic software development at the firm level. However, for the purposes of this thematic review of public support to physical and intangible investment, the concept described above may serve as a second-best solution.

Both physical and intangible investment are driving forces of economic and employment growth, and expenditure on each of these categories plays a crucial role in determining the relative competitiveness of business in the medium and long term. The level of investment is important, and equally important is the composition of investment.

From the late 1970s to the present time, high rates of investment in physical assets characterised the OECD area. Only in the years 1981-83, 1986 and in 1991-93, did the growth rate of gross fixed capital formation fall below the level of GDP growth. On the other hand, there was increasing acknowledgement of the growing, but largely unmeasured, importance of investment in intangibles. Research and development appeared to be the only component for which expenditure was systematically measured, showing a period of steady growth in expenditure in the OECD area during the 1980s, and a steady or declining rate of growth in the early 1990s (Chapter 23). In response to a recommendation of Ministers at the meeting of the Industry Committee at Ministerial level, analytical work may be launched aiming to improve the measurement of the remaining components and the reporting of intangible assets at the firm level.

Policy reviews and statements underline the fact that the promotion of investment in physical and intangible assets played a major role in government policies across the OECD area. In general, the following features were highlighted in the past decade:

i) Tax reforms, by broadening the tax base, have reduced interventionist and selective measures to promote corporate investment in physical assets. At the same time, by lowering income and corporate tax rates, these reforms have favoured a horizontal policy approach in investment promotion.

ii) Support to intangible investment has become a more important part of government support to industry.

iii) In the design of their investment policy, governments have started to address the issue of the adequate mix of support to physical and intangible investment required to improve long-term performance.

However, due to the lack of consistent information on government support to intangible investment, a quantitative picture of the evidence of these features in the investment policies of OECD Member countries does not exist.

This thematic analysis tries to provide some new insights into the role of government support in promoting physical and intangible investment to the extent that such policies find their realisation in programmes, and, more specifically, on the basis of the information collected on public support to manufacturing industry in the periods 1986-89 and from 1989-93. For selected countries and at the level of the Commission of the European Communities, data were collected including the years 1994 and 1995. Given the differences in the reporting methodology, long-term analysis of specific features of government support for the years 1986 to 1993, and comparisons between figures reported for 1986 to 1989 and those reported for 1989 to 1995 must be necessarily limited. Moreover, it should be noted that governmental policies to support physical and intangible investment outside the manufacturing sector are not covered by this note. The reporting gaps summarised in Part I, Section F, have a particular impact on the analysis of public support to physical and intangible investment.

PUBLIC SUPPORT TO PHYSICAL AND INTANGIBLE INVESTMENT FROM 1986 TO 1989

An analysis drawn in March 1992 from the OECD's Industrial Subsidies Database, shows that throughout the period from 1986 to 1989 the promotion of physical investment in each year ranked as the most important objective of public support to industry, with the share in expenditure ranging between 28 and 55 per cent (Table 95).

Table 95. **Policy objectives of reported expenditure**

Policy objectives	NCG (current US$ billion)				NCG percentages			
	1986	1987	1988	1989	1986	1987	1988	1989
Sectoral programmes	4.4	6.3	5.8	4.1	5.9	9.2	8.6	7.7
Crisis aid	1.8	2.0	0.7	0.7	2.4	2.9	1.1	1.3
R&D support	6.7	7.4	6.2	6.1	9.0	10.9	9.4	11.5
Regional development	10.2	11.7	11.9	11.8	13.7	17.2	17.8	22.2
General investment aid	40.9	25.2	24.4	15.0	54.7	37.0	36.6	28.3
SME programmes	2.5	3.1	3.2	2.8	3.3	4.6	4.8	5.2
Employment/Training	1.9	2.0	3.6	2.0	2.6	2.9	5.4	3.8
Export-related aids	6.3	10.3	10.9	10.5	8.4	15.2	16.4	19.9
Total	74.6	68.1	66.9	53.1	100	100	100	100

Source: OECD Industrial Subsidies Database, Phase II (March 1992).

The share in total support declined from 55 per cent in 1986 to 28 per cent in 1989, reflecting the new horizontal policy approach in investment promotion. At the same time, the combined share of public support to R&D and employment and training increased from 12 to 16 per cent. Support to other forms of intangible investment could not be identified with the methodology available at that time. Therefore, actual figures for total government support to physical and intangible investment may have been slightly higher than that shown in Table 96.

Table 96. **Public support to physical and intangible investment**

Policy objectives	Share of all programmes (percentages)				Main instruments (approximate percentage distribution)
	1986	1987	1988	1989	
Tangible investment	55	37	37	28	Tax incentives (90), grants (10)
R&D	9	11	9	12	Grants (50), tax incentives (40)
Employment and training	3	3	5	4	Grants (60), tax incentives (40)

Source: OECD Industrial Subsidies Database (March 1992).

