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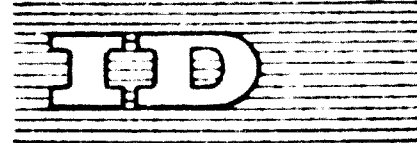
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D 00144



Distr.
LIMITED

ID/G.17/3
July 1968

ORIGINAL: ENGLISH

United Nations Industrial Development Organization

United Nations Economic and Social Office in Beirut

Expert Group Meeting on the Development of Small-Scale
Industries in Arab Countries of the Middle East

Beirut, Lebanon, 11-16 November 1968

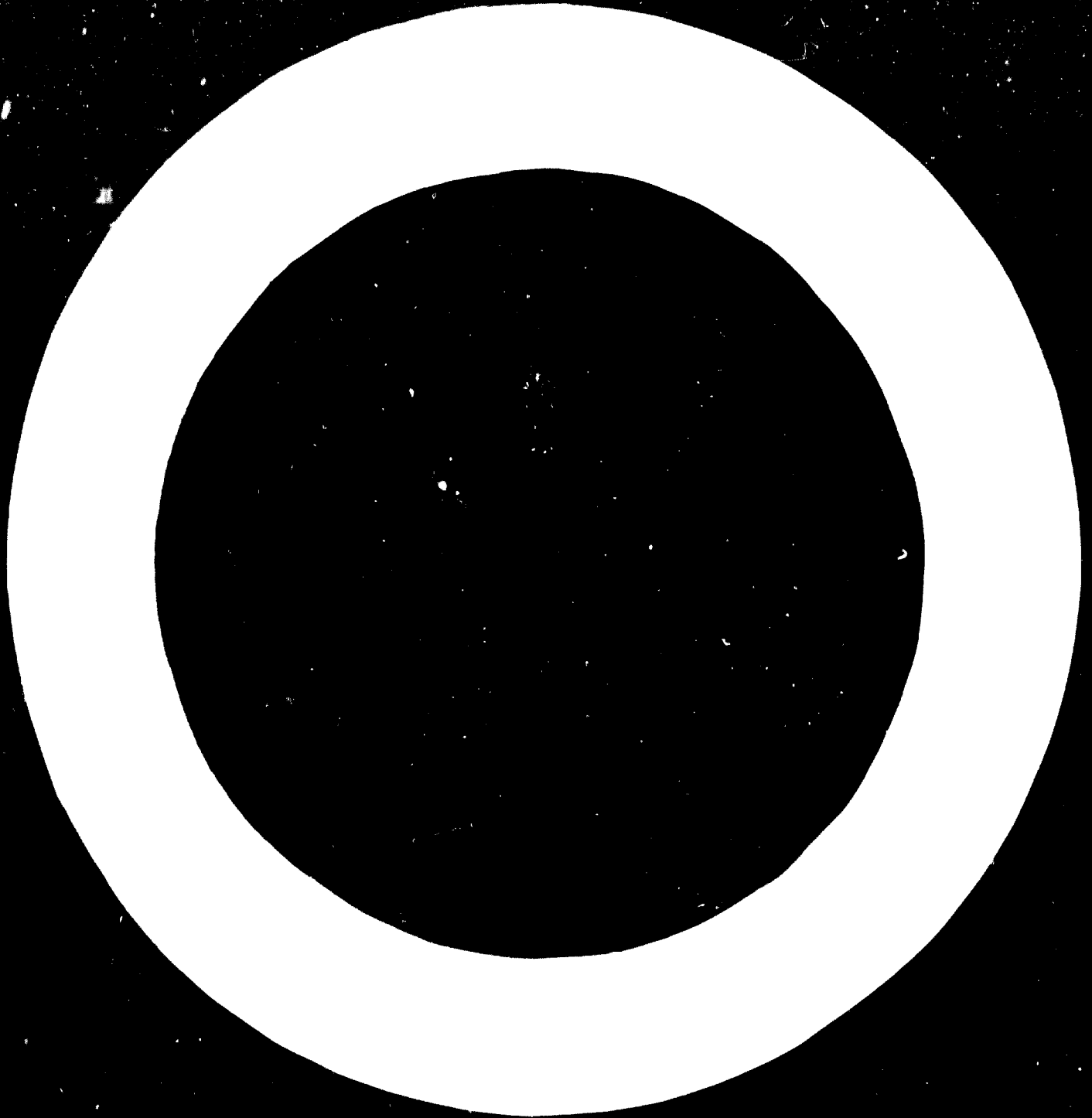
Agenda item 6

**SPONSORSHIP, ORGANIZATION AND FINANCING OF TECHNICAL SERVICES
AND FACILITIES IN THE LIGHT OF INDIAN EXPERIENCE**

by

P.C. Alexander

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ID/CONF.2/10
May 1967

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

INTER-REGIONAL SYMPOSIUM ON TECHNICAL
SERVICES AND FACILITIES FOR
SMALL-SCALE INDUSTRIES

Vedbeek^{ag}, Denmark
26 June to 8 July 1967

Agenda item 5

SPONSORSHIP, ORGANIZATION AND FINANCING OF TECHNICAL SERVICES
AND FACILITIES IN THE LIGHT OF INDIAN EXPERIENCE

Presented by P.C. Alexander



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SPONSORSHIP, ORGANIZATION AND FINANCING OF TECHNICAL SERVICES
AND FACILITIES IN THE LIGHT OF THE INDIAN EXPERIENCE

I. NEED FOR GOVERNMENT INITIATIVE IN PROVIDING TECHNICAL SERVICES
FOR SMALL INDUSTRIES IN DEVELOPING COUNTRIES.

Industries, whether small or large, are in need of a variety of technical services and facilities in developing countries. In the case of large industries such services are secured mainly through foreign collaboration..

Some developing countries offer special incentives and concessions to foreign entrepreneurs to establish new industries or subsidiaries and branches of existing industries in the hope that these industries, though entirely owned and managed by foreigners, will eventually spark off the industrialisation process and lead to stimulation of indigenous entrepreneurship. They hope that the middle and junior level managers and technical supervisors who will be nationals of the country will in due course acquire sufficient skill and experience to start industries of their own. They also expect that the example of a successful industrial venture, though managed by foreigners, will provide the confidence to indigenous entrepreneurs to start similar ventures.

Some other developing countries do not permit the establishment of entirely foreign owned industrial units, but, instead, try to promote joint ventures in which indigenous entrepreneurs will have a share.

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Some others go a step further, and allow joint ventures only on condition that the majority of shares are owned by the indigenous party.

The three types of foreign collaboration referred to above often mark three different stages of industrial development in a developing country. In the initial stage of industrial development, the country is in need of foreign capital, management and technical know how. In due course technical know how will become the main contribution of foreign entrepreneurs; they are acquired either on outright-payment basis, or, as in most cases, by offering a share in capital and management.

This pattern of securing technical know how and services through foreign collaboration, which has become a uniform feature of developing economies, is, however, true only of large industries. The position about small industries is quite different.

