

Organisation for European economic
cooperation.

**THE EUROPEAN
PRODUCTIVITY
AGENCY**

ACTIVITIES AND ACHIEVEMENTS



ORGANISATION FOR EUROPEAN ECONOMIC CO-OPERATION

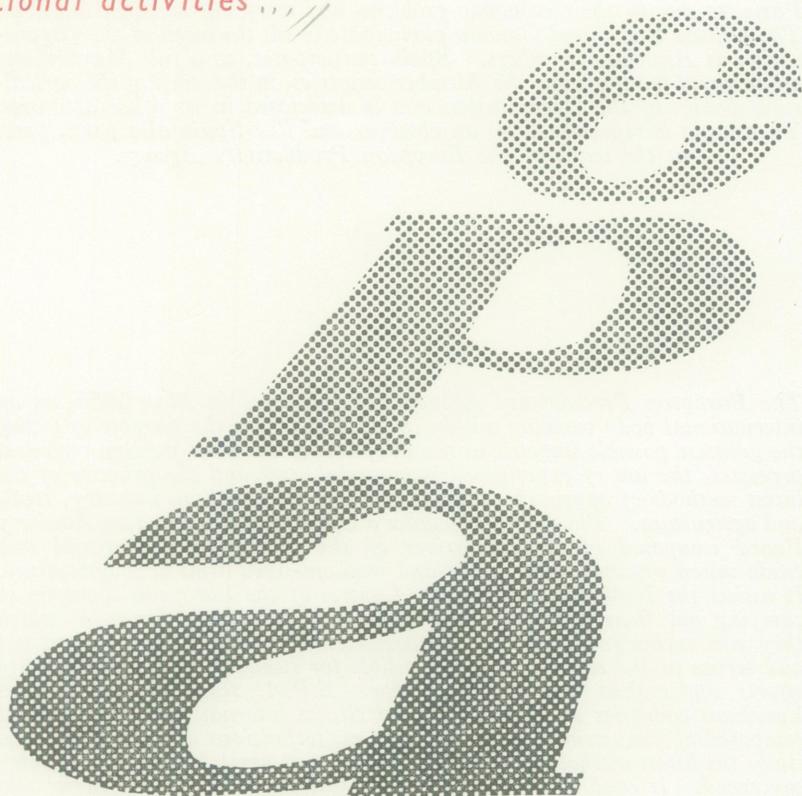
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ACTIVITIES AND ACHIEVEMENTS

*A summary of the work done
by E.P.A. during four years
of operational activities ...*



PUBLISHED IN PARIS, 1958

The Organisation for European Economic Co-operation comprises the following Member countries: Austria, Belgium, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Sweden, Switzerland, Turkey and the United Kingdom. The Organisation came into being with the signing of the Convention for European Economic Co-operation on 16th April 1948, when Member Governments pledged themselves "to combine their economic strength, to join together to make the fullest collective use of their individual capacities and potentialities, to increase their production, develop and modernise their industrial and agricultural equipment, expand their commerce, reduce progressively barriers to trade among themselves, promote full employment and restore or maintain the stability of their economies and general confidence in their national currencies". Representatives of each of the Member countries meet daily at the O.E.E.C. headquarters, Chateau de la Muette, Paris, to discuss their economic problems and work out common solutions. The United States and Canada participate in all the work of the Organisation as Associate Members. Spain participates, as a full Member and on an equal footing with the Member countries, in the work of the agricultural bodies of the Organisation and is associated in its other activities. Yugoslavia is represented by an observer and like Spain also participates in the work of the European Productivity Agency.

The European Productivity Agency was instituted in May 1953, as an international body working within the O.E.E.C. for the purpose of giving the greatest possible impetus to the adoption of the most modern technical processes, the use of experienced managerial staff and the practice of the latest methods of approach to social problems in European industry, trade and agriculture. The E.P.A. includes a Governing Body and an Advisory Board composed of representatives of the European managerial and trade union organisations, small and medium-sized firms and agriculture. It assists the National Productivity Centres of the European countries in carrying out their productivity programmes, provides a forum in which they can exchange the various data collected in their field of experience and serves as the nerve-centre responsible for stimulating the productivity efforts undertaken throughout Europe. E.P.A. sends out to various European countries and to the United States international study groups composed of businessmen, workers, farmers, technicians and scientists, who study the latest methods applied in industry and agriculture in the country concerned. It enables Member countries to benefit by the experience and services of highly qualified European and American consultants. It organises international seminars and conferences, encourages co-operative research and circulates information in the form of reports, periodical publications, technical digests and films. E.P.A. thus uses a wide variety of methods to achieve a single aim, i.e. to raise the standard of living in O.E.E.C. Member countries.

seventeen european countries



3,500,000 square kilo-
metres, that is the total
of O.E.E.C. countries,
less than half that of the
United States (7,828,000
square kilometres)

are members of

Europe has 290
million inhabitants
almost double the po-
pulation of the United
States (170 million)

ORGANISATION FOR EUROPEAN ECONOMIC CO-OPERATION

The United States and Canada are Associate members. Spain participates on an equal footing in the work of agricultural bodies of O.E.E.C. Yugoslavia is represented at O.E.E.C. by an observer and takes part in E.P.A. projects.

1948



EUROPE 1948 = 100



1949

1950

1951

1952

1953

1954

1955

1956

1957

*Here are
some results
of 10 years
of co-operation
between O.E.E.C.
Member countries*

PRIVATE CONSUMPTION



POPULATION



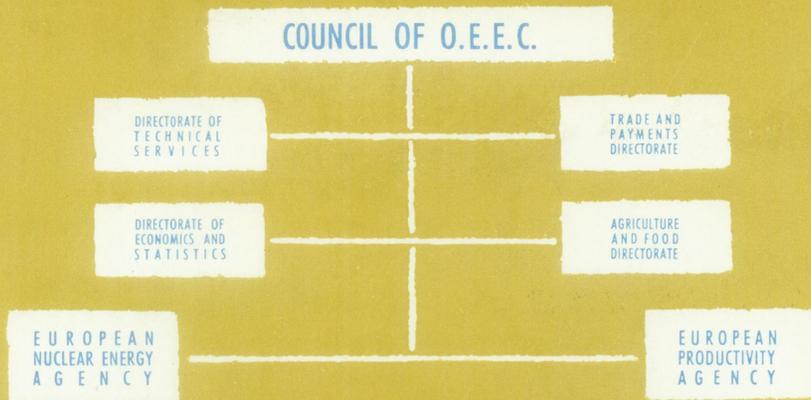
1958

AGRICULTURAL OUTPUT



INVESTMENTS





The E.P.A. was established in 1953 and is part of the O.E.E.C. The E.P.A. is a directorate and its programme is approved by a Governing Body which is responsible to the Council of O.E.E.C.

THE NETHERLANDS

ICELAND

SWITZERLAND

BELGIUM

GERMANY

IRELAND

GREECE

SWEDEN

ITALY

TURKEY

FRANCE

NORWAY

PORTUGAL

AUSTRIA

UNITED KINGDOM

LUXEMBOURG

DENMARK

**europaean
productivity
centres**

E.P.A.'s aim is to support National Productivity Centres and promote productivity through co-operative action. It acts as a « federation » of N.P.C.s, providing them with the services an industrial federation gives to its member firms. Through N.P.C.s the E.P.A. carries out international work organising conferences and seminars and acting as a clearing house for information.

Spain is a Member country for Agriculture. Yugoslavia is a participating country. The United States and Canada are associate countries.

EUROPE NEEDS...

More trained men:

Scientists - Managers - Farmers - Supervisors - Research assistants - Engineers - Agricultural extension workers - Skilled personnel.

Better communications between:

European countries - National and international organisations - Management and labour - Industrial and agricultural research institutes - Universities and industries.

More knowledge of:

Technology - Automation, its social and economic implications - Human and social sciences applied in industry and agriculture - Scientific, technical and social research possibilities - Modern methods of farming and marketing of agricultural produce.

Better economic balance between European countries by:

Improving conditions in the under-developed areas of Europe.

EPA PROVIDES...

Means for exchange of knowledge between European scientists.

Guidance in shaping business management educational programmes.

Facilities for training professors in new business management techniques and specialists in distribution, marketing and farm management.

Technical assistance in the field of vocational training at all levels of skills.

European lending library for technical, industrial and agricultural films.

International conferences and seminars for managers, scientists, professors and trade unionists to exchange knowledge and experience.

Information and study missions to the U.S.A., Canada and European countries.

Periodicals, publications, and technical digests.

Question and answer service on technical subjects. Case studies on automation in European offices and factories.

Promotion of a European programme of research in the human sciences applied in industry and agriculture; register of research in progress in O.E.E.C. countries.

Means for promoting co-operative research.

Technical assistance in the orientation of agricultural production and the improvement of agricultural markets.

Economists to assist in planning national and regional development programmes.

Special services to organise the economic, social and agricultural development of demonstration areas in Mediterranean countries.

Experts in industrial development, agricultural techniques, handicrafts, modern building methods, etc...

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THE WAY FORWARD

The essence of Productivity is the ratio of the means employed to the result achieved. The smaller this ratio, the greater the productivity.

To increase productivity implies, therefore, in the first place, doing more (or better) with less — less capital, less raw material, less physical effort, fewer working hours. It has been said that: “Productivity is economy of means”. This was the generally accepted tenet during the period of reconstruction in Europe, when our resources were scanty.

In the present phase of expansion, something more is needed. History teaches that the big changes in the ratio of means to results come with the introduction of new methods of production and distribution. For example, all the efforts made by copy-clerks, over centuries, to improve their output were reduced to nothing by Gutenberg’s invention of printing. This brings us to the next definition: “Productivity is the measure of technical progress”.

Today Europe’s economy is back on its feet; it is time to go forward. Further increases in productivity will mean not merely making the most economical use of existing resources, but also creating the conditions for progress. It involves allaying fears, overcoming hesitations, breaking with routine — in a word, creating a new mentality.

But established mental habits can only be chang-

ed in the light of definite objects. Here are some: — to adapt our education to the needs of modern economy, to develop applied research, to foster a spirit of understanding and co-operation between employers' organisations and the Unions, to build up the underdeveloped areas of Europe which constitute her weak points.

The European Productivity Agency cannot hope to undertake all these activities; indeed many of them fall outside the objectives it has been pursuing during its first four years of existence. The E.P.A. was created towards the end of the reconstruction period and concentrated, accordingly, first of all on the economic use of available means.

However, parts of the Agency's programme are already attuned to the requirements of the new period of expansion. And since it is in a state of continual adaptation to changing needs and circumstances, the O.E.E.C. will find it an increasingly effective tool for tackling the work before us.

A handwritten signature in cursive script, appearing to read 'R. Sergent'.

R. SERGENT,
Secretary-General of the O.E.E.C.

INTRODUCTION

THIS BOOKLET REPRESENTS AN ABRIDGED VERSION OF THE REPORT SUBMITTED TO THE COUNCIL OF THE O.E.E.C. ON 26TH NOVEMBER 1957 CONCERNING THE FIRST FOUR YEARS OF THE EUROPEAN PRODUCTIVITY AGENCY'S WORK. IN DECIDING TO PUBLISH THE REPORT IN THIS FORM, THE COUNCIL FELT THAT IT SHOULD BE PRECEDED BY A REVIEW OF THE CONDITIONS IN WHICH THE AGENCY WAS SET UP AND THE SCOPE OF ITS ACTIVITIES. THIS INFORMATION HAS BEEN EXTRACTED FROM MATERIAL SUBMITTED BY THE DIRECTOR TO THE NEW GOVERNING BODY.

DETAILS OF THE STRUCTURE OF THE AGENCY, ITS WORKING PROCEDURE AND FINANCIAL MEANS, AS WELL AS THE NUMBERS AND TITLES OF E.P.A. " PROJECTS ", WILL BE FOUND IN THE APPENDIX.

HOW THE AGENCY ORIGINATED

In the Twentieth Century, every nation must relate its rate of economic expansion to that of the more dynamic countries.

After World War II, the whole of Western Europe began to realise that it would very soon be outdistanced by the extremely rapid expansion of the great economic powers, particularly the United States.

As early as 1949, an O.E.E.C. Committee responsible for productivity was engaged in assessing the consequences of the absence of any European programme and the magnitude of the efforts which Member countries of the Organisation would have to make.

