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**SMALL AND MEDIUM SIZED
MANUFACTURING ENTERPRISES
IN TURKEY**

(Draft)

Prepared for UNIDO

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AND TRAINING CENTRE FOR ISLAMIC COUNTRIES**

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0. INTRODUCTION

Small and medium scale manufacturing enterprises play an important role in economic growth and development. This is widely acknowledged especially in the case of developing countries. In this connection, policies to promote small and medium scale manufacturing enterprises in developing countries abound in the literature. Yet, it is difficult to come by indepth studies of the small and medium scale industrial production in developing countries on the one hand, and evaluation of small and medium scale industry related policies on the other.

This study intends to present an up-to-date overview of the small and medium scale manufacturing sector in Turkey. More important, however, is the attempt to draw lessons from the Turkish experience in the field for other developing countries.

Turkish experience in small industrial estates, which diverges from the model promoted by international agencies, is found not only to be successful in spurring industrial growth and development, but also deserving of closer scrutiny for application in other developing countries.

1. SMALL AND MEDIUM SCALE MANUFACTURING ENTERPRISES IN TURKEY

1.1. DEFINITION OF SMALL AND MEDIUM SCALE INDUSTRIES

A number of alternative criteria can be used to divide manufacturing enterprises into two or more classes, with the understanding that there are significant differences among different classes of firms in terms of their behaviour and development trends. In studies on the subject various qualitative and quantitative criteria have been used singly or in various combinations. The quantitative criteria utilize the size of labour force, the size of capital outlay, the level of utilization of inorganic energy and the like. The main criticism directed against the use of this type of criteria has been based on the view that there exist qualitatively distinct spheres of industrial production activities (which) can not be distinguished quantitatively. (Bademli, 1977 : 3-4). The

qualitative criteria, on the other hand, result in dichotomies such as organized/unorganized, modern/traditional, capitalist/pre-capitalist, formal/informal, factory/non - factory which can be regarded as unoperational and controversial.

Without getting into a discussion of the relative merits of the different types of criteria, let it suffice to say that it is very hard to disagree with the view that there exist qualitatively different spheres in manufacturing industry. It is equally true that at least some major characteristics of these different spheres will be reflected in quantifiable variables. Consequently, an analysis based on properly identified quantitative criteria can enable us to have a better understanding of qualitative differences.

However, the selection of quantitative criteria poses certain problems. To begin with, there exist quite a number of variables characterizing the operations of industrial enterprises which can not be readily categorized. (UNIDO, 1984 : 14). A further problem arises when relevant variables are chosen, since "smallness" or "largeness" is a relative concept which, being dependent on "the phase of a country's economic development and its prevailing social condition", varies from one country to another. (Storey, 1983 : 218). Even within one country the categorization of variables may vary from one sector to another. Thus, such criteria are not only time and country specific, but may also show intersectoral variation. Finally, the selection of variables and their categorization would be affected by the purposes and functions of the institutions and agencies using them.

Generally, the number of persons employed by an enterprise is used to classify manufacturing establishments into several distinct groups. The adoption of size of employment as the classification criterion is usually justified on the grounds that, in addition to being easily measurable, it is the most readily available piece of information pertaining to activities of manufacturing enterprises. In some cases, depending on the purpose and the function of its user, the employment criterion is utilized in conjunction with the size of capital outlay or assets, and/or the capacity of installed power equipment. In most of the classification schemes based on the size of employment

criterion, manufacturing is first divided into two dichotomous groups, such as organized/unorganized or formal/informal, where household and cottage industries as well as artisanal and craft activities are included in the unorganized or informal sector, as the case may be. The organized manufacturing, on the other hand, is generally divided into three categories, i.e., small scale, medium scale and large scale manufacturing. However, there is no consensus on the dividing lines between these different groups of enterprises. For instance, "in most developing countries the upper limit ... is between 10-50 for small scale and between 50-100 for medium scale industries, whereas in many OECD countries only firms with more than 500 employees are considered as large scale production units". (UNIDO, 1984 :3fn).

In Turkey various forms of categorization are used by different agencies. "The Small Industry Development Organization defines small scale industry (SSI) as firms employing up to 50 workers. The Halk Bank defines SSI as firms with less than 25 workers and less than TL 80 million assets (excluding land and buildings). Medium scale firms (MSI) are defined by Halk Bank as firms with assets (excluding land and buildings) between TL 80 million and TL 300 million". (World Bank, 1985 : 4fn). The State Institute of Statistics, on the other hand, classifies as small scale enterprises those employing up to 9 persons, while the others are regarded as large scale enterprises. In a World Bank study, the establishments employing less than 10 persons were classified as unorganized sector, while small scale industry was defined as comprising establishments employing up to 50 persons; medium scale between 50-200; and large scale 200 or more persons. (World Bank, 1980). A recent World Bank financed project to promote small and medium scale enterprises in Turkey defines "SSI firms with fixed assets (excluding land and buildings) valued at less than US \$ 500,000 in 1984 prices; the corresponding limit for MSI is US \$ 2.5 million in 1984 prices." (World Bank, 1985 : 4fn).