In newly industrialising countries there are two broad groups of small industries. The first is the group of traditional craftsmen and artisans who are in the process of modernisation of their skills, tools and techniques of production. The second is the group of modern small industries who produce a variety of consumer goods and simple producer goods, and also components and parts required by large industries. In either case, by the very fact of the smallness of their operation, small industries are not able to attract the interest of foreign entrepreneurs. In the case of the first group viz., artisans in the process of modernisation, technical assistance from foreign sources, even if available, may not be very useful. The modernisation and transformation of the traditional artisan is a process to be carried out

with special reference to the historical background and special circumstances of each country and each trade, and this is a field where foreign experience may not be often very relevant.

Small industries in developing countries, therefore, are obliged to look for services and facilities from indigenous sources. A typical feature of a developing economy is the absence or inadequacy of institutional agencies to provide the services and facilities required by industries. This is true not merely of technical services and facilities but also of other facilities such as credit, training, management counselling etc. While some beginnings have been made in most developing countries in setting up institutions for providing credit facilities, there is an almost complete absence of such institutional facilities in the field of technical services. In fact the problem is a more basic one. There are not adequate number of small industrial units to induce private agencies to organise such services and facilities. The problem thus presents itself in the traditional vicious circle viz. absence of services and facilities preventing the development of small industries and non-development of small industries, discouraging the establishment of institutional agencies to provide such services and facilities. It is such a situation that calls for and justifies the initiative and intervention of the Government. In fact, it was in exactly such a situation that the Government of India decided about 12 years ago to assume the direct responsibilities for providing a wide range of services and facilities, including technical services and facilities, for small industries.

II. EVOLUTION OF THE INDIAN PROGRAMME

Within a year of Indian Independence, the Government of India adopted and announced a policy of positive support to the small scale sector* and its modernisation. The Industrial Policy Resolution of the Government issued in April 1948 defined the Government policy on small industry development in the following terms:

"Cottage and small scale industries have a very important role in the national economy, offering as they do scope for the individual, village or co-operative enterprises and means for the rehabilitation of displaced persons. These industries are particularly suited for the better utilisation of local resources and for the achievement of local self-sufficiency in respect of certain types of essential consumer goods".

Small Industries in India are broadly divided into three categories:-

- (i) Those which form an integral part of the village economy - these are called village-industries: example, oil pressing, bee keeping, paddy-husking, cane and bamboo work, etc;
- (ii) Those which represent traditional skills and crafts: example, handicrafts, handlooms, etc; and
- (iii) Those which use modern tools and techniques of production and have intimate connection with the corresponding large-scale industry.

The term "small-scale industry" used in this paper, refers to the third group mentioned above. In the early stages of the implementation of the small industries development programme, small industries were defined as industries having less than Rs. 500,000 investment in fixed assets and employing not more than 50 workers, if power is used, and not more than 100, if power is not used. Later, the employment criterion was omitted from the definition of small-industries, and a small industry was defined as one with capital investment of less than Rs. 500,000.

The definition has recently been raised, and now a small industry is defined as one with investment of less than Rs. 750,000 in machinery and equipment. The cost of land and building has been omitted from the capital ceiling, and the ceiling itself has been raised from Rs. 500,000 to Rs. 750,000.

The Resolution further observed:

"The healthy expansion of cottage and small scale industries depends upon a number of factors like the production of raw materials, cheap power, technical advice, organised marketing of their products and where necessary, safeguards against intensive competition by large-scale manufacturers, as well as on the education of the worker in the use of the best available techniques".

Even though the crucial importance of technological improvement of small scale industries was recognised by the Government in this Resolution, there was very little effective follow up action as far as the group of modern small industries was concerned. In the case of certain traditional industries such as handlooms and handicrafts, some technical services and facilities were provided through agencies set up by the Central Government, but the development of modern small industries received very little attention by the Central or State Governments till the 1st Five-Year Plan (1951-56).

Under the Federal Constitution of India, the constituent States of the Indian Federation are primarily responsible for industrial development. However, in 1951 the Central Government enacted a very important legislative measure called the Industrial Development and Regulation Act under which it assumed extensive powers of control and direction over the development of medium and large industries. The Act empowered the Central Government to take under its control thirtyeight main groups of industries which were listed in the First Schedule of the Act. These industries, generally referred to as "scheduled industries", cover practically all major industries. The main objective of this assumption of responsibilities over major industries by the Central Government was to ensure the healthy development of these industries in conformity with overall national policies. The Act required that

every industrial undertaking falling under the list of scheduled industries should be registered with the Central Government and that no new industries in the scheduled list should be started except under a licence issued by the Central Government. It empowered the Central Government to cause investigations to be made into any scheduled industry in case of decline in production or quality, abnormal rise in prices or other such circumstances, and to issue appropriate directives regulating production, distribution of articles or controlling prices. The Act also empowered the Central Government to regulate the supply and distribution of articles related to any scheduled industry in order to ensure equitable distribution of such articles and their availability at fair prices.

With the enactment of the Industrial Development and Regulation Act 1951, the Central Government became directly responsible for the planning and development of all the important medium and large industries in the country. It soon became obvious that industrial planning and development could not be achieved in sectors, and that the modernisation and development of small industries constituted an integral part of overall industrial development. The Government were convinced that in order to build up a sound and stable sector of medium and large industries, there should be an equally sound and stable base of small industries, and that the modernisation and technological development of small industries were as much important for the progress of large industries as for small industries themselves. However, it was equally obvious that in view of the vastness of the number of small industries and their widely dispersed location, the Central Government could not assume the full responsibilities for their development.

The need for Central Government initiative in providing certain essential technical services and facilities became obvious, and the Government were considering the establishment of a Central Institute for this purpose. However, before taking any step in this direction, the Government decided to obtain the services of an International Team of experts to formulate a comprehensive programme for development of small industries. Accordingly an International Team of experts was assembled in 1953 with the help of the Ford Foundation. After a thorough study of the problems of small industries, the International Team submitted its report in March 1954 recommending a comprehensive development programme. The most important recommendation of the Team was the establishment of an industrial extension service to provide technical advice and assistance, common service facilities and training to small industrialists. The Team recommended that instead of one Central Institute for providing technical services to small industries, there should be four such Institutes and that they should function on a regional basis.

The major recommendations of the Team were accepted by the Government and four Regional Small Industries Service Institutes were established with headquarters at Delhi, Calcutta, Bombay and Madras. Government also recognised that any assistance programme for small industries, in order to be effective, should be an integrat^{ed} one, and introduced a series of measures designed to meet the requirements of small industrialists for credit facilities, marketing, training, etc. This was a comprehensive programme of development in which the Central and State Governments were to assume substantial responsibilities. The Central Small Industries Organisation (CSIO) under the Development

Commissioner for Small Scale Industries was established and it was charged with the direct responsibility for providing industrial extension services as well as for coordinating the activities of various agencies at the Central and State levels engaged in the development programme.