INITIAL MEASURES

A Group of Experts was set up with instructions to study means for promoting co-operation between Member countries and the United States of America

on scientific and technical information. It adopted an extremely broad approach and at its very first meeting began to tackle questions of productivity and technical assistance.

But to deal with this immense problem, a number of working parties had to be established quickly, and the Group of Experts came to be replaced by a Committee for Scientific and Technical Matters and a Technical Assistance Group. In 1952, these bodies were merged to form the Productivity and Applied Research Committee (the P.R.A. Committee) whose terms of reference were to study "the improvement of methods of production and distribution with a view to raising standards of living".

Side by side with the work undertaken by the O.E.E.C., many of the Member countries, sometimes under the stimulus of United States Missions, took steps to study productivity problems and devise measures to solve them. In some instances this work was entrusted to bodies which already existed to co-ordinate such studies and the resulting activities; more often new bodies were created. By the end of 1952, 11 out of 17 Member countries had set up their own National Productivity Centres, but they soon felt the need of a central organisation where they could pool their experiences and which would give them the benefits of common services.

ESTABLISHMENT OF THE AGENCY

The European Productivity Agency (E.P.A.) was established following a meeting of the Council of the

O.E.E.C. on 24th March, 1953. The Council's decision was prompted by the United States Government placing \$100 million at the disposal of Western Europe and its presentation to the O.E.E.C. of \$2 1/2 million. These financial arrangements were the result of an amendment to the Second Mutual Security Act tabled in 1952 by Senator Blair Moody of Michigan, the purpose of which was to furnish Europe with sufficient funds to run a productivity campaign. The objectives which had been defined by United States authorities in the previous year were:

“ to eliminate barriers, and encourage free private enterprise to increase its participation in developing the resources of foreign countries... to discourage cartels and monopolistic business practices...

to encourage, where suitable, competition and productivity...

and the development and strengthening of the free labour union movements... ”

Countries could use the funds allocated to them either for making loans to firms for modernisation purposes or for the direct financing of a productivity programme. The sums allocated to the O.E.E.C. allowed it to set up the executive bodies which had become necessary for its productivity work. Thus the European Productivity Agency was established. Its three main components were the P.R.A. Committee, the Directorate with its Secretariat and an Advisory Board composed of independent personalities who would provide direct contact with influential non-governmental opinion.

THE AGENCY'S OBJECTIVES

Productivity can only be increased by efforts made in the firms themselves, under the leadership of management and with the co-operation of all grades of staff. Encouragement, guidance and co-ordination may be provided at national level by non-governmental organisations and specialised agencies of a public, semi-public or private character, but it would be unrealistic to expect an international institution to exert effective influence in the individual firm. This means that the Agency's existence is bound up with that of the national productivity centres, whom it must assist, and that its programme must be planned as a complement to national programmes.

In practice, difficulties very soon arose when it was found that the national productivity centres established by Member countries had extremely varied fields of activity. Some of them are very general in scope and cover all sectors of the economy, while others work only in strictly limited fields, such as the diffusion of management techniques. It follows that each centre looks to the Agency for activities of a particular nature and that these expectations differ widely from centre to centre.

The very concept of productivity itself takes various forms, quite different, for example, in a country with full employment and in one less developed, where unemployment persists. It can also have two different connotations in a single country according to whether it relates to measures for improving the output of a given product, or to the expansion of the economy as a whole.

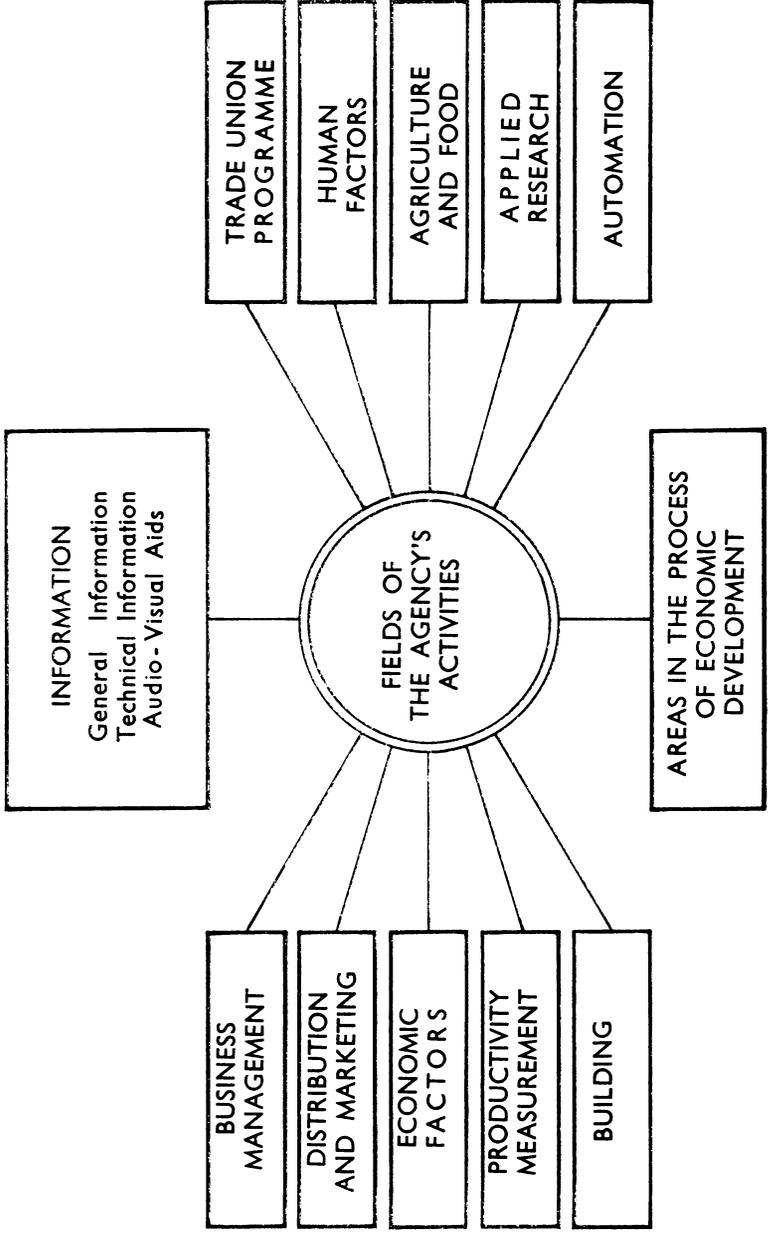
This explains why the Agency's activities are designed to fulfil two essentially complementary functions. First, it must be a clearing house to provide national productivity bodies and, where appropriate, international professional associations with information and other services which will help them in their work. Secondly, it must be a centre for study and discussion to guide European efforts towards greater productivity and, in particular, for the study of the social, economic and " human " consequences of developments in technology. When drawing up the Agency's annual programme, there is always the somewhat delicate task of striking a balance between these functions.



THE AGENCY'S PROGRAMME

Too rapid a start and initial uncertainty as to the Agency's objectives led to an undoubted dispersal of its efforts in the early days. There was agreement both in Member countries and in the Agency itself that the programme should be "concentrated" — a choice must be made among all the multitude of things which could usefully be undertaken. In practice this selection proves difficult because Member countries have such different requirements. Then again, the desired concentration can only be achieved gradually since most of the projects* adopted during a particular financial year are carried out in the years following. Projects adopted in 1954-55 and even some of those approved in 1953-54 are still in hand and, therefore, still occupy part of the staff.

* The term "project" means an operation or a group of operations with a common purpose. For instance, a project may provide for a mission or for a mission followed by an international conference and possibly also a report. See in Appendix I the section on "Preparation of Projects" page 54 et seq.



Concentration also has its limits ; on the one hand, it is neither possible nor desirable to abandon suddenly one of the fields in which action has already been initiated, and on the other, there are fields where inaction by the Agency would be criticised.

GRADUAL ORIENTATION

When the Agency was born, Europe's economic recovery had almost been achieved but the preoccupations of this period still held sway. The main endeavour was to make up the ground lost in Europe during the war by sending study missions to the United States and appealing for American experts. Although the high productivity in American firms was known to be due just as much to operating conditions as to technical progress and that technical arrears were in any case the easier to make up, there was still a tendency to devote a great deal of effort to studying technological problems.

On this last point, there was a very definite revision of policy when the Agency's Second Annual Programme was compiled (1954-55). It was then decided that technological projects should be undertaken only in very special cases. The Agency's programme, and those of most national centres, therefore concentrated mainly on management problems and the establishment of an atmosphere of co-operation between management and labour.

Moreover, after a fairly considerable number of research projects had been launched in the economic

and sociological fields, this type of activity was reduced, first in the Third Annual Programme (1955-56) and then even more decisively in the Fourth Annual Programme (1956-57).

To continue on these lines would have meant diverting the Agency more and more from the study of general problems of productivity. In addition, countries with large under-developed areas were taking less and less part in the Agency's work, (except for Italy where such areas cover only part of that country) and it was plain that projects were not suited to their requirements. The question even arose whether the concept of productivity, as it had developed in regard to full employment economies, held good for countries where unemployment was still endemic. By including a section in its Third Annual Programme (1955-56) entitled " Under-developed Areas ", the Agency set out to tackle a problem which by its nature and extent went beyond the level of the individual firm.

The Fourth and particularly the Fifth Annual Programmes (1956-57 and 1957-58) show a parallel trend in other fields. In the first place, European economic recovery is definitely completed and Europe's next problem is to forge ahead at the same rate as other parts of the world.

Scientific discoveries over the past twenty years point to a further rapid expansion in technical progress ; if Europe does not make the most of the opportunities offered, she will be definitely outdistanced. Furthermore, such new economic structures as the Common Market and the Free Trade Area which are now taking shape will create problems of adaptation

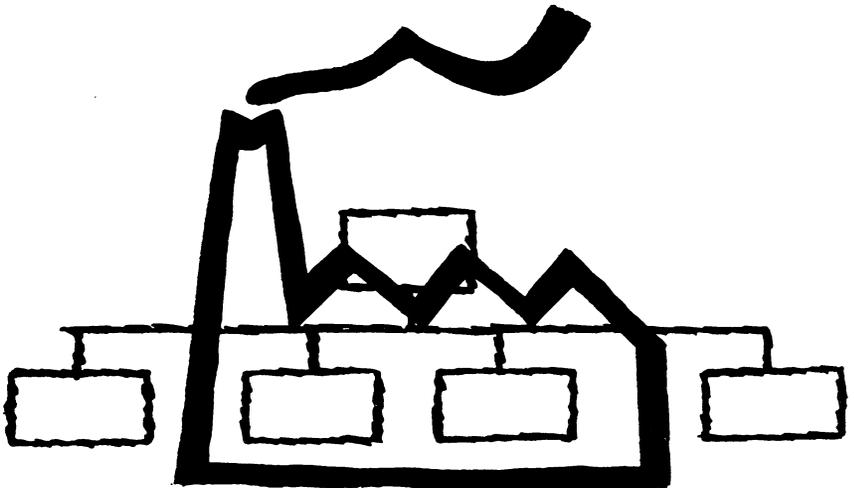
for all sectors of the economy ; the national productivity centres and the Agency will have to help. Consequently, while pursuing activities already begun with the aim of increasing industrial productivity under the existing economic system, the Agency — and the national centres — must study the conditions necessary for technical progress and the evolution of economic structures, work to create these conditions, and also endeavour to foresee the consequences.

This means that technological problems will again become important, not in themselves but in their economic, sociological and human aspects, and that research will have to be given a prominent place in the Agency's programme, since the problems are new and must be studied before action can be taken. And finally, it means that attention will have to be devoted to very general questions, such as the adaptation of education to the requirements of modern economy, which are as much a matter for governments, the principal universities and the professional organisations as for productivity specialists.



BUSINESS MANAGEMENT

The efforts made in the United States to study the best methods of business management and teach them to future managers are accepted in Europe as being to some extent responsible for the American firms' high level of productivity. Most national productivity centres have accordingly chosen as their first task the dissemination of management principles and techniques. The Agency's contribution in this field has taken two forms ; at first, it merely assisted the national centres in their task



of disseminating management and distribution techniques; later it turned towards more long-term projects and has helped to set up and develop permanent centres for training in business administration.