The definition used in this study was largely dictated by the availability of statistical data collected primarily by the State Institute of Statistics through manufacturing censuses carried out every ten years and through annual surveys of "large scale" industries. As was the case with the 1980 World Bank

study, the establishments employing less than 10 persons were categorized as "artisanal enterprises". Establishments with 10-49 employees constitute "small scale industries" and those with 50-200 employees "medium scale industries", while "large scale industry" was defined as comprising establishments with more than 200 employees.

As is the case with any other scheme of categorization of manufacturing establishments, this too does not result in a watertight compartmentalization of industries. On the contrary, some degree of overlapping between categories as well as a high intra-group variability within a given category is to be expected. Therefore, certain quantitative indicators computed as group averages should be treated with caution. It is highly likely that an enterprise in a given category may be closer to those in the next group rather than to those within its own. However, inter-group variations are assumed to be more significant than intra-group variations. Obviously, having no information on the distribution of individual enterprises within each group, this assumption cannot be statistically tested in any meaningful manner.

1.2. DATA

As was mentioned above, the main source of statistical data for this study consists of 1963, 1970, and 1980 Industrial Censuses carried out by the State Institute of Statistics (SIS). Due to lack of access to raw data, use was made of the tables included in various SIS publications pertaining to the said censuses, which created several serious problems in their utilization.

First, a uniform, invariable set of definitions was not used for the collection and categorization of statistical data in these censuses. In 1963, all the private manufacturing establishments employing less than 10 persons were classified as "small", while "large" scale included private establishments with at least 10 employees and all the public enterprises irrespective of the number of their employees. In the 1970 Census, the "small" category included the private establishments with less than 10 employees and less than 50 hp of power equipment. Surprisingly enough, private and public establishments with less than 10 employees which had at least 50 hp of power equipment were not included in

"large" scale either and were left in between, so to speak. In the 1980 Census, the SIS reverted to the definition used in the 1963 Census. In the present study, private establishments with less than 10 persons employed are treated as "artisanal", irrespective of their power equipment.

Second, in all the Censuses the data for "small" scale manufacturing were collected through sampling surveys, while the rest was subjected to a full census. They all were implemented in two stages and the samples for "small" scale establishments were selected on the basis of the information collected during the first stage. Some establishments which have been thought of as "small" scale on the basis of the information of the first stage were found out to be "large" scale during the second stage, largely because of the seasonal nature of their activities or incomplete reporting during the first stage of data collection. Data on such enterprises were presented together with "small" scale manufacturing in the 1963 Census publication. Here they are taken together with other establishments with 10 or more employees.

Third, the data for "small" scale enterprises were presented on a three-digit sectoral breakdown for 1963, while for 1970 a two-digit sectoral classification was used for "small" scale and a four-digit classification for "large" scale. In 1980, on the other hand, a four-digit classification was introduced for both "small" and "large" scales which is different from those used earlier. The switch to this new classification was made in the 1973 "Large" Scale Manufacturing Survey. Since there is not a one-to-one correspondence between the two classifications, a detailed sector-by-sector comparison is impossible for the period of 1963-80 or for 1970-80. However, for the 1973-80 period such comparisons can be made for various sub-categories of "large" scale manufacturing, since the data collection was carried out on the basis of the same classification scheme during this period.

Finally, the information content of the Census publications shows a great degree of variation. For instance, the amount of data provided in the publication on the 1963 Census is scanty compared with the other Censuses. The figures on the number of workers employed by "large" enterprises are not given according to

different establishment sizes, while a similar situation exists in the case of "small" establishments with regard to power equipment or annual additions to fixed capital. Similarly, information on the age structure of enterprises is available for 1963 and 1970, but not for 1980.

It is this state of statistics on manufacturing establishments which led to the following conclusion in a World Bank study on the subject:

"The lack of comprehensive and sufficiently detailed time series by size of establishments and subsector on important economic indicators (e.g., investment, production, value added, exports, capital/labour ratios, labour and capital productivity, profitability capital structure, etc.) makes the study of trends in the SMI sector and the assessment of performance of the SMI extremely difficult. Until a comprehensive census is taken, our knowledge of the vital statistics of the SMI sector is bound to remain incomplete, our analysis limited and inadequate, and our approach largely impressionistic." (World Bank, 1980 : 3fn).

Obviously, a few empirical studies on the subject may not remedy this situation, since, being based on field surveys, their coverage is limited both locationally and sectorally, making any generalizations based on them highly dubious.

The present study deals only with private manufacturing activities. The primary reason for excluding public enterprises is directly related to the objective of the study - namely, the delineation of factors which account for the present state and the growth potential of small and medium-scale manufacturing establishments with specific emphasis on the role played by public policies. It is generally agreed that, in the main, the management of public enterprises is more strongly affected by extra-economic considerations than economic ones. Therefore, their inclusion in the picture would blur the effect of economic variables on the present state and development patterns of small and medium - scale manufacturing enterprises, almost all of which are privately owned. By excluding the public sector, it was possible to concentrate on economic

factors deemed to be relevant to the analysis of the case under study. Accordingly, in what follows, manufacturing always means "private manufacturing" and the term "establishment" refers only to private ones.