The Second Industrial Policy Resolution issued in April 1956 reiterated the Government's policy in favour of modernisation and technological improvement of small scale industries. It stated inter alia as follows:-

" The State has been following a policy of supporting cottage, village and small scale industries by restricting the volume of production in the large scale sector, by different taxation, or by direct subsidies. While such measures will continue to be taken, whenever necessary, the aim of the State policy will be to ensure that the decentralised sector acquires sufficient vitality to be self-supporting and its development is integrated with that of the large scale industry. The State will, therefore, concentrate on measures designed to improve the competitive strength of the small scale producer. For this, it is essential that the technique of production should be constantly improved and modernised, the pace of transformation being regulated so as to avoid, as far as possible, technological unemployment."

III. TECHNICAL SERVICES AND FACILITIES BY PUBLIC AGENCIES.

1. Technical Services and facilities by the C.S.I.O.

In pursuance of the Government policy of improving and modernising the small scale sector, a series of measures were taken by the Government during the Second Five-Year Plan period (1956-61). The most important among them was the strengthening and expansion of the technical services and facilities of the CSIO. In the place of the four Regional Small Industries Service Institutes, seventeen Small Industries Service Institutes were established, one in each of the sixteen States and in the Union Territory of Delhi. Besides, four Branch Institutes and

about sixty specialised Extension Centres were also established. The office of the Development Commissioner, which is the headquarters of the C.S.I.O., was strengthened by the appointment of several senior Directors to provide effective direction to the programmes in the field.*

The following are the important services and facilities provided by the CSIO to small industrialists:-

Advice on improved technical processes and use of modern machinery and equipment

Preparation of designs and drawings for machinery and machinery parts, equipment, dies, jigs, tools and fixtures

Technical assistance on the use of raw materials and improved designs

Demonstration of modern technical processes through model workshops and model production units

Training of workers, supervisors and managers in technical trades and skills such as heat treatment, foundry practice, etc.

Common service facilities such as electroplating, heat treatment, etc.

Technical assistance in the development of ancillary industries

Assistance with advice and training in proper methods of business management, including marketing, financial and cost accounting, production management, industrial engineering, factory legislation, personnel relations, etc.

Conduct of economic surveys in particular industries and areas and advice on the prospects of starting new industries or expansion of existing ones

Publication of bulletins, pamphlets and model schemes and other promotional literature

The C.S.I.O. has on its staff over 1300 technical personnel of various grades and an equal number of non-technical and administrative personnel.

Lack of knowledge of modern tools and methods of production and management has been the main handicap of small industries in India. It will be seen from the functions of the CSIO described above that they have been specially designed to help the small industrialists in overcoming these problems.

Each small industries Service Institute is under the direction of a senior technical officer of the rank of Director, who is responsible for supervising the work of other technical staff under his control. The Director himself provides direct advisory service to small industries in his line of specialisation.

The technical staff of the Institute and Extension Centres not only deal with specific problems brought to their attention by small industrialists, but also visit the small factories on their own initiative, without waiting for small industrialists to come to the Institute for assistance. The assistance programme covers all aspects of development of small industries. Advice is given on the selection of industries, and this is followed up by guidance in the selection of machinery and raw materials, factory lay-out, designing of tools, and in day-to-day production programmes, till the industry is able to stand on its own feet. The Institute and Extension Centres are located in areas, where small industries are concentrated, or where there is potential for small industries growth.

The Institutes have also a number of mobile vans which go to the semi-urban and rural areas in order to demonstrate the use of modern machinery and equipment. These vans are fitted with tools and equipment in trades like black-smithy, carpentry, shoe-making, electric-wiring, electro-plating, welding, etc. The artisans are allowed to handle the

machines mounted on the vans in order to get acquainted with modern equipment. The staff attached to the mobile workshop give information about sources from which these machines can be purchased, and help in sponsoring applications for supply of machinery under the hire-purchase scheme.

Assistance to small industries in improving designs of their products is another major service rendered by the CSIC. This programme aims at improving designs of various industrial products by undertaking studies on consumer tastes, functional values and aesthetic appeal and by producing prototypes of improved designs. The prototypes along with drawings are offered to small industrialists for commercial production.

2. Technical services and facilities by the National Small Industries Corporation.

Besides the CSIC, which is organised as a Department of Government under the Ministry of Industrial Development, there is another organisation under the Ministry, organised as a private limited company, called the National Small Industries Corporation (NSIC) for providing certain technical services and facilities to small industries. Its main functions are to assist small industrialists in obtaining imported and domestic machinery on hire purchase basis and to secure orders for small industry products under the Government's Store purchase programmes. The NSIC has been also entrusted with the management of the three Prototype Production and Training Centres which have been set up with foreign collaboration at Rajkot (Gujrat State), Okhla (near Delhi) and Howrah (near Calcutta). The principal objective of these Centres is to design, adapt and develop machine tools and equipment suitable for manufacture by Indian small industries. Under the scheme, proved machines with complete designs and drawings will be made available to small industrialists

who will produce them. In the initial stages of transfer, the staff of the small industrial unit will be trained at the Centre, after which they will be given production responsibilities according to a phased schedule. The Centre will supply components and parts which the small industrial unit may not be able to manufacture in the initial stages, and also provide technical guidance at every stage. Ultimately the small unit will be in a position to manufacture the item on commercial lines.

The Centre also undertakes the training of apprentices and various categories of technical staff belonging to small scale industries.

The workshops and laboratories of the Centre also provide common service facilities to small industries. This service is not limited to those who participate in the prototype programme, but is available to all small industrialists who ask for such service.

3. Technical services and facilities by State Government Agencies.

The State Governments do not generally attempt to provide technical services and facilities if they are available within the State under the CSIO programmes. However, some State Governments have set up Common Service Facilities Centres to supplement those set up by the CSIO. Mostly, such Centres are located in industrial estates .

State Governments have also set up Training-cum-Production Centres which are intended to provide training in actual production conditions.

Another service provided by State Governments is in quality marking and testing. Centres for quality marking and testing have been set up in localities where there is a concentration of a particular trade.

Some State Governments have also set up Extension Centres on the

model of the Extension Centres of the CSIO to cater to the needs of specific trades.

IV. TECHNICAL TRAINING FACILITIES FOR SMALL INDUSTRIES

The requirements of technical training for small industries are met by the following three main groups of training:-

1. Vocational training sponsored by the Ministry of Labour and other Departments of the Central and State Governments;
2. The National Apprentices Scheme; and
3. Special training courses organised by the CSIO.

The chief institutions providing vocational training in the country are the Industrial Training Institutes (ITI) sponsored by the Ministry of Labour of the Central Government. They provide training in 29 engineering and 22 non-engineering trades. The period of training in engineering trades is 18 months and that for non-engineering trades, 12 months. The training in the ITI's is followed by inplant training in industries.

The National Apprenticeship Scheme was introduced under the Apprenticeship Act of 1961. The Central Government determines the ratio of apprentices to skilled workers for different categories of trade taking into consideration the facilities available for training, and ensures that the industrial units concerned satisfactorily complete their obligations for training of apprentices. At present training is imparted in 23 trades. Over 127 industries have been brought under the purview of this Act.