Embedded in a strong decline of total support during this period, the relative gain in the significance of support to intangible investment occurred in spite of reduced expenditure reported under the policy objectives of R&D and employment and training. While these figures appear to confirm the trend towards a less active role of governments in direct promotion of physical investment, they do not necessarily speak for a more active role of governments in supporting intangible investment during this period.

PUBLIC SUPPORT TO PHYSICAL AND INTANGIBLE INVESTMENT 1989-93

For the 1989 to 1993 period, the information reported allows a more sophisticated analysis of the role of governments in promoting investment. In the case of support to physical investment, the analysis draws on all programmes:

– reported under the policy objective of General Investment Incentives;

– having general investment incentives as their secondary policy objective; and

– those which have investment as the economic activity supported.

In the case of support to intangible investment, the analysis is extended to all programmes:

– reported under the policy objectives of R&D, exports and foreign trade, and labour and training;[15]

– having specialised investment or support to non-profit organisations as the economic activity supported.

All the programmes selected hereunder were the subject of an additional check regarding their potential to support marketing and advertising activities, R&D, education and training activities, organisational and entrepreneurial skills, and software used in firms. Given the workload involved, the analysis was carried out for the years 1989, 1992 and, for a selected group of countries that had updated their reporting for the years 1994 and 1995. The year 1992 was chosen because of the gaps identified in the reporting for 1993, which would have biased the analysis.

The isolated analysis of investment incentive programmes points to a relative stability of support between 1989 and 1993. In the overall OECD perspective, expenditure dropped from US$3.0 billion in 1989 to US$2.6 billion in 1993. The share in total public support fell from 8 per cent at the beginning of the reporting period to 5.9 per cent at the end (Tables 1 and 8).

Viewed more broadly in the light of secondary policy objective and economic activity supported, physical investment appears to have received considerable public support. In addition to the 157 investment incentive schemes, 375 programmes in 1989 and 452 programmes in 1992 aimed at the promotion of physical investment, particularly under the policy objectives of regional development, environmental protection and energy efficiency. The combined net expenditure involved in the promotion of physical investment rose from US$12.4 billion in 1989 to US$16.6 billion in 1992. Combined support to physical investment absorbed 30.8 per cent of total public support in 1989 and 35.3 per cent in 1992 (Table 97). This broader view demonstrates that support to physical investment was significant and growing in the OECD area. Its growth was even more dynamic than the growth of total public support between 1989 and 1992. A declining trend in net expenditure can only be observed for investment incentive schemes as shown in Table 1.

Germany, Japan, and some of the smaller OECD countries such as Austria, Belgium, the Netherlands, Norway, Spain and Switzerland, which had relatively high investment records in 1992, were not particularly engaged in direct promotion of physical investment. Only Austria and Germany are represented among the countries with a high share of support to physical investment, a group of countries led by the Czech Republic, Finland, Hungary, Ireland, Portugal and Turkey (Table 97). In Germany, this is widely explained by the enhanced promotion of physical industrial investment in the new *Länder* since reunification. The absolute and relative significance of public support to physical investment in Germany was considerably lower in 1989.

Table 97. **Support to physical investment**

	Support to physical investment				Share of total support			
	Programmes reported		NCG (current US$ million)		By programme reported (%)		By NCG (%)	
	1989	1992	1989	1992	1989	1992	1989	1992
Australia	7	9	22.1	65.5	14.6	15.0	4.2	10.2
Austria	53	61	342.0	570.4	61.6	61.0	71.4	55.7
Belgium	15	16	615.0	533.9	34.9	36.4	56.9	53.1
Canada	15	15	1 050.6	107.6	36.6	31.3	52.3	19.9
CEC[1]	9	11	550	1 552	23.1	25.6	40.2	46
Czech Republic	1	6	9.1	52.2	100.0	46.2	100.0	67.9
Denmark	3	6	8.5	12.7	11.5	17.1	5.7	2.0
Finland	16	15	320.1	865.4	47.1	48.4	50.8	69.9
France[1]	12	12	1 097	1 228	36.4	36.4	30	34
Germany	73	94	1 460.6	3 732.7	44.5	41.8	34.0	54.4
Hungary	3	11	0.0	123.0	37.5	68.8	n.a..	99.1
Iceland	1	0	1.4	0.0	8.3	0.0	27.3	0.0
Ireland	6	6	143.5	169.5	42.9	35.3	70.5	59.2
Italy	9	10	2 041.4	2 332.0	37.5	38.5	32.9	44.3
Japan	127	135	1 012.6	881.4	57.7	56.3	51.7	40.4
Mexico	3	3	0.0	45.6	37.5	21.4	0.0	29.5
Netherlands	9	9	262.1	135.5	37.5	36.0	36.8	32.5
New Zealand	0	0	0.0	0.0	0.0	0.0	0.0	0.0
Norway	7	11	148.1	288.9	20.0	26.2	29.9	39.8
Portugal	10	16	75.4	168.1	41.7	57.1	7.1	59.6
Slovak Republic	1	6	0.0	244.8	50.0	42.9	0.0	52.8
Spain	18	15	1 154.8	842.4	51.4	37.5	57.4	50.8
Sweden	12	12	137.1	332.3	27.9	29.3	23.3	46.5
Switzerland	4	4	25.8	48.1	44.4	33.3	17.5	17.7
Turkey	16	22	1 064.5	1 305.1	64.0	73.3	63.7	70.4
United Kingdom	19	20	681.4	736.3	32.2	31.7	29.3	32.8
United States	75	76	145.7	261.5	52.4	50.0	1.8	2.5
Total OECD[2]	524	601	12 368.8	16 634.9	43.6	42.6	30.8	35.3

