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**SMALL  
INDUSTRIES  
DEVELOPMENT  
PROGRAMME,  
GAZIANTEP**

DP/TUR/02/005

R) TURKEY .

**Technical report: ASSISTANCE TO THE SMALL  
INDUSTRIES DEVELOPMENT CENTRE AT GAZIANTEP**

(1976)

**Prepared for the Government of Turkey by the  
Small Industry Technical Assistance Programme,  
1974-1976  
Small Industry Development Programme**



United Nations Development Programme

SMALL INDUSTRIES DEVELOPMENT PROGRAMME, GAZIANTEP

DP/TUR/68/525

TURKEY

Technical report: Assistance to the Small Industries  
Development Centre at Gaziantep

Prepared for the Government of Turkey  
by the United Nations Industrial Development Organization,  
executing agency for the United Nations Development Programme

Based on the work of Milivoj Kuntic, expert in production engineering

United Nations Industrial Development Organization  
Vienna, 1976

Explanatory notes

The monetary unit in Turkey is the lira (LT). During the period covered by the report, the mean value of the lira in relation to the United States dollar was \$US 1 = LT 14.36.

KUSGEM refers to the Small Industries Development Centre at Gaziantep, Turkey.

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SUMMARY

This is the report of a mission which formed part of the project "Small Industries Development Programme, Gaziantep" (DP/TUR/68/525). The purpose of the mission was to advise and assist the small units at Gaziantep in such matters as industrial engineering, product development and diversification, training programmes and feasibility studies. The expert was assigned to the Small Industries Development Centre (KUSGEM) at Gaziantep from 27 February 1975 to 25 January 1976.

The work of the expert was handicapped initially by a prolonged strike of the personnel of KUSGEM. He was thus able to work only six months full time.

His general conclusion was that while the working conditions of the small-scale units at Gaziantep were poor and the small entrepreneurs faced a number of serious difficulties in production, these entrepreneurs were forward-looking and industrious. He felt that the situation was improving as a result of the work of KUSGEM and that it would improve further on the completion of a model industrial estate and a relocation industrial estate. He recommended that the small-scale units should have the continued support of KUSGEM, the Government and other interested institutions, and that training activities should be intensified.

## INTRODUCTION

The mission of the expert formed part of the larger project "Small Industries Development Programme, Gaziantep" (DP/TUR/68/525). The purpose of the parent project was to assist in providing common facilities and extension services to small-scale enterprises of Gaziantep through a small industry development centre and to assist in planning, establishing and operating an industrial estate for selected small industries of Gaziantep.

The expert arrived at Gaziantep on 27 February 1975 and left on 25 January 1976. He was assigned to the Small Industries Development Centre (KUSGEM) at Gaziantep. Because of a strike among the KUSGEM personnel which started shortly after his arrival he was unable to undertake full-scale activities until the end of June 1975; thus he spent about six months working full time with KUSGEM. In the period before the strike was settled he visited small-scale industrial estates in other parts of Turkey and rendered extension services to about 60 units at Konya, Kayseri, Ankara, Kirsehir and Hugu.

In accordance with the job description, the tasks of the expert were:

(a) To advise and assist small units in areas of industrial engineering such as production planning and control, inspection and quality control, standardization, factory layout, work study and methods improvement, internal movement and storage of material, inventory control, improvement of work safety and sanitary conditions, replacement of imported materials by those manufactured locally etc.;

(b) To advise and assist the small units on product diversification, on manufacture of parts and components under subcontracting arrangements with large enterprises and on development of regular product lines;

(c) To provide guidance in selecting entrepreneurs for establishing small industries in the industrial estate and to assist them in choosing machinery and equipment, in preparing plant layouts and production programmes etc.;

(d) To organize:

- (i) Short-term training programmes (including presentation of films and use of other audio-visual facilities) for managers, supervisors and operators of the small workshops on:

Reading of drawings

Inspection and quality control

Modern welding methods

Fits and tolerances

Modern production methods in the metal industry

Rudiments of measurement and automatic control

Heat treatment of iron and steel

Iron and steel casting

Economy in production;

- (ii) Refresher courses for engineers, technicians, foremen and other interested KUSGEM personnel on various topics in the fields of economics, engineering, planning, production methods, inspection and quality control;

- (iii) Discussion groups on special topics that may be raised by the entrepreneurs;

- (iv) Training counterparts;

(e) To co-operate in the preparation of feasibility studies on the production of: shock absorbers, brushes, detergent powder and cream, and air brakes for trucks;

(f) To support KUSGEM activities in other fields such as enrichment of library funds, writing articles for KUSGEM bulletins etc.;

(g) As team leader, to co-ordinate the work of other experts and short-term consultants, to supervise the administration and to take care of equipment owned by the United Nations.