While the ITI's provide training to fresh men who after training may join industrial establishments, the CSIO provides training to those who are already employed in small industries. The following are the

important training courses conducted by the CSIO:-

Shop practice courses - these are full-time courses for senior artisans for shouldering supervisory responsibilities in shop operations such as machine shop practice, tool room practice, foundry practice, blacksmithy and forging room practice, etc.

Trade-Oriented Courses - these are full-time courses intended primarily to provide semi-skilled and skilled workmen with advanced knowledge in a particular trade, such as tool maker, fitter, machanist, sheet metal worker, etc.

Process-Oriented Courses - these are full-time courses for persons who are already familiar with the production process in some form or the other, or are qualified tradesmen. Training is imparted in subjects such as heat treatment, electric and gas welding, tanning, leather finishing, etc.

Product-Oriented Courses - these are full-time courses for persons having basic knowledge of the manufacture of the products in some form or the other. Products covered are foot-wear, paints and varnishes, etc.

Blue-print Reading Courses - these are covered by evening classes of short duration.

In addition, the CSIO also provides training, mostly through evening classes, to managers of small business on various subjects relating to business management and marketing.

V. EVALUATION OF THE ROLE OF PUBLIC AGENCIES.

The circumstances under which the Government took the decision to undertake the responsibilities for direct technical services to small industry have been explained in the earlier part of this paper. The programme of providing technical services and facilities was part of an integrated programme of assistance to small industries which covered a wide range of facilities such as factory accommodation through industrial estates, supply of machines on hire purchase basis, credit on easy terms, preference in Government Store purchase programmes etc. Judging from overall results, it can be said beyond any shadow of doubt that the

development programme as a whole has been a significant success. It has resulted in the creation of thousands of new healthy small enterprises and in providing the much needed strength and viability to thousands of existing units who were facing the prospects of decline and extinction. It has contributed significantly to the evolution of an integrated industrial structure where large and small industries coexist and complement each other.

While it is a fact the Government's role in providing various services and facilities to small industries has undoubtedly yielded good results, some important questions remain to be answered. How long should the Government continue in this role? How and to what extent should public agencies withdraw from their current responsibilities?

Recent trends in India indicate that there are reasonable prospects of the Government reducing its direct responsibilities for providing credit and certain physical facilities such as factory accommodation through industrial estates. Institutional agencies such as commercial banks are becoming increasingly aware of their responsibilities in the matter of providing credit for small industries. Government's role in due course may be reduced to one of providing the necessary guarantees and assurances to these institutions. With the technological improvements achieved by small industries, they are increasingly becoming credit-worthy and risk-proof in the eyes of the credit agencies. As regards industrial estates, private associations and cooperations of small industries are coming forward, in large numbers to assume responsibilities which were previously the direct concern of public agencies. In due course, Government's role in this field also may be limited to one of supporting private agencies and supplementing the resources of private agencies. However, no such trend is seen as far as technical services and facilities are concerned. They still remain the direct responsibility of the Government, and there

are no indications of any private institutions or associations of small industries coming forward to assume such responsibilities.

This should not be taken to be a tribute to the excellence of the services rendered by Government agencies or a recognition of any special merits in the existing arrangement. While Government agencies have been endeavouring to provide technical services and facilities to the best of their abilities, experience of the last twelve years of Government's role in this field has brought to light several shortcomings in this arrangement. The most important of them are the following:

(1) Government officials who are responsible for rendering technical services and facilities are also responsible for a variety of regulatory and control duties such as recommending applications for import of machinery and raw materials, sponsoring applications for loans etc. In many cases, the regulatory and administrative functions engage the greater part of the time and attention of the technical staff. This has led to the danger of "service" Institutes becoming less service minded and more bureaucratic.

(2) Since the CSIO is a regular department of the Government, it has to conform to all the rules and regulations of the Government in administrative and financial matters. Technical officers, who have neither the taste nor training for administrative work, find themselves entangled in such work and complain about the large number of statements and forms they have to fill up and the reports they have to receive and send. The valuable time and talents of technical officers are wasted on routine

administrative problems which could well have been avoided in a non-Governmental set-up.

Senior technical officers who are in administrative charge of Institutes or Extension Centres find that they have to spend more time on administrative work than on pure technical work. In due course they may discover that they have become administrators and ceased to be technicians.

(3) Recruitment of all senior staff, whether technical or administrative, for Central or State Governments is done by the respective Public Service Commissions. The system of Central recruitment results in long delays in filling up vacancies, and reduces the flexibility in selection which is very necessary in a technical service organisation.

Problems of small enterprises vary from region to region, and often from state to state. Some places and some industries have special problems which need specialised attention by persons with special knowledge and experience of these problems. There is no scope for recruitment and posting of such staff under the existing system of central recruitment.

(4) Promotion from one grade to another is done according to strict rules of the Government, where great importance is given to seniority or the length of service. Further, there are strict rules about the number of vacancies to be filled on promotion in various categories of posts. The operation of these rules makes the promotion system very rigid and leaves little scope for rewarding outstanding work done by technical staff.

(5) Since recruitments and appointments of staff in the CSIO are made on all-India basis, technical officers are liable for transfers from place to place. Such transfers also become necessary to provide for promotions. These frequent transfers destroys the "personalised" nature of extension service.

(6) Absence of a regular system of in-service training for the technical staff makes their knowledge out of date and reduces the usefulness of their service. Opportunities made available to the technical staff, particularly those at senior levels, to keep themselves up-to-date with the latest developments in technology, are quite inadequate and this affects the quality of their consulting service.

(7) The equipment and tools in some of the service centres and workshops have already become out-of-date. Some of them are no longer the best suited or most economical for small enterprises. The CSIO, acting within the limitations of Government rules, has not been able to replace them quickly or supplement them with new tools. In this respect they have lost their 'model' value.

(8) There have been quick changes in the patterns of occupations in various regions and towns. Towns which used to be centres of wood working trade have developed into metal working complexes, and centres of metal working trades have developed into centres of electrical and electronic industries. The CSIO, however, has not been able to make the corresponding adjustments in the services and facilities offered by it or in the staffing pattern. This has resulted in machinery and equipment lying unutilised in some places.

(9) In some areas, mainly as a result of the promotional activities of the Government agencies, private parties have set up common service facilities. But they have to work in unnecessary competition with Government centres as the latter have not reduced or withdrawn their activities. This defeats the very objective with which these Centres were originally set up by the Government.

Some of the shortcomings mentioned above are inherent in the situation of Government directly providing these services and facilities, and may continue so long as Government continues to hold this responsibility. However, there are two immediate steps which the Government can take in order to improve the position. They are:

(1) withdraw completely from the responsibility for providing those services which can be readily undertaken by other agencies on commercial basis;

(2) withdraw from those areas where technical services and facilities are available from other sources, or can be made available from other sources, and concentrate on areas which need assistance most.