1.3. PAST AND PRESENT OF SMALL AND MEDIUM SCALE INDUSTRIES IN TURKEY

1.3.1. Changing Size Distribution :

During the period of 1963-80 covered in this study, the role and place of the artisanal sector in manufacturing diminished considerably, even though the number of enterprises increased by close to 13 per cent. The share of artisanal and craft enterprises in manufacturing employment declined from 65.3 per cent in 1963 to 49.3 per cent in 1980. Their shares in manufacturing output were 34.6 per cent and 21.5 per cent, respectively. On the other hand, the rate of increase in their numbers slowed down during 1970-80 compared with the earlier period. The figures for small industries exhibit a different picture. While their numbers increased in both absolute and relative terms, their share in manufacturing output declined from 21.5 per cent to 16.5 per cent during the same period. The medium and large industries, on the other hand, were able to increase their share in manufacturing output during the period of 1963-80, from 18.4 per cent to 21.0 per cent for the former and from 25.5 per cent to 41.3 per cent for the latter, respectively. On the other hand, the share of small and medium industries in total output declined by 2.4 percentage points despite the fact that their numbers increased by nearly 150 per cent.

In summary, the size distribution of the manufacturing industry changed in favour of medium and large industries during the period 1963-80, a change which was more pronounced for the first part of the period, i.e. 1963-70. Furthermore, during 1970-80, the rise in the shares of artisanal and small industries in employment was accompanied by a fall in their share in output which is a direct result of their relatively labour intensive nature as well as of their lower labour productivities.

TABLE-1
COMPOSITION OF MANUFACTURING
‡

| | Share in Total Number of Enterprises | Share in Total Employment | Share in Total Output |
|------------------|--|------------------------------|--------------------------|
| ARTISANAL | | | |
| 1963 | 97.9 | 65.3 | 34.6 |
| 1970 | 97.4 | 50.1 | 24.8 |
| 1980 | 95.5 | 49.3 | 21.2 |
| SMALL | | | |
| 1963 | 1.6 | - | 21.5 |
| 1970 | 1.9 | 10.9 | 19.2 |
| 1980 | 3.5 | 13.2 | 16.5 |
| MEDIUM | | | |
| 1963 | 0.3 | - | 18.4 |
| 1970 | 0.5 | 12.6 | 19.6 |
| 1980 | 0.7 | 12.6 | 21.0 |
| LARGE | | | |
| 1963 | 0.09 | - | 25.5 |
| 1970 | 0.18 | 26.3 | 36.5 |
| 1980 | 0.24 | 24.9 | 41.3 |

 Source: SIS Industrial Surveys.

1.3.2. Sectoral Differences:

Even though, the size distribution changed in favour of large enterprises, in general, there was also some sectoral variation in this respect. With the exception of the basic metals and machinery sectors the share of artisanal units declined in all the sectors. These exceptions are two of the three sectors where the share of large enterprises declined during the period of 1963-80. It is also seen that, with the same two exceptions, in the sectors where the share of small establishments declined the share of large ones increased. Obviously, the growth of large scale enterprises was at the expense of artisanal and small enterprises. There are also some sectors where the

share of both small and large enterprises increased during 1963-80 : footwear and clothing, printing and publishing, fur and leather products, non-metallic mineral products, metalware, electrical machinery, appliances and supplies, and transport vehicles and equipment. In some of these sectors (footwear and clothing, printing and publishing, fur and leather products, non-metallic products, and metalware), this development can be partly explained by market segmentation whereby small and large units cater to different segments of the market. In the remaining two sectors, on the other hand, the development in question is related to the growth of production of spare parts and of small repair and maintenance activities following the growth of large enterprises producing electrical appliances and transport vehicles. As a matter of fact, artisanal units have been mushrooming in transport vehicles and equipment sector, while the number of small enterprises in these fields increased by more than sevenfold during 1963-80. In the light of the existing data, it would be safe to conclude that while the growth of large scale manufacturing was, as a general rule, at the expense of artisanal and small enterprises, in several sectors the growth of the former created new business opportunities which proved to be beneficial to the latter.

TABLE - 2
CHANGES IN COMPOSITION OF MANUFACTURING (1963-80)

**CHANGE IN THE DISTRIBUTION OF TO
 MANUFACTURING OUTPUT**
 (+=increase; -=decline; o=same)

| CODE | SECTORS | ARTISANAL | SMALL | MEDIUM | LA |
|------|--|-----------|-------|--------|----|
| 20 | Food | - | - | + | |
| 21 | Beverages | - | - | o | |
| 22 | Tobacco | - | - | + | |
| 23 | Textiles | - | - | - | |
| 24 | Footwear and Clothing | - | + | + | |
| 25 | Wood Products | - | - | + | |
| 26 | Furniture | - | - | + | |
| 27 | Paper and Paper Products | - | - | + | |
| 28 | Printing and Publishing | o | + | - | |
| 29 | Fur and Leather Products | - | + | + | |
| 30 | Rubber Products | - | - | - | |
| 31 | Chemicals | - | - | - | |
| 32 | Petroleum and Coal Prod. (*) | o | + | + | |
| 33 | Non-Metallic Mineral Prod. | - | + | + | |
| 34 | Basic Metals | + | - | + | |
| 35 | Metalware | - | + | + | |
| 36 | Machinery | + | - | + | |
| 37 | Electrical Machinery, Appliances and Supplies | - | + | - | |
| 38 | Transport Vehicles and Equipment | - | + | + | |
| 39 | Miscellaneous | - | + | + | |