DISSEMINATION OF MANAGEMENT TECHNIQUES

Short-term action has mainly consisted of organising training courses lasting a few days or weeks, to impart knowledge of the principal management techniques. In this way, the following have been explained:

- statistical quality control (1)*
- cost accounting and budgetary control (2)
- production planning and control (3)
- work organisation in small and medium-sized firms (4)
- variety reduction (5)
- marketing seminars (6)
- personnel management (7)
- office management (8).

Do these short courses have any practical effect? They are certainly calculated to arouse curiosity and interest and in some cases to promote local or national action. The reports drawn up on the completion of

* This and subsequent reference numbers appear in the first column of Appendix II (page 58 et seq) opposite the number and title of the EPA project to which they refer.

each project show that in many cases the subject dealt with has been included in the curricula of business management institutes, or is now being systematically studied by national groups of specialists.

The courses in statistical quality control were followed by an international conference, a mission of teachers to the United States and the establishment of a European association, which the Agency was able to help in its early days (9). It must, however, be admitted that short training courses have outlived their usefulness, and that important techniques of this type are best taught and disseminated in regular and comprehensive courses. The Agency has also set up an advisory service whose experts are available to countries on request, the nature and duration of their services being determined individually (10) (11).

Other Agency activities include:

- a survey, followed by a training course on job analysis and a survey on work measurement (12) (13)
- a mission to the United States on working methods of industrial design departments (14)
- a conference at Deauville in 1956 to review the dissemination of management principles (15).

Finally, two projects were devoted to problems peculiar to small and medium firms, viz:

- a survey, followed by an international conference, on advisory services for handicraft businesses and small and medium-sized firms (16)
- a mission to the United States on productivity in small and medium firms (17).

MANAGEMENT EDUCATION

Over the past ten years, the number of centres for elementary advanced management training has greatly increased in every European country. Even before the Agency was set up, contacts between these centres had been established under the aegis of the O.E.E.C., and it was clearly the Agency's duty to help such bodies to develop and multiply; this is the natural and principal field of its work to improve business management. It employs three methods:

First, the Agency holds regular meetings of representatives from management training centres to enable them to exchange experience. Five international conferences have already been held in 1953, 1955 (two), 1956 and 1958 (18) (19). The first was to establish preliminary contacts and the second to review teaching methods and the practical organisation of courses; the third conference, devoted to teaching curricula, was attended by a large number of teachers as well as directors of centres. The fourth was to discuss what training industry expected newcomers to have and the relationship between training organised by individual firms and that provided by universities and institutes. The fifth conference, held at Baden-Baden in April 1958, dealt with the question of how to teach European managers to use facts and figures, especially when presented as findings from operational research.

It is intended to continue these meetings at yearly or two-yearly intervals and to deal with a different basic problem each time. Other sessions, for the heads of centres and teaching staff, are organised

with the assistance of and in consultation with such university associations as Inter-University Contact.

Secondly, the Agency assists in the work of training teachers and assistant teachers of management of whom there is a serious shortage in Europe. For the last three years, it has been sending future teachers to train in American universities for periods of up to a year (20). In 1956 and 1957, summer courses were organised for teachers already in practice who wished to become conversant with the content and methods of American management training courses (21). Thirdly, the Agency, with the assistance of the Ford Foundation, has recently obtained facilities for employing American teachers in Europe and making them available to centres for the duration of a complete training course. These activities should be continued regularly.

Lastly, the Agency seeks to become an information exchange service not only between centres for elementary and advanced management training in Member countries, but also between Member and Associated countries. It is already in contact with about 150 European centres and every major American university, has planned an inter-European Exchange Scheme for teachers and has secured the co-operation of American liaison officers (22).

RESEARCH ON MANAGEMENT

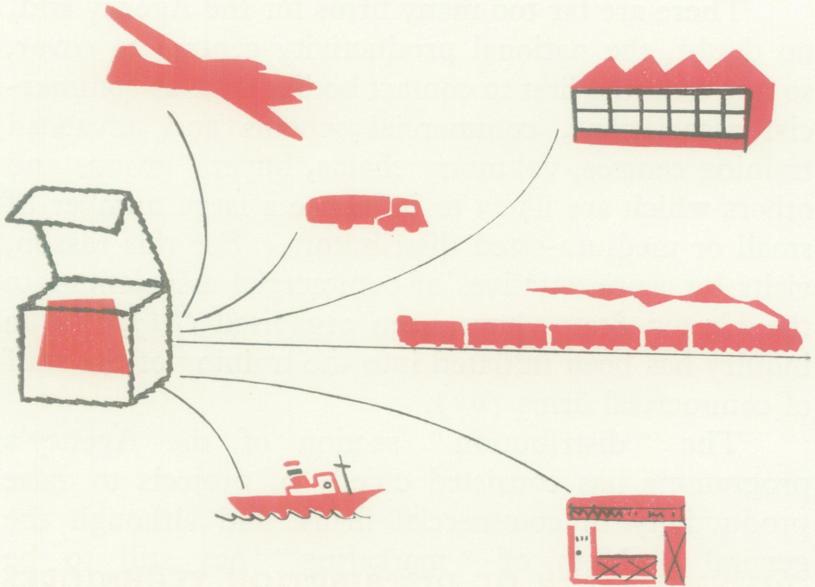
A thorough knowledge of the existing situation is essential if management is to be improved, but the teaching of the problems involved may well remain

theoretical and inept if it is not based on practical objective research. The Agency has so far done little in this field, but it can boast case studies on Variety Reduction (23) and a series of surveys on management structure in Europe (24). However, it is hoped that the forthcoming annual meetings of directors of business management centres will give rise to a programme of co-operative research, and that industrial circles will help to carry out this programme. The new direction given to the Agency's economic programme, which is referred to in a later chapter, should help to make good any lack of knowledge as to how business firms really function.

DISSEMINATION OF DISTRIBUTION TECHNIQUES

Problems concerning the operation of distribution channels are essentially of an economic character and are dealt with in the section of the Agency's programme which covers the study of the economic factors of productivity. Others, such as those concerned with marketing in general and more especially market research, relate to management techniques, while a third category involves operational conditions peculiar to commercial firms (wholesalers and retailers). It is advisable to deal with the last two categories jointly.

In its early years, the Agency concentrated on trying to persuade retailers and wholesalers to use modern methods of sales promotion. A series of study sessions conducted by American experts was organised for this purpose in a large number of Member countries (25) (26) (27). As a result, national advi-



sory services attached either to retailers' associations or productivity centres were set up in several of the countries visited. The general object is to help Member countries to set up their own national advisory services, primarily by interesting the directors of wholesalers' and retailers' associations in the results achieved by American trade organisations.

An advisory service, comparable with that instituted for industrial management, was set up for the benefit of commercial firms (28), and training sessions in the United States were organised for distribution and marketing consultants (29). At the request of several Member countries, the Agency organised a series of study sessions followed by an international conference on problems connected with packaging (30).

There are far too many firms for the Agency and, no doubt, the national productivity centres to cover, so it is essential first to contact bodies such as commercial associations, commercial schools and advanced training centres, voluntary chains, buyers' groups and others which are likely to influence a large number of small or medium-sized distributors. For this reason, visits by representatives of commercial associations to the United States have been organised (31), and an inquiry has been initiated into the training of the staff of commercial firms (32).

The "distribution" section of the Agency's programme has consisted chiefly of projects to raise productivity in commercial firms, and although the general problem of "marketing" has still to be developed, three important projects have been undertaken, viz:

- a survey of market research methods in Europe (33)
- a market sampling survey of iron and steel products (34)
- an international conference held in Paris in 1956 on commercial management in industrial firms (35).

FOUR YEARS OF ACTIVITY



340 training courses in management techniques (with 15,000 participants)



1 mission to the United States (with 20 participants)



15 courses for teachers in the United States (with 144 participants)



3 summer schools (with 70 participants)



7 international conferences on management (with 490 participants)



3 international conferences on distribution (with 330 participants)



40 reports on management



16 reports on distribution



128 seminars on distribution (with 7.071 participants)



5 missions to the United States on distribution (with 147 participants)

FITTING THE JOB TO THE WORKER

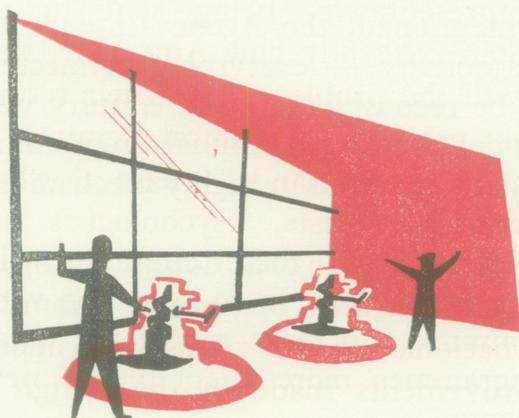
It is obvious that any improvement in "fitting the job to the worker" can result in much higher productivity. Before the Agency took action, the International Labour Organisation and the World Health Organisation had worked out plans of campaign as regards workers' health, but no international organisation had approached the problem as a whole and attempted to solve it by co-opting all the sciences involved, with special emphasis on practical application in industry (36).

The Agency's programme in this field is spread over three years. Its first phase consisted of nine specialists, including a trade-union representative, being sent to the United States to study how Americans were coping with the problem. On their return, they took part in a technical seminar at Leyden, The Netherlands, (phase 2) where sixty-five physiologists, psychologists and engineers representing a dozen European countries, the United States and a number of international organisations, considered the improvements made in the design of

machines and control instruments and ways and means of combating the effects of heat, noise and muscular fatigue. They also discussed the principles to be observed for obtaining better work postures.

The third phase will be an international conference in which representatives of workers, employers and specialists will be asked to take part.

The Leyden Technical Seminar put forward a number of recommendations which justify the continuance of the Agency's activities in this field. It asked for the preparation of a research programme, the establishment of regular contacts between specialists from the various countries, the creation of an International Bibliographical Centre, and the training of engineers and specialists in ergonomics.



VOCATIONAL TRAINING

Although the improvement of vocational training is an essential factor in productivity, the Agency did little in this field in its first few years. In certain instances the O.E.E.C. Manpower Committee has proposed a particular line of action and the project for it has been undertaken with financial assistance from the Agency. In this way, the Agency co-operated in a survey of in-plant training programmes (37), and in an enquiry concerning the selection and training of instructors in vocational training; the subsequent reports were used as basic documents for an international conference held in Geneva in April 1956 (38). A third survey, now in progress, concerns intensive vocational training (39). A survey has also been made of the establishment of experimental employment exchanges in a number of Member countries (40).

Over the past year, the Agency has adopted a much more positive attitude to vocational training. As part of the endeavour to create conditions for the development of technical advances in Europe — to which, as already mentioned, the Agency intends to devote much of its activity — everything connected with training must be reconsidered. An enquiry was therefore started under the fourth Annual Programme (1956-57) into the skills required in highly mechanised and automated industries (41).

The lessons learnt from these enquiries will enable reforms to be worked out, in co-operation with the Manpower Committee, to make traditional vocational training programmes more adaptable to new economic requirements.

FOREMEN TRAINING

The grade of foreman represents the first level of management, and is also the natural goal of the skilled worker. This dual aspect is a reason for treating it separately. Early in its life the Agency launched a foreman training programme, but owing to the particular qualifications of the American Consultants recruited, the work done related mainly to accident prevention. A series of seminars followed, and later a mission of European specialists was sent to the United States. On the basis of their Report, an international conference was held in Paris in April, 1956, to assess the information gained (42). It is no longer necessary for the Agency to continue its work in this field, as international institutions and associations specialising in accident prevention are sufficiently numerous and active.

From a more general standpoint, a joint survey of the organisation of foremen training programmes, requested by the Manpower Committee, has been undertaken by the Agency with the technical co-operation of the International Labour Organisation (43).



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LABOUR CO-OPERATION IN PRODUCTIVITY DRIVES



Effective co-operation between management and representatives of Labour to find the best methods of production is one of the main factors of productivity. Co-operation is often made difficult by obsolete conceptions of leadership, inadequate "communications" and insufficient know-

ledge of economic and technical realities, coupled with such psychological aspects as apathy and natural antagonism. The Agency has dealt with this problem in two ways. First, it has helped the *free* trade unions to supplement the information and training of their officials in economic and technical matters ; secondly, it has promoted research into the social sciences as applied to labour and circulated the results.