## I. CONDITIONS AND PROBLEMS OF THE SMALL-SCALE INDUSTRY AT GAZIANTEP

### General conditions of industry

There are more than 4,000 small-scale units of different trades at Gaziantep. About 1,500 of them are of interest for KUSGEM. Most workshops are grouped together in several areas of the town. They are congested and represent a real nuisance for both the municipality and for the citizens. Frequently, they extend their production floor into the adjacent streets, thus rendering the streets almost impassable to traffic.

A typical machine workshop may occupy a surface of 20 to 25 m<sup>2</sup>. With few exceptions the working conditions are poor with little or no hygienic or sanitary precautions, no changing rooms etc.; some are even situated in caves, half-open sheds or other inadequate places. The owner of a typical shop, the usta (master craftsman or workshop owner), employs one or two Kalfa (helper or qualified workman) and one or two chirak (apprentice). Some larger workshops have as many as 10 or more workmen.

The typical equipment of such a workshop consists of: lathe, drilling machine, grinding wheel, welding unit, work bench, hand tools, sometimes an overhead rail etc.; milling machines and shapers are quite common as well. However, only a few grinding machines may be found in the small workshops. Different special machines of many kinds are found in other specialized shops.

Traditionally, most of the Gaziantep small workshops were engaged in the repair and manufacture of some typical household and consumer goods; they were coppersmiths, tinsmiths, goldsmiths etc. Within the last 15 years or so, however, there has been a trend towards manufacturing a variety of other consumer goods, machines, spare parts etc. Well-established units are manufacturing for the market, e.g., trailers, circular saw machines, safes, textile machines, injection moulding machines, ploughs and other agricultural implements, boilers, tin cans, car batteries, plastic foot-wear and many other items. Some of these products are of sufficient quality for export. The export of industrial products to the neighbouring Arab countries, Iran and other countries seems to be of great potential importance for the future of Gaziantep.

Main problems

Several problems are clearly apparent; they are:

- (a) Congestion and lack of working space;
- (b) Improper use of machinery, equipment and tools;
- (c) Poor (or no) maintenance of machines, equipment and tools;
- (d) Insufficient skill of workers and of most ustas
- (e) Lack of product standardization (the Turkish Standard Institution endeavours to enforce standards wherever applicable and practicable);
- (f) Difficulty in obtaining credits from banks;
- (g) Poor safety at work and generally poor working conditions;
- (h) Difficulties in stock supply;
- (i) Lack of common facilities, such as sales, supplies, publicity etc.;
- (j) Near absence of quality control;
- (k) Poor product design;
- (l) Lack of product diversification.

With the Centre now functioning, the model industrial estate (50 workshops) nearing completion and, most important, the relocation industrial estate (more than 1,100 workshops) in view, most of the above-listed problems and difficulties hopefully will be resolved, or the situation will at least improve to a notable extent. Improvement, however, calls for continued and increased support and encouragement of the Gaziantep small industries by KUSGEM, the Government and other interested institutions.

The complex assistance of KUSGEM to the Gaziantep small industries has been indispensable in the case of substantial subcontracting work, such as the contract recently obtained from the Government valued at about 8 million Turkish lire (LT), an unprecedented amount in the history of the Gaziantep small industries. This work is expected to revolutionize the attitude of the entrepreneurs concerned in several respects. The production of a large quantity (in this case 35,000 sets) of an article within prescribed, strict tolerances and specifications is a completely new undertaking and a challenge for them. The contract should play an important role in the development of the Gaziantep small industries.

## II. ACTIVITIES

Basically, the activities of the expert at Gaziantep followed the outline of the job description; in addition as team leader, he became involved in other aspects of project activities.

His most important tasks included:

- (a) Extension visits to the small-scale industry units at Gaziantep (about 190, including repeated visits);
- (b) Assistance and advice to about 50 ustas who came to his office;
- (c) Feasibility study on miniature bulbs;
- (d) Five feasibility studies initiated and continued, but not completed;
- (e) Eight technical reports/workshop layouts prepared for ustas;
- (f) Assistance in setting up new production lines (subcontracting); three workshops were not completed owing to the termination of the contract with UNIDO;
- (g) Training course organized in repair welding of cast iron;
- (h) Articles written for KUSGEM publications on quality control and repair welding;
- (i) Technical information collected through UNIDO.

Various problems, queries and tasks were dealt with during regular extension service in the town (two half days a week), ranging from advising on proper lubricants for a given machine, demonstrating how to make a gear or bearing, preparing foundation drawings for a given air hammer, recommending machinery for a given product, to calculating and designing an overhead crane.

The expert also assisted in translating operation manuals, leaflets, invoices etc., from German, Italian, French and Russian into English, and in writing letters in these languages. In addition he gave advice on technical matters related to marketing selection.