1. Secretariat's estimations on the basis of revised total support figures, which were not made available programme by programme.
2. See endnote 15 on page 241.

In terms of the programmes reported, public support to intangible investment in manufacturing industry plays an even more dominant role than the promotion of physical investments. However, in terms of net expenditure, intangible investment represented a lower share of total public support. Combined public support to intangible investment grew from US$7.6 billion to US$11.2 billion in 1992, thereby increasing its share in total public support from 18.1 per cent in 1989 to 23.7 per cent in 1992 (Table 98). These figures, when compared with the figures shown in Tables 95 and 96, point to a consistent increase of the share of support to intangible investment in total public support both from 1986 to 1989 and from 1989 to 1992. Moreover, public support to intangible investment grew more dynamically than public support to physical investment in each of these reporting periods.

Australia, Canada, Denmark, Iceland, New Zealand, the Netherlands and Norway focused public support on the acquisition of intangible assets. In most of these economies this may reflect specific policy efforts to improve their relatively weak performance in intangible investment (Table 98).

The composition of public support to intangible investment is marked by a predominant spending on R&D which amounted to more than 80 per cent of combined support to intangible investment both in 1989 and 1992. Among the remaining components, spending on education and training represented almost 10 per cent, and public support to marketing and advertising gathered more than 5 per cent of combined support to intangible investment in each of these years. Net expenditure on software used in firms or on the acquisition of entrepreneurial and organisational skills was always below 2 per cent of

Table 98. **Support to intangible investment**

	Support to intangible investment				Share of total support			
	Programmes reported		NCG (current US$ million)		By programme reported (%)		By NCG (%)	
	1989	1992	1989	1992	1989	1992	1989	1992
Australia	25	36	202.7	349.3	52.1	60.0	38.9	54.6
Austria	21	27	88.3	360.3	24.5	27.0	18.5	35.2
Belgium	15	16	1 51.0	134.8	34.9	36.4	14.0	13.3
Canada	16	18	612.5	196.9	38.9	37.6	30.5	36.4
CEC[1]	21	22	603.5	886.1	53.9	51.1	44.1	26.3
Czech Republic	0	3	0.0	1.4	0.0	23.1	0.0	1.8
Denmark	13	14	83.6	475.7	50.0	40.0	56.1	74.4
Finland	10	10	121.1	132.6	29.3	32.3	19.2	10.7
France[1]	15	14	1 081.2	1 205.4	45.4	42.4	32.0	33.4
Germany	53	76	1 047.3	1 064.5	32.3	33.8	24.4	15.5
Hungary	5	5	0.0	1.1	62.5	31.2	n.a.	0.9
Iceland	11	14	4.0	4.7	91.7	100.0	72.5	100.0
Ireland	5	8	40.6	99.1	35.7	47.1	19.9	34.5
Italy	5	6	1 170.2	1 226.7	20.9	23.0	18.8	23.4
Japan	50	54	493.0	577.8	22.8	22.5	25.1	26.4
Mexico	3	7	0.0	19.4	37.5	50.0	0.0	12.6
Netherlands	10	11	238.7	172.4	41.6	44.0	33.5	41.3
New Zealand	1	3	2.6	8.4	100.0	75.0	100.0	74.3
Norway	17	18	242.6	349.4	48.6	42.9	49.1	48.2
Portugal	9	10	13.8	59.9	37.5	35.7	1.4	21.2
Slovak Republic	0	2	0.0	36.7	0.0	14.2	0.0	7.9
Spain	10	17	167.2	284.7	28.6	42.5	8.3	17.2
Sweden	18	17	106.6	141.1	41.9	41.4	18.2	19.8
Switzerland	4	6	26.2	77.8	44.4	49.9	17.9	28.6
Turkey	3	3	0.8	0.6	12.0	10.0	0.0	0.0
United Kingdom	29	32	105.6	261.3	49.2	50.9	4.5	11.6
United States	32	38	1 275.9	2 572.3	22.4	25.1	15.6	24.8
Total OECD[2]	401	487	7 600.8	11 237.9	33.4	34.7	18.1	23.7

1. Secretariat's estimations on the basis of revised total support figures, which were not made available on a programme-by-programme basis.
2. See endnote 15 on page 241.

combined support to intangible investment, which underlines that these categories of intangible investment were not recognised as an issue in national support policies in almost all OECD Member countries (Table 99).