THE “ TRADE UNION PROGRAMME ”

The Agency's object is to provide facilities to be used on the trade unions' own responsibilities. No question of influence is entailed. Possibly, these activities have taken a little longer to get started than others, union participation in national productivity programmes being for a long time very slight and even non-existent in many Member countries. The unions had to get used to the idea that a non-union and inter-governmental organisation could co-operate with them. Finally, the Agency itself had to define the procedure for its intervention in this highly sensitive sphere of activity. With the help of the Joint Trade Union Advisory Committee (to which the I.C.F.T.U.* and the I.F.C.T.U.** are affiliated) the participation of Member countries, which numbered

* I.C.F.T.U. International Confederation of Free Trade Unions.

** I.F.C.T.U. International Federation of Christian Trade Unions.

only eight in 1954, has developed very satisfactorily, and today only Portugal and Turkey remain outside. The Trade Union Programme comprises three main sections: technical assistance to the unions for their training programme, information services, and inter-European missions. All three sections were the subject of separate projects in the first financial year (1953-54) (44) (45) 46). Since the second annual programme (1954-55) they have been grouped in a single project renewed yearly (47).

The Agency's early work in connection with training consisted solely in helping a number of national projects for the advanced training of trade-union leaders by giving technical advice on the preparation of courses, or by supplying rapporteurs and lecturers. But these activities gradually took on an entirely different aspect. For example, in countries faced with particular difficulties — e.g. France, Greece, Italy — the Agency has organised special courses for instructors. In Greece, where there was practically no trade-union training programme, Agency consultants have themselves organised local courses of this kind and their efforts have enabled a wide system of training to be built up throughout the country.

Thanks to a subsidy from the Ford Foundation, a number of young European trade unionists have been able to take part in three-month courses at Harvard University, which, at the request of the Agency, modified its courses to include comparative studies. As a result of the experience gained at Harvard, a course on modern methods of business

management and administration reserved for European trade union technicians has been instituted at the University of Columbia.

During the past three years, the Agency has also organised international trade union seminars. Each is prepared by a group of specialists who write reports to be used as the basis for discussions and present them orally. At the end of the seminar, a final report is compiled, which may take the form of a brochure for the use of the national trade-union training centres. The seminars have dealt with the following subjects: general problems of productivity ; productivity in the oil industry ; automation ; works councils in Belgium, the Netherlands and France ; sharing the benefits of productivity ; problems of productivity in the textile industry ; collective bargaining and productivity ; teaching methods and techniques.

The information section issues a bi-monthly bulletin which includes articles by some of the most famous names in the European trade union movement. Other recent publications include a detailed study of certain technical problems and a series of leaflets dealing with both general subjects and special cases. A documentation service has been set up to serve as a centre for the exchange of information between the free trade unions of Member countries.

Group travel between Member countries is another feature of the Programme. The National Productivity Centre and local trade union federations and branches in the host country are responsible for the visitors' reception. Factory visits, including

exchanges of views with shop stewards and local trade union representatives, are arranged and various public bodies, such as the Ministry of Labour, are invited to organise general lectures. Members of such a group may also take part in a training programme. Representatives of countries where trade union instruction is only in its early stages may be invited to visit a country where preparation for union work has reached an advanced stage. During the first years of the Agency's life, 700 trade union officials took part in inter-European visits.

The Agency also organises, with the help of the American authorities, trade union missions to the United States. Four such missions, each lasting six weeks, covered:

- the trade unions and collective bargaining
- industrial health and safety measures
- automation in commerce and industry
- wage payment systems and the guaranteed annual wage.

Afterwards, reports were submitted to the Agency and then circulated to national trade union centres for use in their training courses.

FOUR YEARS OF ACTIVITY



242 Intra-European missions (with 876 participants)



10 missions to the United States (with 96 participants)



6 courses in American universities (with 45 participants)



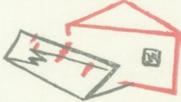
12 international seminars



130 consultants who furnished technical assistance



17 Trade Union Information Bulletins (in English and in French, 5 in German, 2 in Italian)



35 Brochures

THE DEVELOPMENT OF THE HUMAN SCIENCES AND THEIR APPLICATION TO INDUSTRY

The Agency finds the development of the human sciences the only sound means of dealing with the problem of "human relations" but its interest is not purely scientific or cultural as that of UNESCO might be. Little is known in Europe



of the worker's psychological and sociological reactions, and research on the human sciences and their application to industry is, therefore, a prior condition for any effort

to improve "communications" or the "atmosphere" in a firm. Scientific research, moreover, also offers neutral ground on which management and workers' representatives can meet, and is therefore in itself a means of establishing contact. It is for this reason that the Agency devotes part of its work to the subject.

Its first step was to undertake an enquiry (still unfinished) into the reactions of workers in the steel industry to technological changes (48). It is conducted by institutes specialising in industrial sociology, two of which actually came into being because the Agency's enquiries showed the need for them.

At the same time, the Agency collects first-hand information on the manner in which questions connected with human factors in industry are studied and taught in various European countries. A series of reports have been published after on-the-spot enquiries (49). It has also tried to popularise some of the methods of group psychology developed in the United States, in particular that of group dynamics (50) (51) (52).

The Agency has also tried to encourage representatives of management, the trade unions and research workers to co-operate, in an entirely objective spirit, on joint work in the field of human sciences and their application to industry. A first meeting, composed mainly of research workers, but also attended by observers from the Council of European Industrial Federations and the Joint Trade Union Advisory Committee, was held in Florence at Easter, 1955 (53). The report of the Florence meeting served as a basis for the work of the conference held in Rome at the beginning of 1956 to which each Member country sent businessmen, trade union officials and research workers. In some countries these conferences have led to the formation of tripartite groups to continue discussing labour problems at national level.

Measures have been taken to establish a long-term programme. Direct contacts have been made with specialised research institutes in various countries, to study their needs and capabilities. The Agency hopes gradually to see a European research programme drawn up jointly by the various institutes, and eventually to

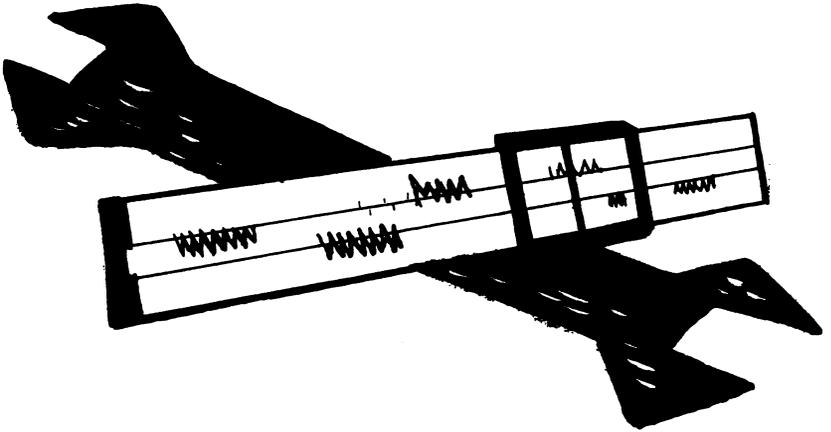
put the results of this research at the disposal of industry in a form of " industrial versions " which can be used by non-specialists.

A further measure has been to re-establish contact with the trade associations and to suggest that each Member country should form tripartite groups (representatives of business circles, trade union officials and applied research specialists) to be responsible for ensuring co-operation between scientific and industrial circles, giving financial help if possible towards the implementation of national research programmes, and keeping research workers informed of the needs and reactions of industry.

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DEVELOPMENT AND USE OF APPLIED RESEARCH

Two types of work are undertaken under the above heading. The Agency tries to promote the development of applied research, particularly when it takes a co-operative form, and to facilitate the use of its results in industry.



CO-OPERATIVE RESEARCH

Many co-operative research projects had already been completed by the time the Agency was set up, several of them being concerned with energy, viz:

- use of oxygen-enriched air in the iron and steel industry,

- gasification of solid fuels,
 - long-distance transport of gas,
 - use of wind power.
- Others applied to raw materials, viz:
- manufacture of phosphate fertilisers without sulphuric acid,
 - mixture of man-made fibres with wool,
 - new coking processes,
 - use of low-grade ores.

A third group consisted of those requiring certain special techniques, such as the establishment of topographical and cartographical surveys by air photogrammetry.

Certain studies, already under way when the Agency came into being, were naturally continued, such as that on the de-salting of brackish water. In several cases, an independent body was established to carry on the work outside the O.E.E.C. In 1950, an International Committee for Research on Low-shaft Blast Furnaces was created, and is still today continuing experimental work at Liège. A European Centre of Photogrammetric Experimental Studies was established in the same way in 1953, and finally two international groups for research into processes for the de-salting of water were set up in London and The Hague in 1955.

Further co-operative research which has been begun over the past two years includes work on the fouling of ships' hulls, fatigue-failure in metals, air pollution, and the use of natural gas as a reducing agent in metallurgical work.

It can, indeed, be said that the process of co-

operative research is in itself even more important than the subjects which have been studied up to date. It is entirely new in Europe, and can be extended to fields other than those dealing with technical matters, such as economic research and research into the human sciences and their application to industry. It will no doubt play a fundamental part in connection with the expansion of the European market.

OTHER MEASURES FOR THE DEVELOPMENT OF APPLIED RESEARCH

Apart from co-operative research, the Agency has engaged in a number of activities designed to develop applied research. A symposium of directors of national research institutes was held in London before the EPA was set up. The Agency organised similar conferences in 1954 at Nancy, and in 1956 at Vienna, taking as its pattern the Conference on the Organisation of Research which takes place yearly in the United States and is attended by experts from government, business and university circles. In 1956, a seminar was held at Ashridge in the United Kingdom, to enable directors of applied research organisations to study the best means of improving productivity in their own institutes (54). The Agency also launched an enquiry into the development of inventions (55). Lastly, the Sub-Committee for Co-operative Research (which has since become the Committee for Applied Research) initiated studies into the best means of organising national research bodies, the status of research workers, the proportion allocated to research in national budgets and in those of the large industries.

THE USE OF RESEARCH IN INDUSTRY

An enquiry into the use made by industry of the results of applied research showed that the position differed greatly in different countries. Some had practically no technical information service. Exchanges of information between countries were inadequate and systems of transmitting information defective, particularly to small and medium-sized firms. A campaign was then started to convince these countries of the need to improve, or where necessary, create information centres. A system for the exchange of documents and a " Question and Answer " service were established, and information centres set up where previously there had been none. Co-operation between centres was based on the documents exchange system and the Question and Answer service.

Thus, from the outset, the Agency had at its service a network which it has had to assist:

- a)* by helping technical information services to improve their methods ;
- b)* by perfecting new methods of information, intended mainly for small and medium-sized firms ;
- c)* by pointing out the value of Russian scientific and technical literature and taking action to make it available if required ;
- d)* by exercising a certain amount of persuasion on business circles.

a) Assistance to the technical information centres has consisted of holding regular meetings for

their directors, and publishing an international guide on sources of technical information (56).

b) The new development in methods of information has been the "Technical Digest". Each month, national editors in eleven Member countries make a selection from over 1,000 articles dealing with technical progress; the articles are summarised, grouped according to subject, and published as a single document. Digests are now being published in French, German, Italian, Norwegian, Spanish, Turkish, Serbo-Croat and Japanese. An English version is circulated direct by the Agency in the United States. Iceland, Israel and Greece quote excerpts from them in certain of their national publications.

c) This work will no doubt be greatly expanded in the near future. It has been found that Europe benefits far too little from Russian technical and scientific publications, and an enquiry has been made to ascertain what use is made of this type of literature. The final aim is the establishment of an inter-European body for the purchase, translation and circulation on a selective basis of technical information in Russian, and perhaps eventually in Chinese.

d) A travelling seminar (57) was organised by which business managers and management staff were brought together in a number of countries and shown not only what they could do with applied research but also the benefits from encouraging its development.

The Agency then launched a general survey on the need for technical information in small and medium industries, to ascertain the use made by such industries

of the sources of information available (58). The project has already resulted in a number of useful developments in the countries which took part, such as supplementing courses for training engineers with lectures on documentation methods and sources of technical information.