 (*) In 1963 there were no private enterprises in this sector

It has been argued on the basis of empirical evidence that :

"At least in the case of the ASEAN countries, ... irrespective of the relative size of the small and medium industry sector, the small and medium industries tend to be concentrated in the same industries in all countries. These include above all ... industries using relatively simple, labour-intensive production techniques (such as leather, footwear, furniture, metal products); industries processing spatially dispersed raw materials (such as food processing and wood processing); and industries particularly dependent on proximity to the market (such as printing and publishing)". (UNIDO, 1984 : 4).

The changes in the relative importance of different types of enterprises taken together with the present situation show that the Turkish case also fits this picture. Artisanal enterprises still dominate sectors such as footwear and clothing, wood products, furniture and, taken together with small scale enterprises, food, printing and publishing, fur and leather products, and metal products - despite the decline in their share in most of these sectors. On the other hand, sectors such as beverages, textiles, rubber products, chemicals, non-metallic products, electrical machinery, appliances and supplies, transport vehicles and equipment and, to a lesser degree, basic metals and machinery came to be dominated by large scale establishments.

TABLE-3
COMPOSITION OF MANUFACTURING OUTPUT ACCORDING TO DIFFERENT TYPE
OF ENTERPRISES (1988)
 §

| SECTORS | ARTISANAL | SMALL | MEDIUM | LAR |
|-------------------------------|-----------|-------|--------|-----|
| Food | 26.3 | 25.6 | 25.5 | 22 |
| Beverages | 4.3 | 10.1 | 17.0 | 68 |
| Tobacco | 0.0 | 6.2 | 82.0 | 11 |
| Textiles | 14.7 | 13.8 | 15.0 | 56 |
| Footwear and Clothing | 62.4 | 13.3 | 12.8 | 11 |
| Wood Products | 64.0 | 10.2 | 13.5 | 12 |
| Furniture | 63.4 | 13.7 | 12.5 | 4 |
| Paper and paper products | 21.3 | 22.1 | 30.7 | 26 |
| Printing and Publishing | 34.1 | 23.4 | 10.6 | 31 |
| Fur and Leather Products | 28.9 | 10.4 | 21.9 | 8 |
| Rubber Products | 18.6 | 9.3 | 4.5 | 67 |
| Chemicals | 5.2 | 14.5 | 25.0 | 55 |
| Petroleum and Coal Products | 0.6 | 15.9 | 55.8 | 27 |
| Non-Metallic Mineral Prod. | 6.7 | 9.1 | 13.5 | 70 |
| Basic Metals | 2.3 | 22.7 | 29.6 | 45 |
| Metalware | 39.7 | 17.5 | 20.8 | 22 |
| Machinery | 28.4 | 11.8 | 19.8 | 39 |
| Electrical Machinery, | | | | |
| Appliances and Supplies | 12.3 | 11.1 | 24.5 | 52 |
| Transport Vehicles and Equip. | 17.3 | 9.3 | 13.8 | 59 |
| Miscellaneous | 28.4 | 27.8 | 22.4 | 21 |

1.3.3. Average Size :

In 1970, the average size of the labour force (number of employees per enterprise) was 1.9 for artisanal units, 21.1 for SSI, 93.3 for MSI, and 534.8 for LSI. The figures for 1980 were 2.1 for artisanal units, 20.4 for SSI, 93.3 for MSI, and 569.2 for LSI. During this period, the average size of artisanal and large scale units increased, while that of small scale decreased and for medium scale it remained constant. This means that the gap between artisanal and small units diminished, while that between large scale enterprises and the rest widened. A similar development can be observed if the average size is measured by value added per enterprise. Here it is seen that while the gap between small and artisanal units diminished, that between medium and large scale units and the rest widened. In terms of value added per establishment, the difference between MSI and LSI remained more or less constant. This implies that the rise in productivity was faster for MSI compared with LSI.

1.3.4. Mortality/Survival Rates :

Existing data indicate that the mortality rates are quite high for artisanal units in some sectors. From 1963 to 1970, the number of artisanal units declined by a total of 8, 658 units in 8 sectors : beverages, tobacco, textiles, footwear and clothing, fur and leather products, chemicals, petroleum and coal products, and metalware and miscellaneous. However, the increase in the number of artisanal units in other sectors (22,162), more than offset this decline, so that their total number increased by 13,404 units. This situation became more pronounced during the period of 1970-80 when the number of artisanal enterprises declined by 19,112 units in 6 sectors : food, beverages, footwear and clothing, fur and leather products, metalware, and miscellaneous. The decline was especially sharp in the footwear and clothing sector. This time, the increase in other sectors was 25,823 units, resulting in an increase of artisanal enterprises by 6,711 units.