The dynamic growth of public support to intangible investment was driven by strong increases in net expenditure on R&D and rising expenditure on the remaining categories of intangible investment in nominal and – with the exception of software used in firms – relative terms.

In 1992, most countries with a strong focus on the promotion of intangible investment allocated low expenditure to the promotion of physical investment et *vice versa*. As regards Austria, Ireland, Japan, the Netherlands, Norway and Switzerland, the pattern of a more balanced spending on support to both physical and intangible investment can be seen in Graph 26.

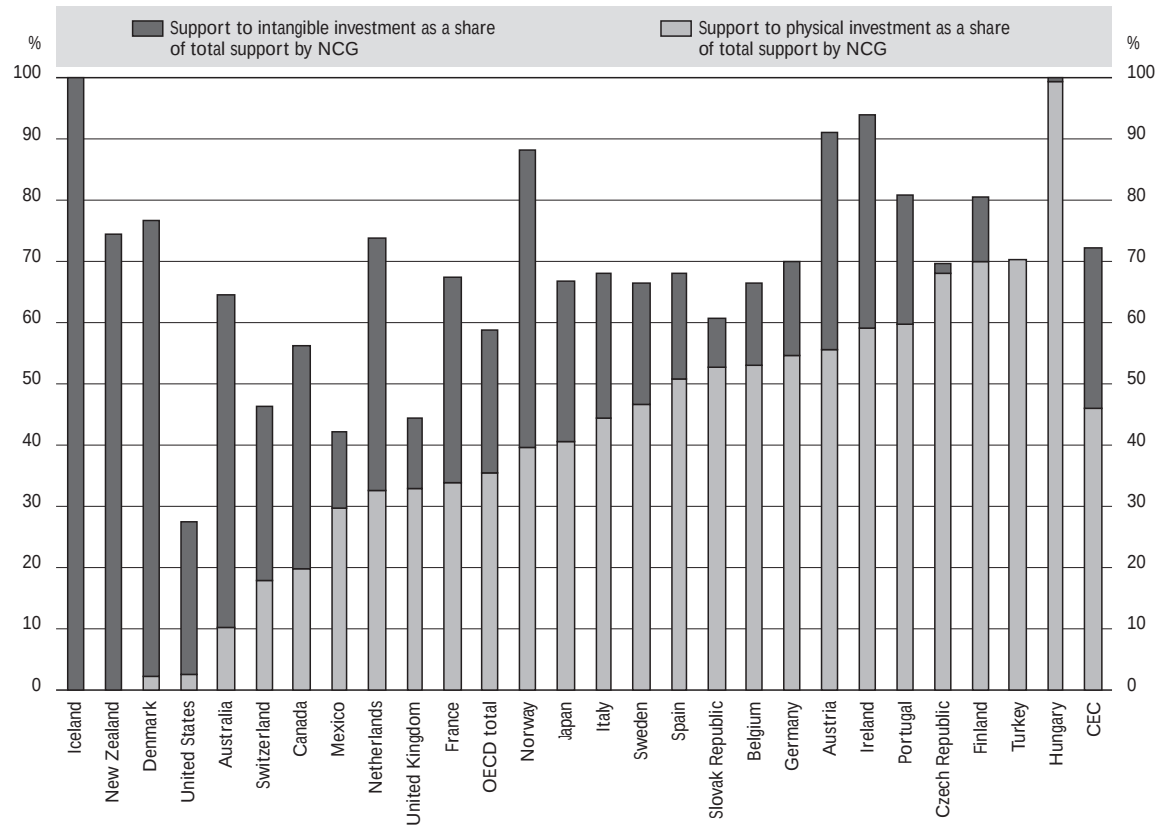
Combined support to physical and intangible investment amounted to US$20 billion in 1989 (49.1 per cent of total expenditure) and US$27.9 billion in 1992 (62.7 per cent of total expenditure). 77 per cent of the programmes reported were identified as supporting either physical or intangible investment both in 1989 and 1992 (Table 100). These figures underline how important the promotion of both physical and intangible investment is in national support policies in the OECD area. In 1992, Austria, Denmark, Finland, Hungary, Iceland, Ireland, New Zealand, the Netherlands, Norway, Portugal, Turkey and the Commission of the European Communities, allocated more than 70 per cent of their funding to physical and intangible investment. In Australia, Belgium, the Czech Republic, France,