### III. CONCLUSIONS AND RECOMMENDATIONS

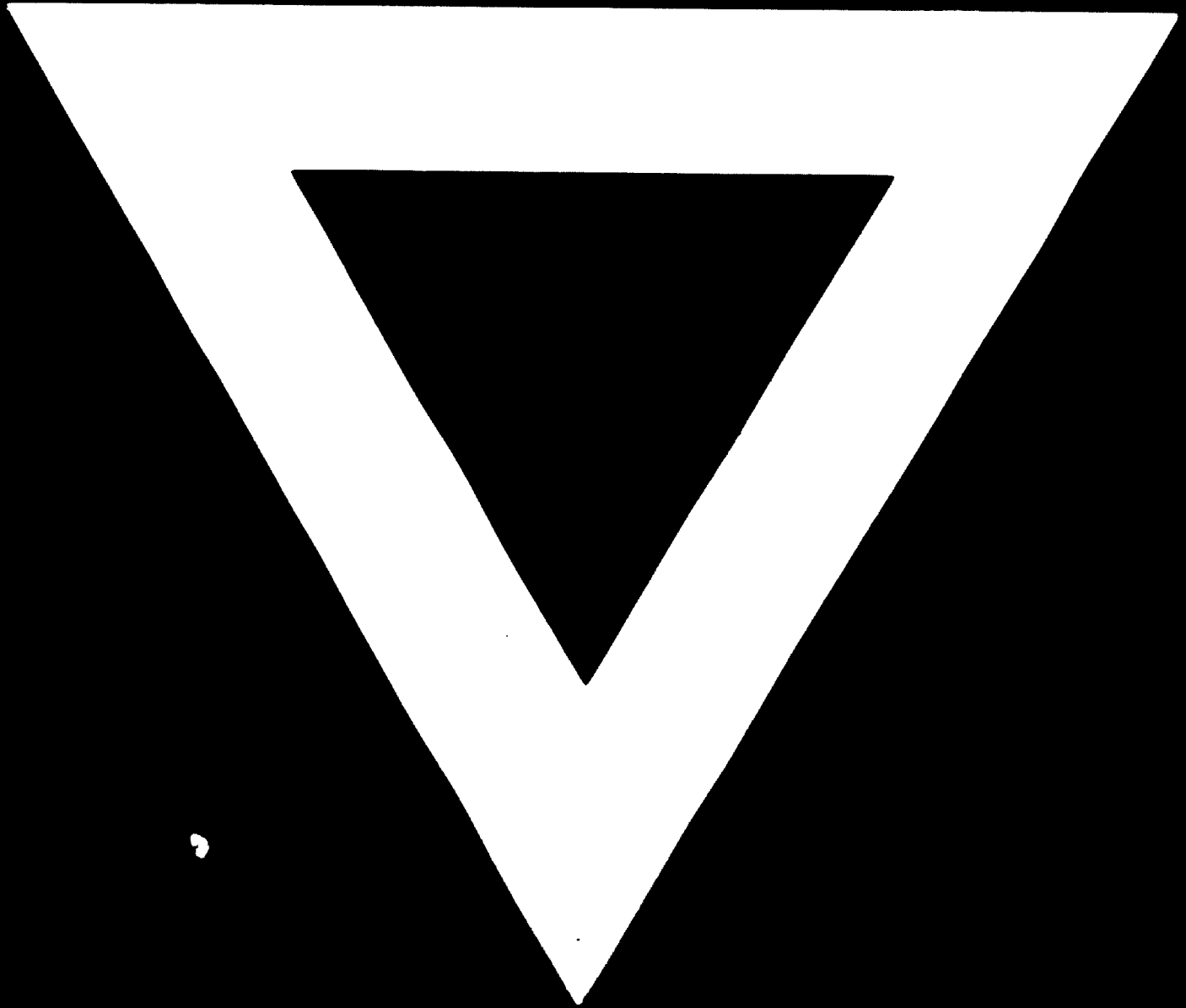
Despite its weaknesses and past difficulties, KUSGEM is beginning to bring favourable results. The Gaziantep ustas and their workers are progress-oriented and willing to accept, though at times cautiously, new technologies, techniques and ideas; they are modest, diligent, clever and honest.

The expert made the following recommendations:

1. KUSGEM and the Gaziantep small-scale industry units need further assistance, encouragement and support, from whatever source;
2. Training activities for Gaziantep workers should be continued and intensified;
3. The existing organizational set-up of KUSGEM is outdated; more engineers, technicians and some other professionals will be needed urgently in the near future;
4. More authority should be transferred to the management of KUSGEM; some of the procedures, now in force, weaken its efficiency.



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