If the two periods are taken together, the number of artisanal enterprises is seen to have declined in 9 out of 20 sectors, the fall being more pronounced in fur and leather products, beverages, and footwear and clothing sectors. The mortality rates of artisanal

enterprises implied by the above figures are certainly underestimated since they are based on a comparison of the number of such units existing at the beginning of the period with those at the end. It is quite likely that the decline in their numbers was considerably higher but the newly established enterprises offset this decline to some extent. In other words, the mortality rates implied by TABLE-4 can be regarded as minimums.

TABLE-4
CHANGES IN THE NUMBER OF ARTISANAL ENTERPRISES

| SECTORS | 1963-70 | 1970-80 |
|----------------------------------|---------|---------|
| Food | + 2,374 | - 2,551 |
| Beverages | - 278 | - 390 |
| Tobacco | - 17 | 0 |
| Textiles | - 2,152 | + 6 |
| Footwear and Clothing | - 2,290 | -12,129 |
| Wood Products | + 4,290 | + 3,763 |
| Furniture | + 1,439 | + 7,041 |
| Paper and Paper Products | + 65 | + 144 |
| Printing and Publishing | + 717 | + 881 |
| Fur and Leather Products | - 456 | - 2,421 |
| Rubber Products | + 305 | + 1,178 |
| Chemicals | - 145 | + 413 |
| Petroleum and Coal Products | - 83 | + 58 |
| Non-Metallic Mineral Products | + 1,832 | + 854 |
| Basic Metals | + 21 | + 578 |
| Metalware | - 3,237 | - 252 |
| Machinery | + 2,806 | + 4,646 |
| Electrical Machinery | | |
| Appliances and Supplies | + 1,222 | + 292 |
| Transport Vehicles and Equipment | + 5,729 | + 6,049 |
| Miscellaneous | + 1,262 | - 1,369 |

An examination of survival rates of artisanal units during the period of 1963-70 supports the above view. The data for the 1963 and 1970 Censuses enable us to determine the age structure of artisanal enterprises and the others. The "survival rates" have been calculated on a sectoral basis. For instance, the sectoral survival rates of artisanal units were found by dividing the number of artisanal enterprises in a

particular sector in 1970 which were established prior to 1965 by the number of artisanal units which existed in the same sector in 1963. The resulting ratio gives us the percentage of firms existing in 1963 which were able to live through the period of 1963-70. However, since the numerator of the ratio also includes the firms established in 1964 and also those with unknown establishment dates, the rates calculated by this method overestimate the chances of survival. The survival rates presented on TABLE-5 indicate that the life expectancy of the artisanal enterprises is considerably shorter than the relatively large enterprises. Slightly more than half of the artisanal enterprises existing in 1963 were still active in 1970. This implies that at least about 74,000 artisanal units existing in 1963 died away during 1963-70 or, what amounts to the same thing, about 83,000 of them survived during this period. Again, these figures overestimate the survival rates of artisanal enterprises since they do not take into account those which were established after 1963 but were closed down before 1970.

In the case of larger firms the situation seems to be quite different. In almost all the sectors the survival rates of larger units are found to be greater than one. This means that in 1970 the number of "large" enterprises which were established before 1965 exceeded the number of "large" enterprises in that sector which were surveyed in 1963. One explanation could be that the numerator of the ratio includes also the enterprises established in 1964. A second reason could be the change during the period of 1963-70 in the nature of activities of enterprises which existed in 1963. This was a period in which a rapid transformation of merchant capital into industrial capital was taking place. Many trading companies engaged in importing entered manufacturing, generally as a result of import substitution policies and of recurring foreign exchange shortages. Such policies raised the profitability of production for domestic market and induced some merchants to become involved in the production of commodities in whose trade they already were active. It is quite possible that some portion of "larger" manufacturing units in 1970 consisted of those established prior to 1965 but were engaged not in manufacturing but trading in 1963.

Finally, the situation depicted in TABLE-5 may have been the result of the transformation of artisanal

units into larger ones through growth. However, the figures suggest that the number of artisanal units which changed classes during this period could be 463 ($=.14 \times 3305$), if all the large firms which existed in 1963 were still alive in 1970. A highly unlikely case could be the one where all the larger units existing in 1963 died away and were replaced by the fast growing artisanal enterprises. In this case, the upper limit to the number of upwardly mobile artisanal enterprises would be 3,768 ($=1.14 \times 3305$). Considering the fact that there existed 157,044 artisanal units in 1963, the figure of 3,768 (maximum number of upwardly mobile ones) implies that, at best, only about 2.4% of them were able to change classes during the period of 1963-70.