Table 99. **Composition of support to intangible investment: NCG (current US$ million)**

	R&D		Education and training		Acquisition of entrepreneurial and organisational skills		Marketing and advertising		Software used in firms		Total	
	1989	1992	1989	1992	1989	1992	1989	1992	1989	1992	1989	1992
Turkey	0.6	0.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.6
Hungary	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1
Czech Republic	0.0	1.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
Slovak Republic	0.0	26.7	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	36.7
Finland	52.4	67.5	33.9	26.3	4.6	4.9	30.2	33.9	0.0	0.0	121.1	132.6
United Kingdom	45.4	146.5	23.9	77.4	14.9	18.0	21.4	19.4	0.0	0.0	105.6	261.3
Mexico	0.0	8.3	0.0	1.2	0.0	9.9	0.0	0.0	0.0	0.0	0.0	19.4
Belgium	97.9	91.6	7.8	9.5	0.0	0.0	45.3	33.7	0.0	0.0	151.0	134.8
Germany	1 026.0	1 027.7	0.0	0.0	5.9	9.0	15.4	27.8	0.0	0.0	1 047.3	1 064.5
Spain	160.9	258.3	0.0	9.5	0.0	6.3	6.3	10.6	0.0	0.0	167.2	284.7
Sweden	86.0	89.0	8.1	31.3	5.1	6.4	7.4	14.4	0.0	0.0	106.6	141.1
Portugal	0.7	30.3	12.4	28.9	0.0	0.0	0.7	0.7	0.0	0.0	13.8	59.9
Italy	1 106.2	1 150.6	63.5	72.4	0.0	0.0	0.5	3.7	0.0	0.0	1 170.2	1 226.7
United States	1 264.0	2 555.6	11.9	16.5	0.0	0.0	0.0	0.2	0.0	0.0	1 275.9	2 572.3
Japan	361.4	432.7	0.0	0.0	0.0	0.1	0.0	0.0	131.6	145.0	493.0	577.8
Switzerland	23.9	45.6	0.0	0.0	0.0	27.8	2.3	4.4	0.0	0.0	26.2	77.8
France[1]	1 005.8	1 130.7	0.0	0.0	20.0	40.0	47.1	30.5	8.3	4.2	1 081.2	1 205.4
Ireland	12.4	9.2	0.0	17.1	0.0	0.0	28.2	72.8	0.0	0.0	40.6	99.1
Austria	80.8	139.5	0.5	0.5	7.0	17.9	0.0	202.4	0.0	0.0	88.3	360.3
Canada	508.3	105.5	92.3	71.6	0.0	0.0	4.8	4.7	7.1	15.1	612.5	196.9
Netherlands	178.2	89.1	47.9	71.1	0.5	0.0	12.1	12.2	0.0	0.0	238.7	172.4
Norway	97.4	147.9	8.2	9.3	0.0	0.0	137.0	192.2	0.0	0.0	242.6	349.4
Australia	122.3	251.9	19.8	46.1	0.0	2.7	60.6	48.6	0.0	0.0	202.7	349.3
New Zealand	0.0	1.3	0.0	0.0	0.0	0.0	2.6	7.1	0.0	0.0	2.6	8.4
Denmark	51.5	403.3	32.1	58.6	0.0	0.0	0.0	13.8	0.0	0.0	83.6	475.7
Iceland	3.4	3.9	0.3	0.7	0.0	0.0	0.3	0.1	0.0	0.0	4.0	4.7
CEC[1]	361.4	445.3	242.1	440.8	0.0	0.0	0.0	0.0	0.0	0.0	603.5	886.1
Total OECD[2]	6 368.7	9 197.7	604.9	999.2	58	143.5	422.2	733.2	147.0	164.3	7 600.8	11 237.9
As a % share of total support to intangible investment	*(83.0%)*	*(81.8%)*	*(8.0%)*	*(8.9%)*	*(0.8%)*	*(1.2%)*	*(5.6%)*	*(6.5%)*	*(1.9%)*	*(1.5%)*		

1. Secretariat's estimations on the basis of revised total support figures, which were not made available on a programme-by-programme basis.
2. See endnote 15 on page 241.

◆ Graph 26. ***Support to physical and intangible investment as a share of total support in 1992***



Source: OECD Industrial Support Database, February 1998.

Germany, Italy, Japan, Spain, Sweden, and in the Slovak Republic, such funding ranged between 60 and 70 per cent. In Canada, Mexico, Switzerland, the United Kingdom and the United States, this figure was below 60 per cent.