FOUR YEARS OF ACTIVITY



10 projects on joint research



5 international conferences



10 seminars on applied research



2500 European technical digests in 38 monthly bulletins



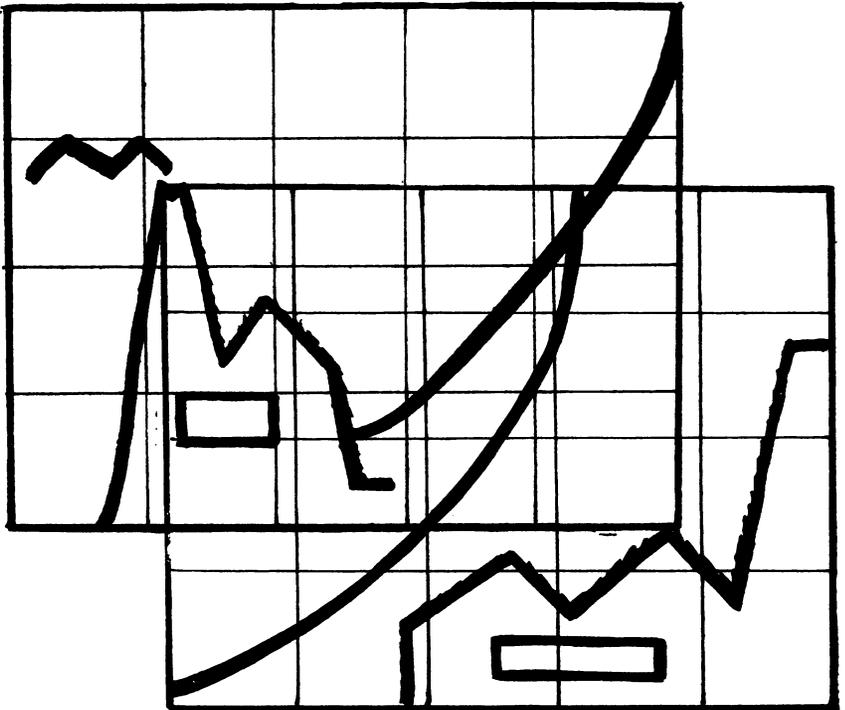
8 reports on research



20 technical reports

PRODUCTIVITY MEASUREMENT AND THE STUDY OF ECONOMIC FACTORS OF PRODUCTIVITY

From the economic point of view, productivity raises two problems, i.e., the methods to be used to measure it, and the influence of general economic factors on



its development. Both are being dealt with in the economic part of the Agency's programme.

PRODUCTIVITY MEASUREMENT

Productivity measurement is one method of diagnosing causes of low productivity, and is not merely a statistical exercise.

The Agency's first step was to produce a manual in three volumes dealing respectively with the principles of productivity measurement, productivity measurement at firm level, and productivity measurement at national level (Volume III has not yet been published). A contribution by Professor Fourastié on this third topic, entitled "Productivity, Prices and Wages", has been published separately.

The Agency has also made use of the services of specialists from the Bureau of Labor Statistics sent to Europe by the United States authorities (59). Their visits led to the publication of a quarterly, the "Productivity Measurement Review" and this was intended primarily for heads of firms, but experience has shown it to be a useful working instrument for institutes or consultants specialising in productivity measurement.

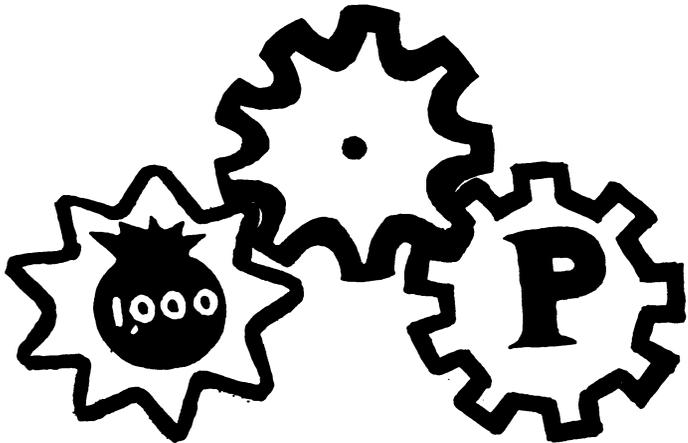
Originally, emphasis was laid on productivity in specific jobs, but the Agency has shown increasing interest in the measurement of other productivity factors. Following a conference on Inter-Firm Comparisons (60) held in Vienna in the Autumn of 1956, plans were made to study the technique of "operating ratios" with a view either to inter-firm

comparisons or to comparison of the same firm at different periods.

It is generally recognised that to measure productivity in firms is both possible and useful, but opinion is still very much divided as regards the measurement of overall productivity, i.e. of entire industries or countries. In this connection, a group of experts met early in 1957 but was unable to reach a unanimous decision. The fact remains that the prospects of a wider European market make this last question one of great importance.

STUDY OF THE ECONOMIC ASPECTS OF PRODUCTIVITY

The terms of reference of the Sub-Committee responsible for productivity studies before the Agency was reorganised covered general aspects of productivity, of an institutional, legal, economic and social nature, as well as research in economics, sociology and



other human sciences. Four main sectors emerged from this definition: restrictive business practices, fiscal legislation, capital investment and resources, and distribution. In each sector consultants or groups of consultants were employed to make studies and to draw up reports for publication.

Two reports on restrictive business practices are to be printed, namely, " Re-sale price maintenance " (61), and " Freedom of entry in certain sectors of industry and distribution " (62).

Two studies on fiscal legislation have been carried out, namely " The effects of differential tax treatment of corporate and non-corporate enterprises " (63) and " The influence of turnover taxes on productivity " (64).

The question of capital investment and resources is dealt with in a very important report on " The supply of capital funds for industrial development in Europe " (65). It comprises four volumes, three devoted to national studies by consultants in each of the countries taking part, the fourth being a general report prepared under the direction of Lord Piercy, a Governor of the Bank of England. Few, if any, studies have dealt so thoroughly with the subject of the financing of business. This work is to be supplemented by a second survey, recently begun, on investment policy (66).

As regards distribution, the Agency began by publishing a report on " Productivity in the Distributive Trade in Europe " written by a mission organised before the Agency was established. The report aroused considerable interest and its recommendations

have formed the basis of most of the Agency's later work in connection with distribution. Subsequently, a series of sample surveys were undertaken on the consumer's attitude to food distribution (67). They have now been completed and are to be published during 1958.

It looks as though the Agency would have, in future, to turn its attention to the economic study of problems affecting firms, with particular emphasis on "micro-economics", a subject on which little work has been done in Europe. The Agency hopes to establish contact with the institutes working in Member countries, examine their programmes, ensure that results of their work are disseminated and exchanged, and endeavour to co-ordinate them with the object of gradually building up a European programme of research on micro-economics.

FOUR YEARS OF ACTIVITY



13 Productivity Measurement Reviews.



4 Supplements to the Review.

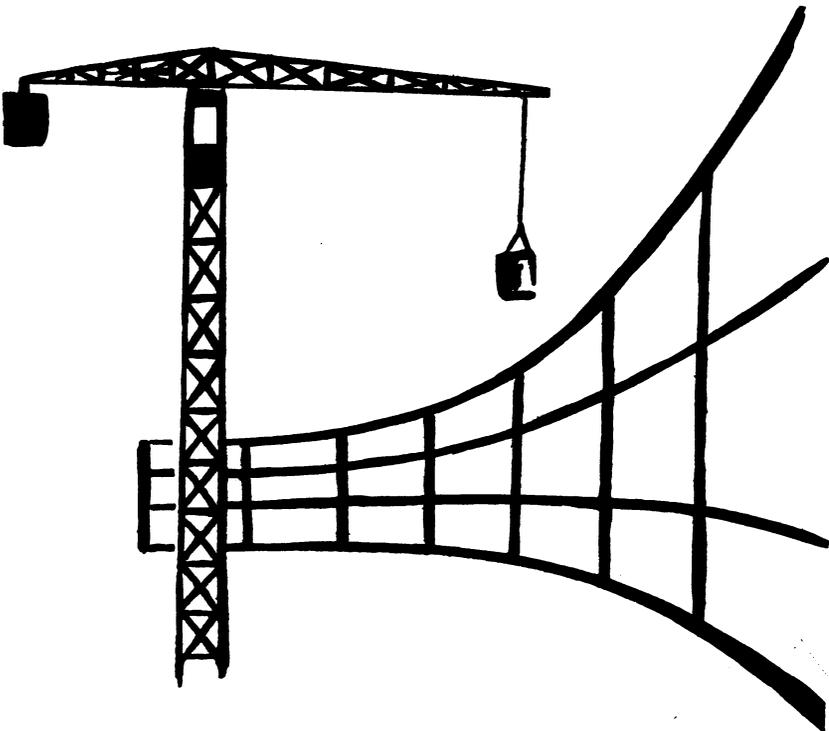


12 Economic reports.

VERTICAL ACTIVITIES (AGRICULTURE EXCLUDED)

All the activities described so far in this report affect the economy as a whole ; those mentioned below relate to specific economic sectors, hence their title of “ Vertical activities ”.

BUILDING



The development of productivity in the building industry has been particularly slow compared with the results recorded by other industries. The cost and the time spent on building varies immensely, not only from country to country but even from site to site. Yet every country has its housing shortage and all the studies carried out on this subject show that substantial savings are possible. The Agency therefore decided from the outset to devote a certain amount of its efforts and resources to the building industry.

Obviously, any appreciable reduction in building costs calls for the introduction of new methods and techniques whereby material can be mass-produced, and the Agency decided to undertake a study on modular co-ordination (68) and to publish the results in a first report dealing with what had transpired from the principles of standardisation, already adopted in several countries. The aim was the ultimate adoption, if possible, of a single module for the whole of Europe so as not only to reduce building costs but also to widen the possibilities for international trade. On the basis of these studies, a number of Member countries undertook, with the help of the Agency, to construct "modulated" buildings. An agreement was also concluded with the European Coal and Steel Community for applying the principles of modulation to building work for which it is responsible.

The Agency also organised a series of study sessions on the improvement of work on sites, and the wider use of modern building techniques. They dealt with "Mechanisation of building operations" (69), "Organisation and mechanisation

of sites " (70), " Mechanical handling and transport of materials " (71), " Production and distribution of concrete " (72) and " Work planning in the building industry " (73).

Latterly, the Agency has taken up the question of the inadequacy of training for managerial staff in building firms. A seminar was held on training methods for foremen and general contractors in the application of scientific principles and this was followed by an enquiry and later by an international conference (74). It is in this field that the Agency intends to continue its work. Technical building problems are adequately covered by national or international trade associations, and economic and financial problems, such as the financing of national or local building programmes, are essentially a matter for the United Nations Economic Commission for Europe. On the other hand, the Agency alone seems capable of providing, at international level, the impetus necessary for gradually improving the organisation of building work, which requires not only co-operation between architects and contractors, but without doubt some revision of their respective roles.

OTHER " VERTICAL " ACTIVITIES IN TRADE AND INDUSTRY

Among other vertical activities undertaken may be mentioned:

- a) Missions to the United States on: — sub-contracting in the automobile industry (75); powder metallurgy (76); traffic engineering and control (77); zinc and light metal die-

- casting (78) ; pure research and its application for the processing of ores (79) ; methods of drying and conditioning timber (80) ;
- b) Intra-European missions on: — the recovery of methane from coal-mines (81) ; the use and grading of wood waste (82) ; refrigeration in existing European laboratories (83) ; welding techniques (84).
- c) Surveys on: — greater research for the rational use of timber (85) ; internal transport in iron and steel plants (86) ; water economy in iron and steel works (87) ; distribution problems in the chemical industry producing for direct consumption (88).

In future, the Agency will concentrate on two sectors, viz: — energy, because of the emergence of new techniques and the need to economise traditional fuels ; and textiles, owing to the difficulties encountered in all Member countries. Work undertaken in connection with energy has so far been concerned only with its nuclear forms, and has consisted of nuclear energy courses for management (89) and courses for teachers in universities and higher technical colleges (90). The Agency's activities will probably change considerably in view of the creation in February 1958 of the European Atomic Energy Agency.

As regards the textiles industry, a study of distribution networks has just been completed, and a detailed study made of the establishment of a method for measuring productivity in the cotton spinning industry on an international basis. It is expected that textile firms will make very extensive use of this method.

AGRICULTURE

Since the Agency's resources are limited, and the subject really vast, efforts have to be concentrated on a few important sectors in which they are likely to prove most fruitful and be of the greatest benefit to the countries concerned. The three main sectors are:

- marketing of agricultural products ;
- advisory services and education ;
- dissemination of facts and figures on technical developments.