Among the various services and facilities now offered by public agencies, common service facilities can be singled out as a typical "commercial" service which can readily be transferred to private agencies. The Government agencies have been operating these services on payment basis, and there is no reason why the Government should continue to shoulder this responsibility when it can be effectively undertaken by either individual small industries or associations or cooperatives of small industries. Some of the Extension Centres of the Government, even though called Extension Centres, are now working primarily as Common Service Facility Centres, and they also should be handed over to private agencies. Similarly, there are some Demonstration Production Units which were originally started by State Governments to serve as models for small industrialists. They have served out their demonstration objectives and should therefore be transferred to private agencies. If they have failed to produce any demonstration effect during the last ten years, that by itself

will be a justification for their closure. Ten or twelve years should be considered more than an adequate period for Government to hold responsibilities for such centres.

Withdrawal from areas which have alternative sources for supply of technical sources and facilities is another step which the Government should take in order to make the most economic use of its limited resources. In a vast country like India, Government agencies cannot ever hope to meet the entire requirements of small enterprises. In fact, Government policy in technical services and facilities should be to act as a catalytic agent which should stimulate the interests of others. Government agencies can never aim to reach all the small industries in the country. Even if they attempt, they can never succeed in view of the sheer vastness of the country. By attempting to provide services everywhere and to everyone, they will only end up in reducing the quality and impact of their services. Government agencies therefore should try to withdraw from areas where their services have now only marginal usefulness and concentrate on areas where they are in greater demand.

A suggestion has often been made that in order to provide operational flexibility to the CSIO, it should be converted into an autonomous society or corporation. But so long as all its funds have to come from the public exchequer, a mere change in the form of organisation is not likely to be of much help. If the organisation is to function entirely with Government funds, it will remain fully accountable to the Government, and therefore may not be able to acquire the freedom and flexibility of a full fledged corporation. Further, the CSIO is not intended merely to provide certain technical services and facilities to small industries. It has a far

more important role, and that is, to function as the national organisation for evolving right policies for development of small industries and for coordination of the programmes of various agencies engaged in small industry development. In order to function effectively in this role, it should remain as a Government organisation. However, it can improve its usefulness by diverting itself of some of the responsibilities on the lines indicated in the preceding paragraphs.

VI. CHARGING FEES FOR TECHNICAL SERVICES RENDERED BY PUBLIC AGENCIES.

When the Government assumed the responsibilities for providing industrial advisory services to small industries, it took a deliberate decision that no fee need be charged for the services provided. This was an exception to the normal rule that all facilities and services provided at Government expense should be paid for by the beneficiaries of such services. Government was aware of the fact that public funds cannot be utilised for the benefit of a small class of the population, and that if such services are provided for the small industrialists, there will be requests for similar services and facilities from other occupational groups. However, in the special circumstances in which the Government decided to assume these responsibilities, it was felt that in the initial stages at least, these services should be rendered free to all those who chose to avail of them.

Small industries were in a particularly weak position as regards financial resources. They could not afford to engage the services of consultants or specialists. In fact, many of them were in need of assistance even to identify their own problems. It was felt that if fees were to be charged for the services given to small industries really deserving small industrialists may not come forward to avail of these services, and that the

benefits of these services may go to those who can afford the payment and not to those who deserve the assistance. It was further felt that in order to educate the people of the usefulness of industrial advisory services, such services should be provided free in the initial stages. However, what was intended to be an exception in the initial stages, has come to stay as a rule even after a decade of working of the industrial extension service. With the exception of one or two items of service such as Distribution Aid Surveys and certain common service facilities, all services and facilities are now provided free of charge. The Government even pays stipends to the trainees who are deputed by the small industries for some of the technical training courses conducted by the CSIO.

The suggestion that fees should be levied for the services and facilities provided by the CSIO has been made by very responsible bodies like the Estimates Committee of the Parliament and the International Perspective Planning Team organised through courtesy of the Ford Foundation in 1963. It has been pointed out that in the absence of fees, there will be no restraint on the part of small industries in asking for advice and that they may ask for assistance even on non-essential matters. This will be a heavy burden on the limited resources of the organisation. Further, advice or assistance is not taken seriously when it is rendered free without any corresponding obligation. The absence of fee also reduces the sense of responsibility of those who provide the services. It may be further pointed out that the small industries in India today are no longer in the state of weakness in which they were ten years ago. The vast majority of them have acquired strength and stability and can well afford to make a contribution to the cost of the services received by them. It is only under a payment system that the true value of services rendered can be assessed. It

will also serve as a good yardstick to evaluate the usefulness of various programmes and to judge the performance of the extension personnel.

In spite of the convincing arguments in favour of levying fees, Government have not introduced the system, and extension service continues to be free as before. In fact the free availability of services and facilities from Government sources is pointed out as one of the main reasons which have discouraged private agencies from undertaking such responsibilities.

One of the arguments advanced against charging fees is that small industries as a class are still weak and not in a position to pay for these services. There are of course many small industries which may be considered weak, but this by itself is not a sufficient reason for providing them technical services and facilities without fees. If the weakness of small industries is the justification for making extension services free, several other facilities and services should also be made free. But small industries, even the weakest among them, pay for other facilities and services, though there may be concessional rates in some cases. A practicable step to reduce the hardship on small industries will be to charge fees for technical services at concessional rates in the initial stages. The objective should be to levy full charges over a period of a few years.

Even in a system of services on payment basis, exception can be made for some categories of small industries, if found necessary, e.g. payment may be waived in the case of small industries in industrially backward areas. Industrial development of backward areas and planned dispersal of industries are some of the important objectives of the

Government's economic development plans. In several countries, including industrially advanced countries, special incentives and concessions are offered to attract industries to depressed or backward areas. They include accommodation in industrial estates at concessional rates, rebates in duties and taxes, special facilities in transport etc. These concessions are generally offered to industries of all sizes, whether large or small. In India there is no such special scheme for the industrial development of backward areas, but if extension services are made free of charge to small industries in backward areas, it will be a good beginning in implementing the policy of attracting industries to such areas.

It has sometimes been suggested that if fees are charged from small industries, it should be on a varying scale based on the size of the small units, size being determined by capital investment. For example, it has been suggested that for the same service rendered in the same locality, a small industry with capital investment of Rs. 100,000 should be charged less than another with capital investment of Rs. 200,000. It has also been suggested that the very small among small industries, e.g. those with capital investment of less than Rs. 50,000 should be exempted from payment of fees altogether.

This suggestion of differentiating between small scale industries on the basis of capital investment for purposes of levying fees has several drawbacks. Small industries are broadly distinguished from large industries on the basis of capital investment for administrative convenience, but it will be impracticable to reorganise further sub divisions among them for determining their eligibility for different services and facilities. This will involve elaborate administrative work. In view of the rapidly changing capital structure of small units, there will be need for frequent reclassification and regrouping among them, and this will lead to

administrative difficulties. This system may even prove to be a disincentive to modernisation in some cases. For example, a small unit which is entitled to free services may be discouraged from acquiring a new item of machinery or equipment if the cost of the additional machinery will increase its capital investment to the extent of making him liable for payment for the services. It will also lead to abuses which may be difficult to check.