Among the policy objectives analysed, environmental protection policy had a specifically strong interface with public support to physical and intangible investment. The support pattern of environmentalprotection programmes shows that 86 per cent of the programmes, and approximately 90 per cent of the expenditure, were in support of physical investment, specialised investment or R&D all of which for environmental purposes. As the remaining shares were largely attributed to unclassified programmes and expenditure, the actual overlap may have even been greater than expressed by the above data. The fact that under the policy area of environmental protection, financial support measures are so closely built around the promotion of both physical and intangible investment adds to the importance of investment promotion policies, and, at the same time, reveals a policy area in which a fairly balanced mix of public support to the promotion of physical and intangible investment already exists.

Table 100. **Support to physical and intangible investment**

	Support to physical and intangible investment				Share of total support			
	Programmes reported		NCG (current US$ million)		By programme reported (%)		By NCG (%)	
	1989	1992	1989	1992	1989	1992	1989	1992
Australia	32	45	224.8	414.8	66.7	75.0	43.1	64.8
Austria	74	88	430.3	930.7	86.1	88.0	89.9	90.9
Belgium	30	32	766.0	668.7	69.8	72.8	70.9	66.4
Canada	31	33	1 663.1	304.5	75.5	68.9	82.8	56.3
CEC[1]	30	33	1 153.5	2 438.1	77.0	76.7	84.2	72.3
Czech Republic	1	9	9.1	53.6	100.0	69.3	100.0	69.7
Denmark	16	20	92.1	488.4	61.5	57.1	61.8	76.4
Finland	26	25	441.2	998.0	76.4	80.7	70.0	80.6
France[1]	27	26	2 178.2	2 433.4	81.8	78.8	62.0	67.4
Germany	126	170	2 507.9	4 797.2	76.8	75.6	58.4	69.9
Hungary	8	16	0.0	124.1	100.0	100.0	n.a.	100.0
Iceland	12	14	5.4	4.7	100.0	100.0	99.8	100.0
Ireland	11	14	184.1	268.6	78.6	82.4	90.4	93.7
Italy	14	16	3 211.6	3 558.7	58.4	61.5	51.7	67.7
Japan	177	189	1 505.6	1 459.2	80.5	78.8	76.8	66.8
Mexico	6	10	0.0	65.0	75.0	71.4	0.0	42.1
Netherlands	19	20	500.8	307.9	79.1	80.0	70.3	73.8
New Zealand	1	3	2.6	8.4	100.0	75.0	100.0	74.3
Norway	24	29	390.7	638.3	68.6	69.1	79.0	88.0
Portugal	19	26	89.2	228.0	79.2	92.8	8.5	80.8
Slovak Republic	1	8	0.0	281.5	50.0	57.1	0.0	60.7
Spain	28	32	1 322.0	1 127.1	80.0	80.0	65.7	68.0
Sweden	30	29	243.7	473.4	69.8	70.7	41.5	66.3
Switzerland	8	10	52.0	125.9	88.8	83.2	35.4	46.3
Turkey	19	25	1 065.3	1 305.7	76.0	83.3	63.7	70.4
United Kingdom	48	52	787.0	997.6	81.4	82.6	33.8	44.4
United States	107	114	1 421.6	2 833.8	74.8	75.1	17.4	27.3
Total OECD[2]	925	1 088	19 969.6	27 872.8	77.0	77.3	49.1	62.7

1. Secretariat's estimations on the basis of revised total support figures, which were not made available on a programme-by-programme basis.
2. See endnote 15 on page 241.

RECENT DEVELOPMENTS IN SELECTED COUNTRIES

For Denmark, Finland, France, Hungary, Iceland, Norway, Sweden, Switzerland, the United Kingdom, and at the level of the Commission of the European Communities – all of which have updated their initial reporting – the trend in supporting physical and intangible investment can be shown for the period 1989-95.

Within this group, combined support to physical and intangible investment increased by 63 per cent between 1989 and 1992 but declined by US$0.8 billion when 1995 is compared with 1992. This reduction of public expenditure on physical and intangible investment mirrors the down-sizing of public support to manufacturing industry in the increasingly difficult budgetary context of the years 1994 and 1995. Cuts in expenditure on intangible investment accounted for almost two-thirds of this reduction.