TABLE-5
SURVIVAL RATES OF MANUFACTURING ENTERPRISES (1963-70)
 ‡

| SECTORS | ARTISANAL | OTHERS |
|--|-----------|------------|
| Food | 63 | 97 |
| Beverages | 41 | 133 |
| Textiles | 38 | 95 |
| Footwear and Clothing | 47 | 207 |
| Wood Products | 60 | 107 |
| Furniture | 56 | 158 |
| Paper and Paper Products | 49 | 183 |
| Printing and Publishing | 64 | 117 |
| Fur and Leather Products | 60 | 110 |
| Rubber Products | 55 | 81 |
| Chemicals | 55 | 133 |
| Non-Metallic Mineral Products | 60 | 166 |
| Metalware | 49 | 104 |
| Machinery | 154 | 164 |
| Electrical Machinery, Appliances and Supplies | 56 | 164 |
| Transport Vehicles and Equipment | 70 | 220 |
| Miscellaneous | 58 | 160 |
| TOTAL | 53 | 114 |

However, it is also obvious that the new starters in the field were not discouraged by the slim chance of succeeding to grow or the low chance of survival. While

about 70,000 artisanal units failed and consequently disappeared, close to 90,000 new artisanal enterprises were established during this period. This implies that the newcomers, despite the pessimistic picture above, probably expected to fare better than those already in the field or, more likely, had no alternative but to start their own workshops, due to the lack of employment opportunities elsewhere in the economy.

2. FUTURE DEVELOPMENT POTENTIAL OF SMALL AND MEDIUM SCALE INDUSTRIES

2.1. FACTORS AFFECTING DEVELOPMENT POTENTIAL

2.1.1. Productivity :

Available data show that labour productivity in manufacturing establishments (as measured by value added per employee) increases with size of establishments. In 1980, taking average labour productivity for the artisanal enterprises as 100, the figure for small ones turns out to be 265, for medium enterprises 459 and for the large ones 534.

If labour productivity is measured by output per employee, the corresponding figures are found to be 290, 387, and 386, respectively. Both sets of figures show that there is a direct relation between the size of an enterprise and its labour productivity. However, both measures underestimate the labour productivity of larger enterprises since their denominators include all the employees. A better measure would be obtained if only the number of those engaged in production were put in the denominator. In 1980 about 22.7% of those employed in private manufacturing (excluding artisanal establishments) were engaged in administrative activities. Available data do not allow us to calculate the figure for enterprises in different size groups. However, one can argue that, due to the small size of the unit, this percentage tends to be quite low for artisanal enterprises where productive and administrative activities are not clearly distinguished and carried out by different persons. The owner usually performs both types of activities. For small enterprises, on the other hand, some types of administrative activities such as bookkeeping may be handled not by internal staff but rather by outsiders such as professional bookkeeping offices. As the size

grows, some activities previously carried out by outsiders need to be internalised, thereby leading to a rise in the proportion of employees engaged in activities related to the management of the enterprise. Due to scale economies in administrative activities, the said proportion may stabilise or even fall and then start to rise again together with growing size. While there is no information which would enable us to determine the way in which administrative activities change with growing size, it would be safe to assume that, as a rule if labour productivity is measured by taking into account only the employees engaged in production, the gap between enterprises of different sizes would be greater than that given above. The breakdown of employees according to whether they are engaged in production is available only for the establishments with at least 10 employees, but not for different size groups. If labour productivity for such establishments is calculated as a value added per production worker, the figure turns out to be nearly 6 times as high as labour productivity of artisanal units measured by value added per employee. If output is used instead of value added, the corresponding figure is found to be 5 times rather than 6.

This correlation between the size and the labour productivity of manufacturing enterprises can be argued to be a direct result of differences in capital intensity of production techniques used by enterprises of different sizes. As a general rule, the larger the size of an enterprise, the higher is its capital intensity. Unfortunately, the available data do not permit us to determine whether this relationship empirically holds in the case of Turkish manufacturing. However, if the capacity of power equipment per enterprise is taken as a rough indicator of capital intensity, it can be said that in Turkey too increasing size leads to rising capital intensity of production techniques. If capacity of power equipment for an artisanal firm is taken as 100, the figure rises to 1,812 for small, to 13,214 for medium and to 48,660 for large enterprises. This could be taken as an indicator that the use of inorganic energy increases with the size of establishment. In other words, especially in artisanal units, production is based on human labour, rather than machinery and equipment.

A better indicator of this situation is provided by comparing the power equipment per employee in artisanal units (4 hp) with the power equipment per production worker in the rest of manufacturing which is

found to be 14 hp. However, even this measure cannot be considered to be a good proxy for capital intensity of production since it does not take into account the differences in the quality of machinery and equipment used by enterprises of different sizes.

The direct relation between capital intensity and enterprise size was one of the findings of a World Bank study where the investment cost per job created as estimated in the Encouragement Certificates granted during January 1979 - June 1980 (World Bank 1980; 25) was used as a proxy for capital intensity. It was concluded that "small and medium size enterprises ... tend to be less capital intensive compared with large firms", (*ibid.*). Finally, it must be pointed out that on the basis of existing statistical data, it is not possible to calculate capital productivity for enterprises of different sizes.