MARKETING OF AGRICULTURAL PRODUCE

Various " vertical " measures have been taken to improve the distribution of certain key commodities such as fruit and vegetables, livestock products, fish and seed. The main object has been to secure a progressive reduction in distribution costs at every stage, to the benefit of both producer and consumer.

FRUIT AND VEGETABLES (91)

This is a highly " sensitive " subject because of the perishable nature of the produce and the difficulty of adjusting supply and demand. The Agency has taken three kinds of action:

1. In 1954, the Agency promoted the establishment of a teleprinter network which now operates between Germany, Belgium, France, Italy and the Netherlands, and provides daily market news on principal commodity prices, market trends and movement of goods ; information on harvest prospects is also exchanged periodically. Taken as a whole this material, which is widely circulated in the trade, should help to keep the market steady and curb price fluctuations.

2. The Agency has endeavoured to assist countries in applying the protocols of the Economic Commission for Europe which lay down principles for a common standardisation of products and packaging.

Notably, it has organised trial commercial shipments to study the technical and economic consequences — from production to consumption — of the application of European standards. In 1955, four such shipments were made between France and the United Kingdom, Italy and Germany ; the following year saw four more between Switzerland and France, France and the United Kingdom, Italy and Germany and Greece, Germany and Austria. They were of considerable value to the trade as a demonstration of what can be done, and enabled the combined experts of the despatching and receiving countries to make recommendations which resulted in the establishment of general standards for apples, peaches, dessert grapes and cauliflowers. At the same time, certain standard sizes of packaging were selected. Work is continuing to get these standards adopted in the trade and to prepare the way for others.

3. Economic research and experiments have been carried out to raise the productivity of marketing operations based on studies of distribution costs. Measures have also been taken to promote the consumption of fruit and vegetables, principally by publicity and consumer education.

LIVESTOCK PRODUCTS (92)

The action taken under this heading, one of the most important in the food and agriculture economics of the O.E.E.C. Member countries, began with an appraisal of the various types of distribution network in Europe for livestock products. It made possible valuable comparisons between commercial margins, and disclosed that improved distribution circuits were needed, particularly at the retail stage. To supplement this work, a survey of American marketing methods and the corresponding distribution costs was made. Useful information was thus made available for countries wishing to reorganise their marketing systems.

The Agency has also undertaken enquiries and studies for improving slaughtering and meat transport and to provide information on the techniques for handling and delivering milk. To encourage the consumption of milk and dairy products, efforts have been made to determine the best means of consumer education.

FISH (93)

Increased consumption of fish in European countries has been regarded as an important objective.

Published reports of projects carried out have dealt with such matters as the improvement of the quality and packaging of fresh and frozen fish, and also included "The Fish Market in Western Europe since 1950". The Agency is at present trying to encourage the sale and consumption of frozen fish by a detailed study of the problems of transport and refrigeration equipment at all stages of marketing.

SELECTED SEED (94)

The aim has been to improve the organisation of international trade so that all European farmers can obtain high-class seed at reasonable prices and in the desired quantities.

Considerable work has been done on the multiplication of seed of various fodder crops such as lucerne, clover, vetch and lupin. Primary seed adapted to northern climates and supplied by producers and grain merchants in Germany, Austria, Belgium, Denmark, Norway, the Netherlands, the United Kingdom and Sweden, has been propagated in Greece, Portugal, Italy and Southern France with higher yields so that it can be sold cheaply. The success of this experiment has made it possible, since the Autumn of 1957, to turn over this trade to the normal commercial channels; the subsequent role of the Agency has been confined to convening a meeting of representatives of the countries concerned so that their efforts can be co-ordinated.

To aid international trade, the Agency has prepared a draft agreement for standardising the

nomenclature of herbage seed and methods for certifying its quality.

Standard trials with lucerne, grass and clover strains are now in progress at 20 Centres in 15 Member countries of the O.E.E.C.



ADVISORY SERVICES AND VOCATIONAL TRAINING (95)

In view of the importance of vocational training in agriculture, the Agency has given it considerable attention and has based its activities on the following three essentials:

1. To help countries to improve the organisation and operation of their advisory services for agricultural and rural home economics.
2. Promotion of improved advisory methods. The Agency conducted an enquiry, then published a brochure on how to make better use of five advisory

methods, viz: — visual aids, radio, demonstrations, agricultural press, publications. Thirty-one studies are now in hand in 13 Member countries to evaluate the efficiency of the methods and aids advocated.

3. Intensive “refresher” training courses. The Agency worked out syllabuses, and in 1954 over 1,000 key personnel from the advisory services of the 16 Member countries took part in 21 initial courses of this type. This was followed in 1956 by a study and publication on “In-service Training of Agricultural Advisory Staff”.

FARM MANAGEMENT

As regards the technical and economic aspects of advisory work, the Agency has concerned itself with training agricultural advisers in farm management. Two courses were organised, in 1953 and 1954, and in 1956 demonstration areas were set up in 9 Member countries. During this period greater attention was paid to labour management and work simplification, and the years 1956-57 saw material being collected for a handbook on farm management. In 1957, a mission was sent to the United States to evaluate the earning capacity of farms. Further work has been done to develop a system of farm accounting.

VOCATIONAL TRAINING

The Agency is making a comparative study of the organisation and operation of vocational training

in agriculture in Member countries. Thirty-five young farmers have been sent to live for a year with farming families in the United States to obtain practical training in a new environment. Their number is being raised to 65 during 1958.

ADVANCED TRAINING IN AGRICULTURE (96)

A project now in preparation is designed to bring together representatives of university departments and institutes providing advanced training in agriculture, with a view to obtaining European co-operation in this field and to preparing the creation of a Centre where all aspects of agricultural productivity can be discussed at a higher educational level. It is also planned to send graduate agronomists to attend one-year courses at American universities.

THE FOOD AND AGRICULTURAL TECHNICAL INFORMATION SERVICE (FATIS) (97)

The Agency has kept agricultural advisers and allied personnel in touch with the most modern techniques of advisory work through the medium of the "FATIS Review", an illustrated bi-monthly issued in French and in English; a German edition is prepared by the Federal Republic. It is edited by specialists, and approximately 10,000 copies are distributed free of charge by special liaison centres set up in all Member countries, in the United States and Canada. For some time past "FATIS Review" has also been on sale at booksellers.

Supplements are issued from time to time on special topics such as " Grassland Improvement " and " Rural Home Economics ". Two supplements are in preparation on agricultural training (technical education and higher education). A comprehensive catalogue of agricultural films available in Member countries has also been published.

FATIS produces a monthly " newsletter " for Country Liaison Officers which includes information on new publications received, together with a " Question and Answer Service " which enables special questions arising in Member countries to be dealt with at international level. A system for the exchange of publications has so far handled over 2,000 publications. Publications considered of outstanding interest have been translated and re-issued ; a handbook on the organisation and lay-out of agricultural exhibitions is in preparation.

DISSEMINATION OF TECHNICAL PROGRESS

Various types of project come under this heading, but they all aim at raising agricultural efficiency by means of research and spreading information on the best techniques in the interest of the farmer and the community as a whole.

FARMS AND FARM BUILDINGS

" Land consolidation " and the " Promotion of economically viable agricultural units " have been dealt with under two projects (98) for the collection of

documentary material likely to help countries in this difficult and complex field. This work is now being supplemented by a general review on the modernisation of farm buildings, embodying the conclusions of a mission to the United States and of enquiries made in European countries by two consultants. Their proposals take into account the difference in natural conditions existing in northern and southern countries and lay particular stress on the special role to be played by co-operatives.

AGRICULTURAL MACHINERY (99)

With the co-operation of experts from various Member countries, the Agency has established joint methods of testing tractors and knapsack sprayers.

In 1957, a meeting of experts proposed that the Committee of Deputies of the O.E.E.C. Ministers of Food and Agriculture should adopt "an international code of tractor testing".

Two reports have been published on "International tests of agricultural machinery" and "The selection, use and maintenance of agricultural machinery".

CONTROL OF ANIMAL DISEASES (100)

The Agency has begun an enquiry into the progress made in Member countries, and promoted the adoption of various control measures for dealing with diseases which may have serious economic repercussions.

CONTROL OF PARASITES IN STORED PRODUCTS (101)

This project has culminated in the publication of a report on the difficulties encountered and action taken in Europe, North Africa and North and South America. It also gives facts concerning problems of transport and control.

ATOMIC ENERGY AND ITS APPLICATION TO AGRICULTURE (102)

The Agency's first action was to send to the United States a mission of twenty senior agricultural scientists whose report is now in course of publication. In addition, four American experts, assisted by European consultants, will be put at Member countries' disposal to help in establishing national programmes and in promoting European co-operation. One of the experts will deal with general, and more particularly biological, aspects of the work while the other three will specialise in plant science, animal science and food preservation.

THE USE OF AGRICULTURAL PRODUCE OTHER THAN FOR FOOD

Agricultural bodies are considering a project for examining the possibilities of co-operation on the use of agricultural produce unsuitable for human consumption (rejects, waste, etc.).

FOUR YEARS OF ACTIVITY



35 training courses



14 study sessions



18 meetings of experts



9 missions to the United States



62 reports published



26 FATIS Reviews



6 supplements to the Review

COMBINED OPERATIONS

In addition to the activities listed so far, each of which has a precise and limited object or concerns a clearly determined "vertical" sector, the Agency, during recent months, has had to undertake activities which have a more general purpose, or are a combination of other activities.

Current studies of this kind cover:

- conditions and consequences of increased automation,
- adjusting education to the requirements of modern economy,
- areas of Europe in the process of economic development.

CONDITIONS AND CONSEQUENCES OF INCREASED AUTOMATION

One of the most spectacular technical advances achieved since the end of the Second World War has been "automation". Automation is not only a question of serial processes perfected by applied electronics which simplify the classification and rapid synthesis of information as well as the execution and automatic control of manufacturing programmes, it



is also a "system of concepts". The use of the processes and application of the concepts constitute "a challenge to management". According to whether Europe takes up the challenge within a reasonable time or not, its industry will remain either "in the running" or will fall further behind that of other world economic groups. A study of the conditions and consequences of applying automation to industrial enterprises is therefore vital, and in taking up this question, the Agency hopes to contribute new elements to its solution.

The first stage of this work lay in an international seminar restricted to trade union representatives, organised in London in May 1956, when the consequences of automation on conditions of work, pay, security of employment and vocational training were discussed. A report prepared by two trade union leaders was published as a result of this meeting. The second phase consisted of preparing and holding an international conference in Paris in April 1957 (103), with the purpose of reviewing the extent to

which automation had been applied in O.E.E.C. countries and of studying the conditions and consequences of its future development.

Three very general conclusions may be drawn from the London and Paris meetings. First, progress with automation, which is essential to the economic development of Europe, depends more on the attitude of management and labour than on purely technical factors; secondly, very little is still known of the social and economic consequences of automation, owing to a lack of objective studies similar to those made by the Agency. Finally, automation accentuates the entire problem of technical progress, and in particular one of its cardinal aspects — the inadequate adjustment of education and vocational training to the requirements of the modern world.

ADJUSTING EDUCATION TO THE REQUIREMENTS OF MODERN ECONOMY

A great many of the Agency's activities converge on a single problem, that of training men at all levels and the inadequate adjustment of this training to present-day requirements. One of its more obvious features is the scarcity of highly qualified scientists and technicians which has, during the past twelve months, been attracting the attention, not only of all Member and Associated countries but of the O.E.E.C. itself and of a number of other international organisations. The Agency owed it to itself to take part in studying this problem and to attempt to find a solution.

As early as 1950, the Sub-Committee on Research was already giving the matter a great deal of attention and was stressing its urgency. The Manpower Committee, alive to the situation, carried out two inquiries in 1954 and 1956, on the scarcity and also the surplus of scientists and highly qualified technicians ; a report on the more recent study was published in July 1957. Meanwhile, the Agency devoted its Third Symposium on Research, held in Vienna in 1956, to the question of recruitment and use of manpower for applied research. In addition, a mission consisting of three leading specialists has been organised to examine matters relating to the training of engineers and research staff.