Apart from practical considerations, the system of different scales of payment based on different scales of capital investment, does not appear to be basically a sound proposition. This suggestion is based on the presumption that the smaller a unit, the weaker it is. But this is not correct. The size of a unit is determined by economic and technological factors and not necessarily by the financial resources of the entrepreneur. Different products and different manufacturing processes require different levels of capital investment and the size of investment in each case is no indicator of its weakness or strength. An industrialist with adequate financial resources of his own may start an industry with a small capital investment for the simple reason that the small investment is sufficient for its efficient working. This should not give him the advantage of free services. Since size of investment is not a safe indicator of the weakness or strength of a unit, it should not become the basis for determining the scales of payment for services received.

Once the principle is accepted that technical facilities and services should be provided on payment basis, the question will arise as to how and when it is to be introduced. Since small industries have been

receiving these services freely for a long time, there will naturally be some reluctance on their part to avail of these services on payment basis. In order to overcome this difficulty, it may be desirable, as indicated earlier, to start with reduced scales of fees in the first few years. In due course small industrialists will get used to paying for the services received by them, and fees can be gradually raised.

It may also be desirable to introduce the payment system in different stages for different categories of services. There are certain services and facilities which can be conveniently grouped as "commercial" in nature as distinguished from "promotional", and a beginning could be made with the former. Similarly certain services may be required exclusively by some units and in such cases service on payment should be the rule.*

The following services and facilities have been suggested as suitable for levy of fees in the first stage:-

1. Preparation of sketch schemes on the lines of model schemes at the request of parties.
2. Preparation of detailed working schemes with sketches, drawings, sequences of operations, specifications of machinery and other working details.
3. Preparation of specific manufacturing projects and rendering technical services in implementation of the project.
(This is more or less like collaboration with the unit for some time).
4. Designing of jigs, fixtures, tools, etc.
5. Machinery lay-out of factories and consultation in the matter of setting up of workshops from time to time.
6. Exclusive use of designs prepared by the Industrial Design Cell.
7. Integrated plant study of the unit. (Management consultancy service).
8. Specialized economic information requiring region-wise or all-India enquiry.
9. Distribution and surveys carried out for a particular manufacturer.

Agenda item No.8 - Meeting of the senior officers of CSIO held on 24 and 25 February 1967.

VII. IMPROVING THE QUALITY OF TECHNICAL SERVICES AND FACILITIES BY PUBLIC AGENCIES.

The basic presumption in introducing fees for technical services is that the customer will get full satisfaction for the payments made. This will call for considerable rethinking and qualitative strengthening as far as the staff of the public agencies are concerned. Initial recruitment of staff in the CSIO had been made at a time when small industry developments were mainly in fields such as wood working, simple hand tools and machine tools, parts and components of cycles, and sewing machines, domestic electrical appliances etc. There has been considerable diversification and sophistication in small industries sector during the last few years resulting in the demand for a variety of new services and facilities. New raw materials and new products are in use now and small industries are no longer satisfied with the services and facilities which the CSIO used to provide in the early stages. Some examples of new items taken up by small industries in recent years are electronic instruments, electrical measuring instruments, diagnostic apparatus, precision type machine tools, carbide tools and dies, film projectors, water meters, hearing aids, cameras etc. Plastics have introduced an altogether new field for small industries. The CSIO will have to acquire a highly competitive team of technicians with sound practical experience and up-to-date knowledge in these new lines, if it is to render useful service to the industry. Similarly, its workshops and laboratories will need considerable strengthening in order to enable it to cope with the new demands from small industries.

Another important step which public agencies should take in order to improve the quality of their services is to utilise the services of

private consultants and experts. Even though the CSIO may function as a Government Department, it should have the freedom and flexibility to utilise the services of experts from private industry, research organisations, universities, etc. on part time consultation basis as and when found necessary. Such an arrangement of drawing upon the services of private consultants is necessary for a variety of reasons. The CSIO will not be able to attract always the best and most suitable experts to serve on full time basis in view of the comparatively poor scales of pay in Government service. The services of such highly qualified experts can be more easily obtained as part time consultants. Again, some technical experts may be unwilling to join Government service leaving the professions of their first choice, which may be private industry or research or teaching. But, they may be willing to make their services available for specific assignments of short duration. In some trades there may be no need for full time staff as the demand for technical services may not justify it. In such cases it will be economical to engage the services of private consultants on part-time basis. In fact the responsibility of the CSIO should be to arrange for the best technical service to the industry. It should try to provide the service through its own staff if possible, but, where necessary, should not hesitate to arrange for such services from outside the organisation.

In order to arrange for such services efficiently and promptly, the CSIO should maintain panels of consultants for different trades, whose services can be drawn upon at short notice. Apart from facilitating effective service to the industry, this system will also help in providing training to the regular staff of the CSIO.

Associating representatives of the industry with the planning and implementation of different programmes of the public agencies is another measure for improving the quality of service. The experience of constituting advisory committees for the different small Industries Service Institutes consisting of one or two representatives of the industry has not proved to be very successful. What is needed is a much more intimate participation by private industries in the programmes of the Institutes. It is only through such close association with the industry that the staff of Institutes will be able to plan their work in a realistic manner.

It has sometimes been argued that such close association of private parties is not possible in the planning and execution of work in a Government organisation. But the important point to be stressed is that the CSIO is not like any other Government Department. Even though it is organised as a Government Department, it is essentially a service organisation which has to formulate its programmes to suit the actual requirements of its clients, and therefore has to work according to conventions and procedures different from other Government Departments. In fact there is nothing basically wrong in the concept of organising industrial services through Government Departments. Even in some industrially advanced countries, such services and facilities are provided through Government agencies. The Netherlands Consulting Services is a department of Government working under the control of the Ministry of Economic Affairs. The Institute of Technology, Oslo, Norway, is a Government Institution, though partly financed by the Municipality. In Sweden, the Handicrafts Institute is a Government department and its Directors and Heads of Departments are Government employees

paid from the Government budget. A large percentage of its employees are paid from contingencies and other incomes of the Institute and not covered by Government service rules. Even though it is a Government Department, it is governed by a Board of Directors consisting of representatives of Government, labour, industry and the local Municipality.

The CSIO, while remaining a Government Department, would do well in adopting some of the healthy and useful conventions evolved by the Scandinavian Institutes.

VII. ROLE OF SEMI-PUBLIC AGENCIES IN PROVIDING TECHNICAL SERVICES FACILITIES.

There are a few semi-public agencies which, along with their other activities also provide technical services and facilities to small industries. The most important among them are the industrial research institutes and laboratories controlled by the Council of Scientific and Industrial Research (CSIR), the Indian Standards Institution (ISI) and the National Productivity Council (NPC).

(1) The Council of Scientific and Industrial Research.

The CSIR is primarily an organisation for industrial research. The main functions of the CSIR are the following:-

Promotion, guidance and co-ordination of scientific and industrial research, including the institution and financing of specific research.

Establishment of or developmental assistance to special institutions or departments of existing institutions for specific study or problems affecting particular industry and trade.