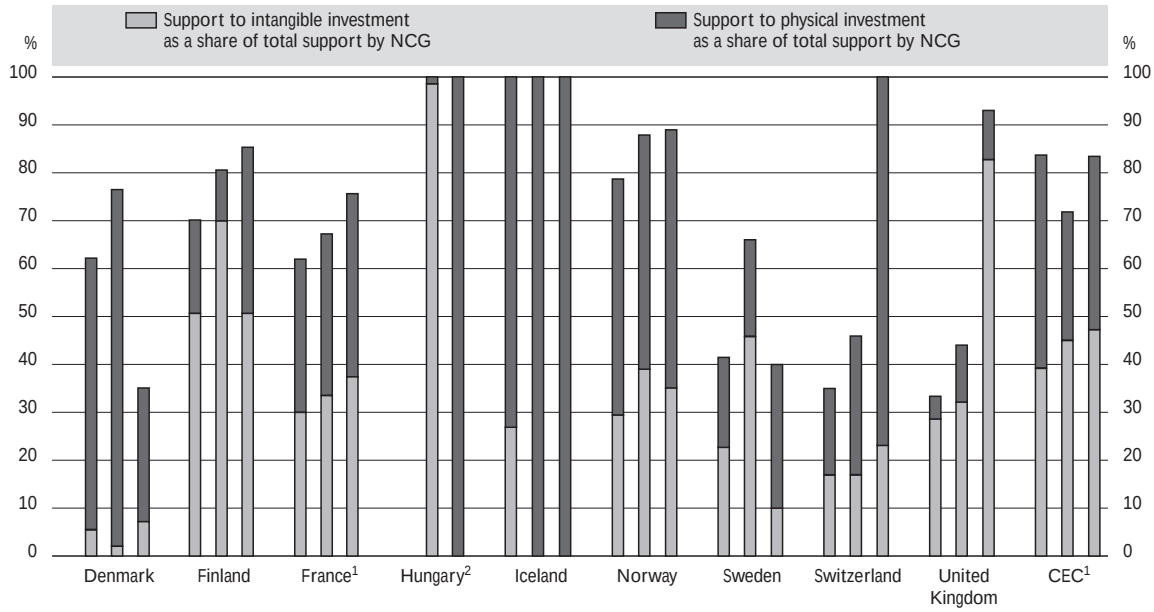
However, while support to physical and intangible investment in this group of countries and at the level of the Commission of the European Communities decreased in nominal terms, its share in total public support continued to grow (Table 101). This speaks for the strong commitment of these governments and the Commission of the European Communities to encouraging investment in physical and intangible assets even in a deteriorating budgetary environment.

Table 101. **Combined support to physical and intangible investment in selected countries and at the level of the CEC in 1989, 1992 and 1995**

	Combined support to physical and intangible investment: NCG current US$ million (% share of total support)		
	1989	1992	1995[1]
Denmark	92.1 *(61.8%)*	488.4 *(76.3%)*	149.0 *(35.0%)*
Finland	441.2 *(70.0%)*	998.0 *(80.6%)*	481.9 *(85.4%)*
France[1]	2 178.2 *(62%)*	2 433.4 *(67.4%)*	1 821.3 *(75.6%)*
Hungary[2]	n.a.	124.1 *(100.0%)*	0.1 *(100.0%)*
Iceland	5.4 *(98.2%)*	4.7 *(100.0%)*	5.7 *(100.0%)*
Norway	390.7 *(78.9%)*	638.3 *(87.9%)*	514.7 *(89.4%)*
Sweden	243.7 *(41.4%)*	473.4 *(66.3%)*	77.1 *(40.5%)*
Switzerland	52.0 *(35.4%)*	125.9 *(46.3%)*	259.3 *(100.0%)*
United Kingdom	787.0 *(33.8%)*	997.6 *(44.4%)*	1 314.4 *(93.6%)*
CEC[1]	1 153.5 *(84.2%)*	2 438.1 *(72.3%)*	3 269.3 *(84.1%)*

1. For 1995, the expenditure on labour and training programmes was estimated.
2. Hungary could not provide NCG figures for most of its support programmes.

◆ Graph 27. ***Support to physical and intangible investment as a share of total support***
1989, 1992 and 1995



1. Shares for France and the CEC were estimated.
2. Figures for 1989 not available.
Source: OECD Industrial Support Database, February 1998.

Only in Denmark and in Sweden did support to physical and intangible investment as a share of total public support diminish over the period from 1989 to 1995. With the exception of Denmark and the United Kingdom and at the level of the Commission of the European Communities, public support to intangible investment gained importance in the mix of public investment promotion and was the driving force in increasing the significance of investment promotion in this group of countries and at the level of the Commission of the European Communities.

Part VI

CONCLUSIONS

CONCLUSIONS

In creating the OECD Database on Industrial Support Programmes, which is a collection of 1 479 programmes targeted at the manufacturing sector, OECD Member countries have demonstrated their commitment to greater transparency in this area of public support.

An enormous potential for analytical exploration has been collected through confidential information on public support by country which includes indirect R&D support measures, public procurement policies and volumes, background information on business-related tax regulations and a voluminous peer-review documentation. This potential has not been fully evaluated at this stage.

The value of this exercise must not, however, be underestimated: the importance of this work has already been recognised not only by countries represented in other OECD bodies, but also by the outside world.

Industrial subsidies continue to feature prominently on the international agenda. In spite of a deteriorating budgetary situation in almost all OECD Members in recent years, widespread expectations of a strong reduction in industrial subsidies were fulfilled in only a few countries. Industrial support constitutes a cornerstone of structural policies all over the OECD area.