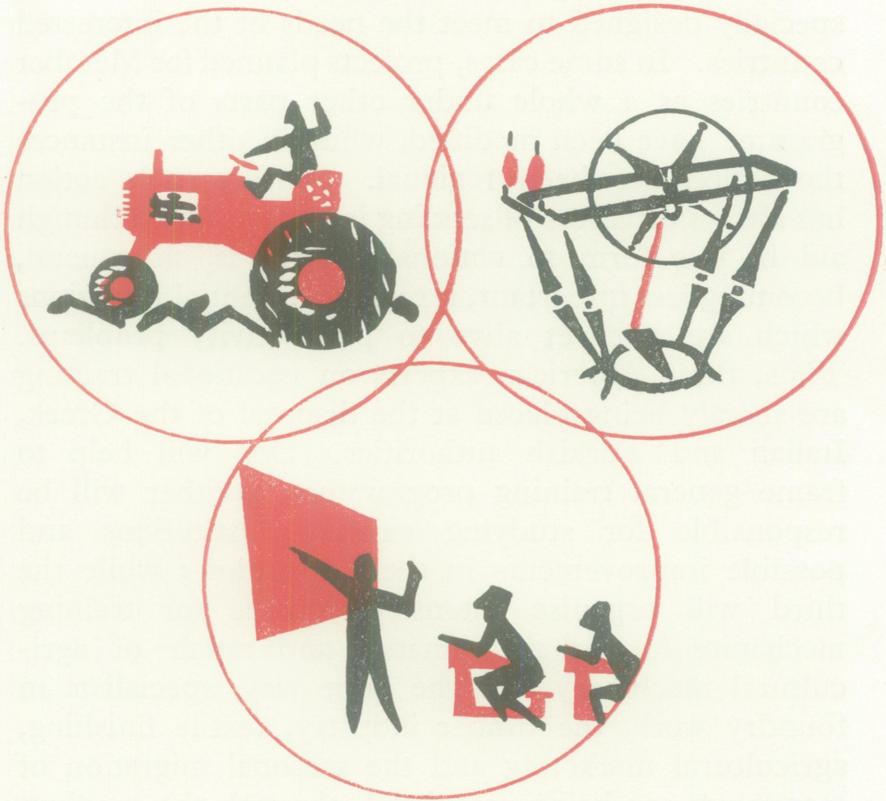
AREAS IN PROCESS OF DEVELOPMENT IN EUROPE

Here, activities must go beyond productivity in the limited sense of the term, and be aimed purely and simply at economic development. The reason is that, in countries where production and employment are inadequate, increased output is subordinate to an improvement in the general situation. The programme, which will absorb a very large part of the Agency's resources, is in three parts:

1. Interested countries are provided with the experts needed to draw up development projects. The Agency either helps in the training of national experts or ensures the co-operation of experts from other countries. Italy, Greece and Turkey have already profited from this form of technical assistance and will continue to do so.

2. Various types of action have been taken, specially designed to meet the needs of the interested countries. In some cases, projects planned for Member countries as a whole under other parts of the programme have been modified, while in other instances the action has been regional. So far, such action has always consisted of sending in experts and although aid in this form to national centres is, in general, becoming less important, it remains essential in regions which are not yet alive to productivity problems. Thus, three American experts on vocational training are shortly being placed at the disposal of the Greek, Italian and Turkish authorities. One will help to frame general training programmes, another will be responsible for studying existing institutions and possible improvements in their operation ; while the third will organise intensive courses for training mechanics in the maintenance and repair of agricultural machinery. In the same way, specialists in foundry work, the timber industry, textile finishing, agricultural marketing and the seasonal migration of manpower are being associated, through the medium of the Agency, with the productivity efforts of the Mediterranean countries. Finally by sending instructors, the Agency has assisted in launching a centre for training industrial supervisory staff in Palermo and intends to help a similar centre in Istanbul in the same way.

3. The Agency is trying to encourage and aid the creation of experimental and demonstration areas. This is the most important, difficult and costly form of action, but experience gained in other Member



countries or other parts of the world seems to prove that it is the best method of approach. A "pilot area" has already been established in the Oristano region of Sardinia, and two others are under study for the Epirus and South-West Asia Minor. The process of development will be comparable in all three cases.

In Sardinia, the area was chosen and marked out by a mission of members of a Working Party of the Productivity and Applied Research Committee,

followed by an on-the-spot enquiry by two agricultural experts. The programme which they drew up included the development of newly-irrigated land, improvement of animal-breeding, rural home economics, agricultural co-operation and the organisation of markets. An expert on local handicrafts has begun a similar task. Finally, a specialist on the development of community services and an economic geographer are in contact with local authorities and have begun to prepare a programme of general instruction and co-operation.

As a result of all this preliminary work, it has been decided to set up an international Board of Management including representatives of the Agency, the Italian Productivity Centre, the Sardinian authorities and the United States authorities. The Board will be responsible for drawing up a budget financed by the institutions represented, for approving a detailed programme, and for the general conduct of operations. An executive staff consisting of a Project Manager appointed by the Agency on the recommendation of the Board, and a number of consultants, will be responsible for carrying out the practical side of the programme.



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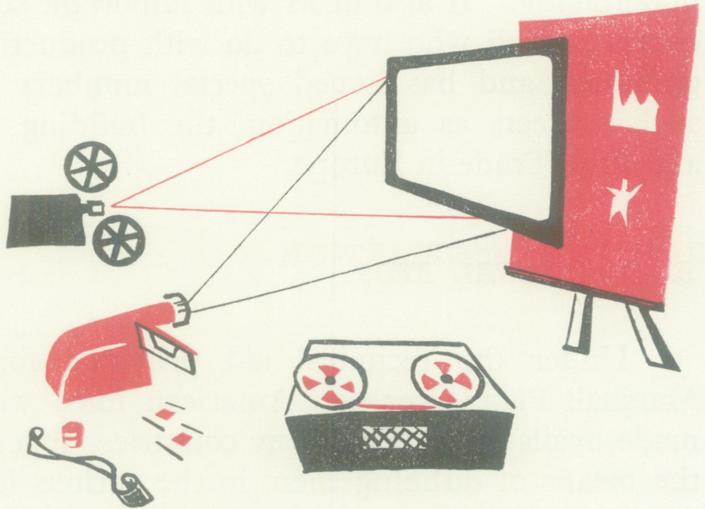
GENERAL INFORMATION AND AUDIO-VISUAL AIDS

GENERAL INFORMATION

Information has at least three different parts to play in the Agency's activities. First, it has been a method of attaining its objectives to date, for the national productivity bodies have to be supplied with documentary material and information on subjects figuring in their programmes of action. Secondly, information is an important feature of the Agency's "public relations" in bringing current projects and achievements to the notice of all those authorities, groups or individuals likely to be interested. Thirdly, it embraces the media of press, radio, television, etc. which aim to create in all Member countries a psychological climate favourable to action taken either by national bodies or by the Agency itself to increase productivity.

The first aspect, known as "Basic Information" is one of the more important features of the work of every operational unit in the Agency; some have their own means of diffusing information in their particular field such as the "Trade Union Information Bulletin", the "Productivity Measurement Review" and the

” FATIS Review “ mentioned earlier. The other two aspects constitute what is known as “ General Information ”.



Every month, the Agency publishes in English, French, German and Italian “ EPA Activities ”, a news-sheet which gives full details of current Agency activities and has a circulation list of over 15,000. The many institutes, organisations and private individuals who go to make up its readership can contact their national Productivity Centre if they wish to take part in any Agency activity.

Press releases, Press and radio conferences, and special articles written in connection with conferences, international meetings, study sessions or the issue of certain reports are the chief means which the Agency uses to publicise the results of its work. A magazine published every three months entitled “ European

Productivity " sums up the results of leading projects, includes original articles and information on the activities of national Productivity Centres and describes how successful aid has been given to some particular undertaking. It also deals with important subjects of concern to all who have to do with productivity programmes, and has issued special numbers featuring such subjects as automation, the building industry, and Free Trade in Europe.

AUDIO-VISUAL AIDS

Under the technical aid provided for by the Marshall Plan, over 900 American films were to be made available to European countries, together with the means of dubbing them in the various languages. American missions attached to Member countries have been gradually handing over these films either to the national Productivity Centres or to specially established audio-visual centres. It was in this connection that the audio-visual activities of the Agency originated and they have since assumed four main forms: the establishment of a central film library, the co-production of a certain number of European films, synchronising films for the benefit of Member countries, and courses on the use of audio-visual aids. At first, the film library was composed of films presented by the United States authorities, but others have gradually been acquired and today there are about 190 American, 25 Canadian and 240 European. Although these figures appear substantial, Member countries considered that the Agency could

have accomplished more in this matter, and a representative was consequently sent to the United States early in 1957 to select films and make contacts with suppliers who could provide films regularly. Eighty new films were bought in this manner and also a certain number of film strips. These films are sent to countries interested to enable them to be "viewed" and orders to be placed for extra copies with rights of translation and synchronisation where necessary. Other facilities of the cinema library include an information service and a film exchange service. In addition, Agency films are placed at the disposal of centres in countries which ask for them, and an agreement has been reached with the Customs authorities so that there is little hold-up or hindrance in this matter.

The Agency has done a great deal for Member countries in financing synchronisation work; it initially paid the full costs for 94 films, and later part costs for another series of over 100 films. It has also provided substantial technical assistance. A consultant was made available to national centres for setting up audio-visual services or for synchronisation work, and it should be mentioned that this same consultant also perfected a magnetic recording machine which more than one country is now using.

All this work would have been in vain if the Agency had not provided training in the use of audio-visual aids. A team of consultants toured Member countries to demonstrate how films and film strips should be presented and commented upon, and how flannel boards, working models and other means of

visual teaching should be employed. In this way, they trained a great number of demonstrators and instructors, not only for industry, but also in schools and colleges. The results are encouraging, since in several countries audio-visual groups have been set up to continue the work begun by the Agency.

FOUR YEARS OF ACTIVITY



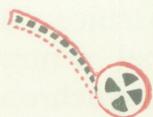
85 audio-visual courses in 13 countries



100 technical assistance missions



2 missions to the United States



800 American films of the Marshall Plan

190 new American films

25 Canadian films

240 European films

EPA Film
Library



29 issues of "European Productivity"



20 issues of "EPA Activities"



33 journalists visited the E.P.A.

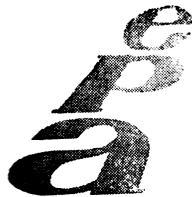
IN CONCLUSION

There are two comments which might be made in concluding this report. The first is that the early stages of the productivity drive in Europe were carried out in terms of a more or less static economy. There was a shortage of capital, and markets were still suffering from the chaos of war. Gradually, as Europe recovered, a more dynamic economic policy developed in individual Member countries with the growth of capital investment and the expansion of markets. This enabled governments and industry alike to adopt broader productivity programmes and to invest more in new machines and equipment.

The second significant aspect which should be underlined is that *acceleration* of technical change is perhaps one of the most

crucial points which have to be taken into consideration today. The immense strides made by scientists and engineers have apparently outstripped the present potential of industry and given rise to serious problems connected with manpower and the training of technicians.

Finally, the changing pattern of European economy is bound to affect future activities of the Agency and of the national Productivity Centres. The development of a European market — whether it be of six or more countries — will mean a re-orientation and adaptation of programmes to take into account the effects of European economic integration. There will be an even greater need for higher productivity in firms of all sizes, for competition will be fiercer, and efficiency will be the key to survival in both production and distribution of goods and services.



APPENDIX I

STRUCTURE

The structure of the Agency and the consequent distribution of responsibilities were intended by the Council of the O.E.E.C. to enable this "operational" service to develop and undertake practical work quickly without being bound by the rules of procedure applied to other branches of the Organisation.

THE ORIGINAL STRUCTURE

According to the statutes, the Council remained the supreme governing body, and had to approve not only the annual programme and budget of the Agency, but also the more costly projects ; the necessary powers to carry out day-to-day business were delegated partly to the PRA Committee and partly to the Secretary-General, represented by the Director of the Agency. The Committee fixed the rules and methods of work, approved projects of medium importance and kept under review the activities of the Director, whom it guided by means of directives. The Director was responsible for

submitting the programme of action to the Council and for carrying out the programme when it was approved ; this included the preparation and execution of all projects and the direct adoption of the least costly projects.

Alongside the Committee and the Director was the Advisory Board, consisting of representatives chosen from industry, agriculture and the trade unions for their ability and standing, for the purpose of expressing an opinion on the general trend of the work.

PRESENT STRUCTURE

By its decision of 27th January 1957 to continue the activities of the Agency, the Council of the O.E.E.C. decided to alter its structure.