Utilization of the results of the research conducted under the auspices of the Council towards the development of industries in the country.

Establishment, maintenance and management of laboratories, workshops, institutes and organisations to further scientific and industrial research and to utilise and exploit for purposes of experiment or otherwise any discovery or invention likely to be of use to industries.

Collection and dissemination of information in regard not only to research but to industrial matters generally.

Publication of scientific papers and journal of industrial research and development.

The Council, though entirely dependent on Government for its funds, functions as an autonomous organisation under the overall supervision of its Director General. It has under its control 37 research laboratories and institutes. The institutes are designed to serve important industry groups such as fuels, metallurgy, glass and ceramics, food, leather, etc.

Even though the main function of the laboratories and institutes is industrial research, they also provide certain direct technical services and facilities to industries such as training, testing and certification and analytical work for industry on payment basis. Each laboratory or institute has a liaison division or unit to maintain contact with industry and to assist in the practical application of the results of research. Most of the laboratories and institutes publish technical bulletins and digests in order to disseminate the information needed by industry. At the headquarters of the CSIR there is a central liaison and coordinating unit which coordinates the work of the liaison units of the laboratories and institutes and supplements their efforts in maintaining contacts with the public and the agencies engaged in industrial development.

The laboratories and institutes act as consultants to industries on specific requests. Field officers of the laboratories and institutes are located in or near industrial centres. They assist the industries in their day-to-day technical problems and also carry out special services such as testing of raw materials and finished products, quality control etc. Some field centres also conduct periodical demonstrations for the industrial units through special teams of experts. Such demonstrations are usually held in the premises of selected industries.

The CSIR has a special programme of assistance to small scale industries. It has established an Information and Liaison Cell to provide guidance to small industries on their technical problems. This cell disseminates information regarding research projects worked out by the CSIR laboratories and institutes and maintains liaison with and provides technical support to the extension agencies in the field of small scale industries.

The laboratories and institutes of the CSIR are some of the best equipped in the country. They are also staffed by highly qualified scientists and technicians. However, it is doubtful whether their services are being adequately made use of by the small industries. In many developing countries industrial research and industrial consulting services are undertaken by the same institution. In a vast country like India there is no doubt need and scope for separate organisations, but they should function in close cooperation and complementary with each other, in order to maximise their usefulness to industry. In fact the best arrangement would be for the Small Industries Service Institutes, Branches and Extension Centres to function also as the field centres for the institutes and laboratories of the CSIR as far as technical services to small industries are concerned. The CSIO's field staff should maintain close liaison with the CSIR staff and refer to them problems of the field which need deeper attention. They should particularly refer to the CSIR laboratories and institutes problems which call for research and experimentation. The CSIR in turn should utilise the services of the CSIO's extensive field centres for carrying to the industry the fruits of their research. This two-way traffic between CSIR and CSIO should be increased considerably from its present level, if the small

industries are to get the full benefits of the services of these organisations.

(2) The Indian Standards Institution:

The Indian Standards Institution is the national organisation responsible for standardisation in the country. It is an autonomous society functioning under the control of a Director appointed by the Government. Its main functions are the following:-

Prepare and promote the general adoption of standards on national and international basis;

Promote standardisation and quality control in industry and commerce;

Coordinate the efforts of producers and users for the improvement of materials, products, appliances processes and methods;

Provide for the registration of standardisation marks applicable to products, commodities, etc. for which it issues standards to be branded on or applied to those products, commodities, etc.

Provide or arrange facilities for the examination and testing of commodities, processes and practices and for any investigation or research that may be necessary;

Communicate information to members on all matters connected with standardization through periodicals, books, leaflets, etc.

The ISI has accorded very high priority in its programme to the development of standards for industrial raw materials and products. The implementation of standards is voluntary, except in a few vital sectors.

An effective means of implementing standards is the Certification Marking System. A Certification Mark is a third party assurance to the purchaser that the goods have been inspected, tested and certified by or under the supervision of a competent authority. The ISI is the national agency for providing the Certification Mark.

The overall control of the ISI rests with its General Council which consists of representatives of industry, the Central and State Governments,

scientific organisations and subscribing members. The administration of the ISI is carried out by an executive committee through its Director. Its main sources of income are grants-in-aid from the Government, subscriptions from the members, sale of standards and fees for Certification Marking.

The ISI's facilities are available to all groups of industry and trade; its main contribution to small industry has been to educate them to be standard-conscious. It is very encouraging to note that more and more small industries are making use of the services of the ISI and utilising its standards.

(5) The National Productivity Council.

The National Productivity Council is an autonomous organisation under the Ministry of Industrial Development. Its main objective is to promote efficiency and productivity in industry as well as in business and trade.

It has established 6 regional branches and sponsored over 50 Local Productivity Councils. The local councils are fully representative of industrial enterprises, trade unions, Government agencies, and technical and professional institutions.

The following are the main functions of the NPL:-

Stimulating and sustaining productivity movement at local levels by guiding and assisting Local Productivity Councils in their programmes.

Planning and organising seminars in productivity subjects.

Sponsoring industrial executives and labour representatives for training abroad.

Sponsoring study teams composed of representatives of management and labour to study specific industries or application of productivity techniques abroad, record their findings and to recommend adoption of improved methods.

Sponsoring study teams within the country.

Providing a full efficiency service to industry, including surveys of fuel utilisation in industrial establishments, recommending ways and means of increasing fuel and heat utilization and training of appropriate personnel.

Conducting productivity surveys to locate problem areas and improving operational efficiency.

Providing a technical enquiry service.

Production and presentation of films, film strips, slides and other audio visual media to aid and supplement training activities.

It will be seen from the activities of NPC mentioned above that they are oriented in favour of the modernisation and technological improvement of industries. The NPC undertakes studies on the working of individual industrial enterprises, in particular their organisation, management, production and technical procedures. It assists the enterprises in locating and overcoming their difficulties by introducing systems of work study, quality control, production planning etc.

There is no doubt some overlapping of functions between the NPC and other extension agencies, particularly the extension agencies of the CSIO. However, special efforts are made by the NPC and the CSIO to arrange their programmes in close coordination with each other. The NPC assists in the training courses conducted by the CSIO by lending the services of its senior staff. The CSIO similarly helps the NPC in sponsoring suitable small industry units for the NPC's training programmes. On the whole the two organisations try to work in close cooperation as far as extension work to small industry is concerned.

II. ROLE OF PRIVATE AGENCIES IN PROVIDING TECHNICAL SERVICES AND FACILITIES.

As already explained, public or semi-public agencies in India are almost the only agencies providing technical services and facilities for

small industries. When the Government assumed the responsibilities for providing direct technical services for small enterprises, it was mainly intended to be a "pump priming" operation and it was expected that in due course private agencies will come up to provide many of these services. But as stated earlier, progress in this direction has been remarkably slow. A few private individuals have set up industrial consultancy bureaus in some of the big cities, but their activities have been mainly confined to preparation of feasibility studies, project reports, etc. In some big cities private consultants have been offering their services for selection and installation of machinery. They also undertake trouble-shooting assignments. However, such services are still offered on a personal basis and have not yet been organised on institutional lines.