The enlargement of the OECD and, in particular, the new membership of former centrally planned state economies, call for a better understanding of the role of subsidies in the post-transformation process of these countries.

Furthermore, other categories of financial government interventions in favour of a specific manufacturing industry such as civilian and defence procurement, or support through public R&D institutions and R&D contracts, have evolved. These interventions have the potential to serve as indirect means of public support, channeling far more public financial resources to manufacturers than do grants, loans, guarantees, equity capital infusions and tax concessions combined. Clarifying the role of such indirect measures as a policy instrument and, more specifically, as a tool of support to manufacturing industry should rank high on the policy agenda.

Support programmes transfer annually up to US$45 billion from public budgets to the enterprise sector in the OECD area. The long-term side effects of these programmes on the competitiveness of manufacturing firms should not be underestimated: in a globalising world economy, it is more than likely that public support will, directly or indirectly, affect competition, trade and investment. Recent discussions on the role of increased R&D funding and on investment incentive packages for creating new businesses or attracting new branches of firms to new locations point to the existence of such problems. Subsidy races in new technologies and ''site wars'' to attract new investments show how important the monitoring, analysis and evaluation of support policies are in the context of accelerating globalisation and international competitiveness.

In some OECD Member countries, high priority is attached to the down-sizing of industrial subsidies. It is interesting to see how rigorously some countries have proceeded in phasing out subsidy programmes. This reveals an interesting feature of decision making by finance ministers, who appear to look principally at the potential for budgetary savings. A strategy of flat, across-the-board reductions of subsidies is the usual outcome of such decisions.

In a budgetary environment characterised by the principle of ''doing more with less'', industry support programmes must be fully effective in meeting their stated objectives. An evaluation of the costs and benefits of support programmes is essential in order to obtain a maximum return on

government spending. The absence of methodologies which enable the costs and benefits of support programmes to be evaluated in economic or even in fiscal terms explains to a large extent the current deficiencies in national industrial support policies.

When the Industry Committee met at Ministerial level on 3 and 4 February 1998, Ministers took note of OECD work to increase the transparency of public support to industry and shifts in overall trends in government support, and emphasized the importance of carrying out analysis appraisal and evaluation of such policies. ''They recommended that the OECD develop principles for improved evaluation of public support programmes and methodologies, highlighting improvements and efficiencies therein. They also recommended that the OECD build on its work to date on benchmarking, and programme design and evaluation to provide a forum where programmes can be compared and lessons drawn.''

NOTES

1. The Phase II database finally contained 1 013 programmes after more than 130 additional programmes relating to the sub-central support of one Member country were reported. The Phase II report did not take account of these programmes.

2. The 113 programmes reported under the policy objective of labour and training were finally withdrawn from the database. This decision was made having regard to the strong ties to social policy objectives and uncertainties which persist regarding the final beneficiaries of such programmes.

3. GGBE measures the total amount of funds transferred to beneficiary companies and the total amount of uncollected tax liabilities from them per year by programme.

4. NCG calculates the difference between the cost of funding a programme in any given year and the revenue generated for the public budget by the same programme in any given year.

5. Italy was grouped in this category in spite of the absence of reporting at the sub-central level. The Italian Delegation affirmed that support to manufacturing industry at this level was negligible.

6. The GDP deflator was used in the calculation of real direct support.

7. ''Incentives and Foreign Direct Investment'', report by UNCTAD, published in April 1995.

8. Includes the late reporting of 130 sub-central programmes by one Member country, mentioned in note 1 above.

9. An updated and more comprehensive analysis of public support to R&D and technological innovation is presented in Part IV.

10. Regarding energy efficiency, support was provided under the programme ''Tax Credit on Investment''.

11. NCG data is available for 14 out of 16 support programmes. Only GGBE data for two crisis aid programmes, incurring expenditure for 1990 only, have been reported.

12. The exceptional large expenditure in 1989 on an energy programme accounting for 29 per cent of total expenditure, reduces significantly the share of all other policy areas in 1989.

13. Iceland's industrial competitiveness policies can be consulted at the following Web site: <http://brunnur.stjr.is/interpro/ivr/ivr.nsf/Files/icelandic_policy/$file/icelandic_policy.pdf>

14. The time series on GERD do not cover some important elements of public support to R&D and technological innovation (see Chapter 24, Section A). In particular, fiscal incentives, contributions to international space agencies and, to some extent, defence contracts, and defence procurement are not included in GERD. Moreover, figures on public support to R&D and technological innovation refer strictly to manufacturing industry only.

15. The inclusion of such programmes reported under the policy objective of labour and training which qualify for providing support to education and training expenditures of firms or to the acquisition of entrepreneurial and organisational skills may result in inconsistencies with the figures presented in Parts II, III and IV.

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