2.1.2. Wages:

The wage levels in manufacturing enterprises are also observed to vary with establishment size. In 1970, the average wage level in artisanal enterprises was less than half of that which prevailed in larger establishments. In 1980, on the other hand, the variation seems to have increased, not only between large and artisanal enterprises, but also between small, medium, and large enterprises. This differentiation in wage levels, which seems to persist and also to increase, indicates the existence of a segmented labour market in Turkish manufacturing, paralleling the differentiated nature of manufacturing. The wage differentials between different types of manufacturing enterprises and the tendency of such differentials to increase means that firms of different sizes operate in separate labour markets and that for a worker the transition from a lower-wage market to another with higher wage is highly restricted.

 TABLE-6
 ANNUAL AVERAGE WAGES
 (1000 TL)

| | 1970 | 1980 |
|-----------|------|-------|
| ARTISANAL | 6.0 | 67.4 |
| SMALL | 12.7 | 135.1 |
| MEDIUM | 12.7 | 248.4 |
| LARGE | 13.8 | 350.3 |

One limiting factor here would be the limited number of job openings in higher wage markets. The lack of any tendency for the equalization of wage rates in the labour markets implies the existence of a mechanism of rationing the jobs among the applicants, provided that everybody in the low-wage market can move freely to a higher-wage market. However, it is more likely that the movement in this direction is not possible or very difficult as a result of the nature of labour supply in low-wage market. This is related to the apprenticeship system still in existence in artisanal and, to a lesser degree, in SSI. This system creates a particular age structure of the workers in artisanal and small units so that a majority of them are in their teens working as apprentices. For a majority of such wage-labourers in the low-wage market, moving into a job at larger enterprises is out of the question. In other words, the different segments of the labour market are effectively separated.

Another factor which strengthens the separation of these labour markets is related to the geographical distribution of different types of manufacturing enterprises. While the artisanal and small units are almost evenly spread throughout Turkey, medium and large ones are concentrated in and around the big cities in the western region of Turkey. Thus moving from an occupation to another may also mean a move from one region to another. The extent to which such geographical mobility is limited will exert an influence in the direction of the continuation of wage differentials.

The artisanal and small units also provide a training ground, a labour pool from which the larger firms can meet their labour requirements. Thus, in periods of high growth of larger enterprises one would expect a shrinkage of wage differentials. However, due to the high level of unemployment and to the nature of the work force of smaller units, probably such a shrinkage does not take place or it occurs for specific skill categories in high demand by larger firms.

Different segments of the labour market also differ in terms of working conditions and unionization. Not only are the workers in artisanal units almost totally non-unionized, but for the most part they do not have the benefit of a social security system, (DPT, 1971; Ebin, et.al., 1979).

2.1.3. Profitability :

Since data on capital stock are not available, it is not possible to measure the profitability of manufacturing enterprises. However, the so-called price cost margin can be calculated and can be taken as a proxy for the rate of profit of an enterprise. The price cost margin is computed as follows:

$$\text{Price cost margin} = (\text{output} - (\text{input} + \text{wages})) / \text{output}$$

This method of computation leads to an overestimation of price-cost margins for artisanal and, to a lesser degree, small enterprises, since no allowance is made for the labour put in by the owners of the enterprises, their partners and family members who do not work for a wage. Therefore, the costs of such an enterprise must be adjusted so as to take account of such unaccounted cost items, which would be measured by the alternative (opportunity) costs of such persons. Assuming that the only alternative for such persons would be to work for a wage in an enterprise of the same size in the same sector, this opportunity cost can be approximated by the going wage rate at such enterprises. Under these assumptions the adjusted price-cost margin is to be computed as:

$$\text{price cost margin} = (\text{output} - \text{input} - (\text{Wages/workers} \\ \text{x employees})) / \text{output}$$

Obviously, as the size increases, the difference between the two difference price-cost margins above will get smaller. However, it is the latter which would enable us to make a valid comparison between the profitability of different groups of enterprises.

Measured by these adjusted price-cost margins, the profitability of enterprises also seem to be correlated with their size. When the figure for artisanal establishments is taken as 100, it rises to 101 for small to 129 for medium and to 140 for large enterprises. The higher profitability of medium and large firms is connected with their higher productivity, on the one hand, and their ability to operate better in both input and output markets, on the other.

Furthermore, it can be argued that our calculations still overestimate the profitability of artisanal and, to a lesser degree, small enterprises. First of all, we could not take account of certain items

which are regarded as cost components by an individual firm, but are treated as elements of value added in national totals. The best example of these is the rents paid by manufacturing enterprises. The data on rents are presented separately for artisanal enterprises, on the one hand, and all the rest, on the other. Since they are not available for different size categories in the latter group, it is not possible to see how their inclusion would affect the profitability of small, medium and large enterprises. However, suffice it to say that, the amount of rents paid by artisanal enterprises taken as a whole was more than 50% higher than the total amount paid by the latter group. This implies that their inclusion in costs, would reduce the price-cost margins for artisanal establishments by a considerably greater proportion than it would those for the small, medium and large enterprises. Thus the difference between the price-cost margins of different groups of enterprises would increase in favour of larger enterprises. If the rents are included in costs, the price-cost margin for artisanal enterprises declines to 18 per cent while it is found to be 25.8 per cent for the rest of manufacturing establishments.