A " Governing Body " consisting of a representative of each of the Member countries has now replaced the PRA Committee as the deliberative body of the Agency. Representatives are to be freely chosen, on condition that they are empowered by their government to act for their country, particularly with regard to the use of Agency funds and participation in projects. They are nominated personally, and their appointment must be recorded by the Council ; each of them may have a deputy to be appointed in the same way. The Governing Body will exercise all functions previously fulfilled by the PRA Committee; it is also authorised to approve all projects costing over 5 million Fr. frs., whereas formerly the most costly projects had to be approved by the council of O.E.E.C. The latter, however, continues to approve the annual programme and budget of the Agency.

For general guidance of the Agency's work, the Governing Body is advised by an Advisory Board which is no longer composed of persons appointed for their status alone, but of representatives of international non-government organisations proposed to the Council of the O.E.E.C. for appointment. The new Advisory Board will therefore act as a liaison group with these organisations and as spokesman of the official views of the professional bodies. On technical matters, i.e., the contents of the various chapters of the annual programme and the preparation of projects, the Agency may request an opinion either from the committees and working parties of the Organisation or from two special committees set up for that purpose or from "ad hoc" groups of experts appointed by the Director. The opinion of these various bodies is communicated by the Director to the Governing Body.

The two "special committees" referred to are known as the "Productivity Committee" and the "Committee for Applied Research". The former consists of representatives of the Productivity Centres, and the latter of representatives of the national applied research institutes. The Productivity Committee is intended to be a forum for exchanges of information and experience between those responsible for the national Productivity Centres. Its discussions will enable the Director and the Governing Body of the Agency to ascertain the programmes, needs and possibilities of these Centres.

WORKING PROCEDURE

PREPARATION OF PROGRAMMES

Special arrangements have been made for the part of the programme concerned with agriculture. When the Agency was set up, it was recognised that the Food and Agriculture Committee of O.E.E.C. was "the body of the Organisation best qualified to advise the European Productivity Agency on the technical aspects of the various questions which might affect food and agriculture in the programme and activities of the Agency". Consequently, the Council of O.E.E.C. decided that the Secretary-General would submit to the Food and Agriculture Committee for comment those parts of the Agency's programme of action and estimated expenses which related to food and agriculture. When a Committee of Ministers of Agriculture and a Directorate of Agriculture were established in the O.E.E.C., there was a complete division of work between these new bodies and those of the Agency, which was the outcome of internal "arrangements" but has never been sanctioned by any formal decision. The agricultural part of the Agency's programme is drawn up, not by the Director of the Agency, but by the Committee of Deputies of the Ministers of Agriculture, on the proposal of the Director of Agriculture. It is afterwards incorporated into the general programme.

E.P.A. BUDGET

The Budget of the Agency consists of two parts: Part I, called "operational", contains the allocations necessary for financing the activities envisaged under each chapter of the programme. These activities must be begun before the end of the financial year, but they may continue through subsequent financial years. The sums entered in Part I of the Budget are, therefore, the maximum commitments authorised.

Part II contains the allocations necessary to meet general expenses during the financial year (administrative services, rents, maintenance) ; these are therefore expenditure allocations.

PREPARATION OF PROJECTS

Each project has its own, separate budget, and is approved individually. It has gradually become the practice to group a series of activities with the same aim into a single project. For this reason, certain projects absorb the entire sum allocated to a budget section. These adjustments have simplified the Agency's administrative work and clarified its programme.

Projects originate either in a Member country, the Director's office, or even in an O.E.E.C. Committee which may be said to "place an order" with the Agency for action it considers useful. Projects developed under the agricultural part of the programme are prepared by the Directorate of Agriculture and discussed by the Committee of Deputies of the Ministers of Agriculture. This discussion results, as it were, in approval at technical level before normal approval of the project by the Agency.

In order to obtain a general view of the projects proposed and to avoid duplication, the Director undertakes to study between July — when the financial year begins — and December, all suggestions made and to draw up a list of projects which can be fitted into the annual Programme. Over the same period, views are exchanged with countries which have proposed projects, and meetings of experts are convened to examine methods of procedure.

The establishment of this list therefore entails selection and establishes an order of priority. Once the list is passed, the projects are notified individually for adoption ; they must be approved before 30th June. It is seldom that actual work on a project can be begun before the beginning of the following financial year.

Before a project can be put into effect, two separate decisions are required :

a) *It must be adopted by the majority vote of the Governing Body (unless it costs less than Fr. frs. 5 million, in which case it can be adopted by decision of the Director) ;*

b) *It must, in both the above cases, also evoke a declaration of “ participation ” or “ interest ” from a certain minimum number of countries.*

A declaration of “ participation ” is used for such types of project as a conference or a mission to the United States for which countries can nominate persons to take part, or for visits by experts to various countries. A declaration of “ interest ” is used for such projects as the production of a report or a continuous Agency service where no physical participation by countries is involved and where, consequently, there are no local costs to be borne and the country makes no specific

contribution to the costs of the Agency. The minimum number originally set for declarations by countries was five for all projects, but it was recently decided that in cases where a declaration has no financial implications for the countries concerned, this figure should be raised to seven.

The so-called "five-country rule" cannot, for obvious reasons, be applied to "regional" projects, e.g. those in favour of territories in course of development. Only a limited number of Member countries can, by definition, participate in such projects. No difficulty arises, however, since the rule in question was made by the Governing Body itself, which can accordingly authorise exceptions.

FINANCIAL RESOURCES

For its working expenditure the Agency draws on a capital fund from which the necessary amounts are allocated year by year. That is to say, it is not subject to the vote of an annual grant based on a budget, with any unspent surplus being withdrawn.

EUROPEAN CONTRIBUTIONS

Capital was initially provided from two sources: Member countries benefiting from Benton-Moody aid paid 8 per cent of counterpart funds into the Agency and the American authorities granted it \$2.5 million. Originally, most of the payments in national currency were only partially convertible, and the remainder, although the property of the Agency, could be spent only in the currency of the country concerned. This rule was progressively relaxed, and from 1st July 1957, all payments in national currency have become convertible. The initial capital from these two sources amounted to approximately Fr. frs. 4,000 million.

In each financial year from 1953-54 to 1956-57 inclusive, the O.E.E.C. has paid Fr. frs. 150 million into the Agency funds, a sum representing part of the Organisation's budget which was spent on work relating to productivity before the Agency was formed. This payment was prompted by the desire that the whole capital should be employed on activities which the O.E.E.C. had previously been unable to undertake.

When deciding that the Agency's activities should be continued after 1st July, 1957, Member countries undertook to subscribe annually, for at least three years, a total of " about Fr. frs. 600 million ", instead of the former 150 million. This contribution (Fr. frs. 594 million for 1957-58), calculated on the same percentage basis as the contributions to the O.E.E.C., is paid into the Agency funds in the same way as before. It is thus quite different in kind from the Member countries' annual contribution to O.E.E.C. expenditure.

Other income has come from interest on investments and miscellaneous receipts, e.g. from the sale of publications. Discussions are also in progress with the " observer " countries, with a view to fixing annual lump-sum contributions to cover their participation in projects.

UNITED STATES AND CANADIAN AID

Over and above their initial contribution, the American authorities have so far made a special contribution averaging about \$1.5 million yearly. Since 1956-57, there has been a radical change in the method of allocating special aid from the United States. It is no longer granted through the reimbursement of

specific costs but takes the form of an annual contribution, which is also paid into the Agency funds. But, it is not fully merged with the rest of those funds. First, the major part must be spent in dollars, and, secondly, although it need no longer be used for carrying out projects designated by the American authorities, it must be devoted to certain sections of the programme, agreed with them.

In 1956-57, Canada, in turn, decided to make a grant of Can.\$20,000, on the same principle as the special aid forthcoming from the United States.

APPENDIX II

REFER- ENCE NO.	NO. OF PROJECT	TITLE
(1)	148	<i>Statistical quality control</i>
(2)	172	<i>Training in cost accounting and budgetary control</i>
(3)	173	<i>Training in production planning and control</i>
(4)	181	<i>Practical courses in industrial engineering</i>
(5)	269	<i>Seminars on variety reduction</i>
(6)	375	<i>Marketing seminars</i>
(7)	380	<i>Personnel management</i>
(8)	381	<i>Office management</i>
(9)	318/1	<i>International conference on statistical quality control</i>
	318/2	<i>Training mission to the United States for teachers of statistical quality control</i>
	318/3	<i>Secretariat for liaison between Member countries in the field of quality control</i>
(10)	382	<i>Advisory service in industrial management</i>
(11)	390	<i>Management development seminars</i>
(12)	231	<i>Programme of training in job analysis</i>
(13)	272	<i>Current practice with regard to analysis and measurement of work</i>
(14)	278	<i>Study of the function, organisation and methods of industrial design departments in the United States</i>
(15)	349	<i>Conference on dissemination of management principles and techniques</i>
(16)	374	<i>Survey and conference in connection with advisory services for handicraft businesses and small and medium sized firms in industry and commerce</i>
(17)	384	<i>Productivity in small enterprises</i>
(18)	331	<i>International conference of directors of advanced training centres</i>

REFER- ENCE NO.	NO. OF PROJECT	TITLE
(19)	378	<i>Fourth international conference on business management education</i>
(20)	329/1	<i>Training in the United States of European teachers in business administration</i>
	329/4	<i>Training in the United States of European teachers in business administration</i>
(21)	369	<i>Advanced training in Europe for professors in business management</i>
	404	<i>Summer seminar for management teachers</i>
(22)	329/2	<i>Liaison between European and American establishments of higher learning in the field of business management</i>
	329/3	<i>International co-operation in the field of education for management</i>
	411	<i>Information and advisory service in the field of education for management</i>
(23)	184	<i>Case studies on the reduction of variety</i>
(24)	347	<i>Studies of management organisation in various European countries</i>
(25)	142	<i>Retail food distribution</i>
(26)	166	<i>Retail store merchandising (non-food)</i>
(27)	167	<i>Warehousing and wholesaling</i>
(28)	365	<i>Advisory and consultative service for the distributive trades</i>
(29)	376	<i>Training in the United States of distribution and marketing consultants</i>
(30)	362/1	<i>Seminars in the field of packaging</i>
	362/2	<i>Munich symposium on packaging</i>
(31)	377	<i>Mission to the United States of top officials from retail associations</i>
(32)	353	<i>Survey of education and training for the distributive trades</i>
(33)	261	<i>Market research methods in Europe</i>
(34)	328	<i>Market research survey on iron and steel products</i>
(35)	342/2	<i>International conference on marketing by manufacturers</i>
(36)	335	<i>Fitting the job to the worker</i>

REFER- ENCE NO.	NO. OF PROJECT	TITLE
(37)	179	<i>Evaluation of industrial in-plant training programmes</i>
(38)	189	<i>Selection and training of vocational training instructors and the selection of candidates for vocational training</i>
(39)	359	<i>Accelerated vocational training of unskilled and semi-skilled manpower</i>
(40)	268	<i>Establishment of experimental employment exchanges in certain Member countries</i>
(41)	418	<i>Vocational training in view of technological changes</i>
(42)	338	<i>Occupational accident prevention</i>
(43)	234	<i>Supervisory training programme</i>
(44)	175	<i>Training programmes for trade union leaders</i>
(45)	176	<i>Intra-European labour TU team development</i>
(46)	177	<i>Trade union information and research</i>
	175/2	<i>Continuation of trade union projects</i>
	175/3	<i>Trade union programme ; continuation of 175/2</i>
(47)	175/4	<i>Trade union programme ; continuation of 175/2</i>
(48)	164	<i>Study on the reactions of workers in the steel industry towards technological changes</i>
(49)	178	<i>Analysis of human relations policies and practices</i>
(50)	188	<i>Training of trainers</i>
(51)	227	<i>Training of European trainers in an industrial training school in the U.S.A.</i>
(52)	339	<i>Training of trainers in human relations</i>
(53)	312	<i>Human relations in industry</i>
(54)	352	<i>Conference on the rational organisation of industrial research</i>
(55)	324	<i>Enquiry into the development and exploitation of inventions</i>
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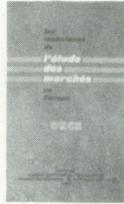
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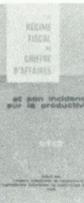
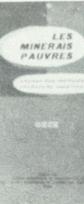
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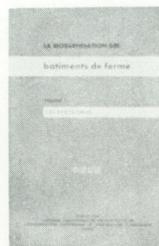
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