1. Role of Trade Associations.

In spite of the phenomenal growth of small industries in India during the last one decade, it is surprising to note that Trade Associations have not so far come forward with any worthwhile programme of self help or service. The need for such voluntary efforts by Trade Associations had been stressed from the very beginning of the implementation of the development programme for small industries in India. The International Planning Team sponsored by the Ford Foundation had strongly recommended in their Report(1954) that small industries should organise themselves into associations and undertake programmes of self help. The report said:-

"The general functions of trade associations should be to perform and execute things of national interest to the members, things which each of them would not be able to do by himself. This activity should touch a large number of aspects, e.g. promotion of vocational training, demands for better credit and finance, purchasing of raw materials, market investigations, collective publicity and information, contribution to experiment and research for the benefit of the members etc.

The association should act on behalf of all members, when negotiating with Government and Municipal authorities or in relation to other sections of business and social life. The associations can also perform internal service of different kinds for the benefit of their members, e. . . consultation in the technical field, business management, finance calculations, book keeping, etc. They can arrange conferences for discussions of an information in active business or trade problems. They can organise study and training activity, supply regular information for members and so on."

The expectations about voluntary efforts by the industry have not so far been fulfilled. Associations of small industries have been formed in almost all States of India and a Federation of Associations of Small Industries has also been set up with headquarters in Delhi. The Federation has been providing enlightened leadership to the State associations and taking up vigorously the cause of small industries with various agencies of the Government engaged in providing services and facilities to small industries. It has developed into an influential forum to voice the grievances and demands of small industries and has been fairly successful in influencing the formulation of policy at Government levels. But it has not seriously attempted to undertake the responsibility of providing some of the essential services needed by small industries, such as technical facilities, training, information services, etc. In this field also the example of Trade associations in the Scandinavian countries should serve as a good model to India.

The Federation of Crafts and small and medium industries (SHIO) of Sweden provides an excellent example of non-official leadership and initiative in arranging services and facilities needed by small enterprises. Over 45,000 small units are members of constituent trade or regional associations and about a third of these have dual membership in both functional and area organisations. 46 trade associations, each comprising a particular industry or trade group, are affiliated to the Federation. One

of the important services rendered by the SHIO is its "Economy Service". It provides monthly book keeping to a large number of its members and also offers tax counselling, profitably analyses and special economic investigations. A recent study of the working of SHIO by a Ford Foundation Consultant has confirmed the increasing vitality of the Federation. It states:*

"The well-qualified professional accountants and related specialists who man SHIO's economy service undergird its internal research competence on small business problems, and thereby give realism to the Federations' policy formations. Maintenance of a direct clientele among thousands of many firms, at a high standard of service keeps the Federation in first-hand, daily touch with its' industrial constituents. This establishes a communication network, on a professional level, which undergirds, supplements, and strengthens the Federation's formal ties to member associations".

In Denmark consultative services to small firms is efficiently organised by industrial trade associations. Each association appoints its own consultants for which it receives subsidies from the Government. Subsidies are given on a graduated scale, averaging about 50 percent of salaries and direct expenses. The association meets the remaining 50 percent from fees charged to individual client firms.

The qualifications of the consultants appointed by the associations are reviewed by the Government in order to ensure that they are of the requisite standard. New consultants undergo a two-months course in management-consultancy principles.

Consultants on a regional basis are approved by the Council for Handicrafts which is the representative Federation of artisans and small enterprises in Denmark. They are responsible for organising management and trade courses and for general information services to member firms.

* Sponsorship and management of industrial advisory services -
Note by Mr. Richard Morse, November 1965.

The Indian small industry associations are mostly on State basis. In some places, there are separate associations for the tenants of industrial estates. However, much progress has not been made in organising associations for specific industries except in the case of traditional industries. In order to undertake the responsibilities for technical services, it will be necessary to form associations of specific trades and crafts on a regional basis and even on all-India basis. These associations should engage the services of specialists and experts to render technical services to the member units as in the case of the Scandinavian countries. Periodical seminars and meetings of the technical personnel in particular industries should be arranged to review technical problems and share each other's experiences in solving such problems. The associations should also arrange for the training of workers and supervisors on an exchange basis in the factories of the member units.

The workshops of some of the better equipped and better staffed units should also undertake specific services and facilities needed by others. The associations should function as the clearing houses for requests for such services and facilities. They should advertise space capacity available among member units and arrange for utilisation of such services and facilities by those who need them.

While the Federation of Association of Small Industries and State associations of Small Industries may continue their representational activities, it is high time that they turn their attention to the more important task of organising direct services and facilities to their member units. The Government should give full encouragement and support to the Federation and its constituent units in these new programmes by suitable

grants and subsidies.

2. Role of large industries.

Promotion of small industries in sub-contracting or ancillary relationship with large industries is one of the major programmes undertaken by the Government of India. An essential feature of this programme is that a large industry provides certain technical services and facilities to the small industry who is to supply the components and parts needed by the former. Large industries, both in the public and private sectors, have been encouraged to establish Industrial Estates for ancillary units in close proximity to their own premises in order to facilitate effective technical assistance. Such assistance includes selection of plant and machinery required by the small industries, installation and maintenance of machinery, technical guidance in production-planning and delivery schedules, supply of processed sheets, drawings, specifications, etc., training of workers, and supply of raw materials of the right quality and specifications.

The extent of technical assistance provided by the large firms to the small firms depends on the nature of the contractual relations in each case. Large industries, however, do not generally provide technical assistance to small industries who have no ancillary relationship with them.

3. Role of Universities.

The Universities in India have so far remained almost completely out of the field of extension service to small industries. There was an attempt a few years ago to make the Universities interested in the Industrial Estate programme. The scheme was to encourage the Universities to set up within their own premises workshops and production units under the supervision of their technical staff. However, the scheme did not make any appreciable progress.

The example of Universities in the western countries, particularly of those in the U.S.A., should be a good guide to Indian Universities in the matter of providing advisory services to industries. In the United States the majority of States have some form of a University programme for liaison with industry. Small enterprises, in particular, have found the services of Universities helpful in solving problems in the fields of production, marketing etc. In view of the shortage of qualified technical personnel in India, there is special justification in harnessing the resources of the Universities in providing technical services and facilities to the small industries. Engineering colleges and Institutes of Technology in particular can play a very useful role in this field. Here again, Government should assist the Universities with suitable grants and subsidies in undertaking such programmes. Government support will be particularly needed in equipping the University-workshops and laboratories adequately for undertaking such tasks.

The tendency on the part of small industries in India has been on the whole to look up to the Government for all types of assistance. This tendency had been to some extent been unconsciously encouraged by the Government by their trying to provide every type of service. Whatever might have been the justification for this in the past, it is time that the Government withdraw from some of these activities and assume a new role of stimulating the interests of others and providing leadership and support to them. This will not only result in tapping new resources and talents for the benefit of small industries, but also conserve the resources available with the Government for more important tasks in the service of small industries.





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