Secondly, the adjusted price-cost margins for artisanal enterprises was computed by using as opportunity cost the wage levels in artisanal establishments in the same sector. If this opportunity cost is measured by wage levels in larger establishments in the same sector, the profitability of artisanal enterprises would be considerably lower, considering the fact that the average wage level in small enterprises is more than double the figure in artisanal enterprises. The average level in large enterprises, on the other hand, is more than five times as great as that in artisanal enterprises.

2.1.4. Investments :

One of the reasons which underlies the trend of decreasing significance of smaller enterprises is their inability to generate the funds which can be invested for growth purposes. This is demonstrated by the low amount of annual additions by such firms to fixed capital. While for an average artisanal enterprise this figure was TL 57,800 in 1980, it turns out to be TL 939,000 for a small, TL 14,179,000 for a medium, and TL 59,987,000 for a large enterprise. The difference between the abilities of enterprises of different sizes to invest in fixed capital becomes all the more striking if their shares in output and annual investment are

compared. The share of artisanal enterprises in total manufacturing output was 21.2 per cent, while its share in total investment amounted to 16.6 per cent. The figures were 16.5 per cent and 9.9 per cent for small, 21 per cent and 31.1 per cent for medium, and 41.3 per cent and 42.5 per cent for large enterprises, respectively. This weak investment performance of smaller firms can be partly explained by their lower labour productivity and lower profitability and partly by their limited access to outside funds for investment purposes.

2.2. THE ROLE OF SUBCONTRACTING

2.2.1. Introduction : Symbiotic Relations Between Small and Large Scale Industries

As a rule, in many lines of industrial activity smaller firms have lower levels of productivity and profitability than larger firms. When in competition with each other, therefore, the latter tends to displace the former. In the process, larger firms progressively widen and deepen their capital outlays and smaller firms decrease both in number and importance. In brief, competition paves the way for industrial concentration. But, as observed in many developing countries like Turkey, this is not always the case. Often, non-competitive or symbiotic relations weigh heavier, and permit lesser firms to proliferate next to the larger ones.

In general, non-competitive or symbiotic relations between smaller and larger industrial firms develop either directly through "cooperation", or indirectly through "segmentation".

Symbiosis of small and large firms through "cooperation", as manifested in various forms of subcontracting, stands as a possible tool for not only mass employment creation, but industrial development. Smaller firms solve their marketing problems, and enjoy new possibilities for growth and development. Larger firms, on the other hand, benefit from the "cooperation" in other ways. First, they economise capital and labour. Second, they take advantage of lower wages in, and sometimes specialised technologies of, the smaller firms. Last but not the least, they come to enjoy smaller firms as buffers against business fluctuations.

Indeed, "cooperation" between smaller and larger firms is rarely a relationship on an equal basis. As a rule, the latter subordinates the former by becoming its

only or major purchaser. Yet, this subordination may attain positive values when the larger firm supplies not only a relatively stable order but also aids the subordinated to overcome technical and financial bottlenecks. Otherwise, "cooperation" develops into a form of "exploitation", pure and simple.

Symbiosis of small and large firms through "segmentation" stands as a kind of "unnegotiated or indirect complementary" where the former addresses itself to market segments which are not attended by the latter. Doubtless, lesser firms avoid competition from and proliferate next to the larger ones; but in the process, they get trapped in market segments characterised by lower quality, relatively cheap, and labour intensive products or services on the one hand, and remain subordinated, albeit indirectly, on the other. Brief, symbiosis of small and large firms through "segmentation" may stand as a tool for mass employment, but not for industrial development.

In developing countries like Turkey, symbiosis of small and large industrial firms through "segmentation" weighs heavier than their symbiosis through "cooperation". Strengthening industrial "cooperation" between small and large firms, therefore, stands out as a worthwhile policy to pursue in developing countries not only to solve the employment problem, but also to spur industrial development.

2.2.2. Subcontracting : A Definition

An important form of industrial "cooperation" between small and large firms is "subcontracting". In general, it stands as a "form of structured, backward linkage from a principal to a complementary firm" where "the subcontractor supplies specified products, components or services in accordance with the agreement." (World Bank, 1980 : vol. 3,44). Indeed, the term has acquired different connotations over time (Gupta, 1981 : 27-31). Yet, its invariable feature remains to be the following:

"The party offering the subcontract (parent firm, enterprise or company), requests another independent enterprise (subcontractor, or 'ancillary industry' in India) to undertake the whole or part of an order it has received instead of doing the work itself, while assuming full responsibility for the work vis-a-vis the customer". (Watanabe, 1971 : 54).

Doubtless, as such, subcontracting "differs from the mere purchase of ready-made parts and components in that there is an actual contract between the two parties setting out the specifications of the order". (Watanabe, 1971 : 54).

2.2.3. Types of Subcontracting :

In general, two types of subcontracting are distinguished: commercial and industrial.

In commercial subcontracting, the parent firm is either a wholesaler or a retailer. It contracts out finished end-products; collects and sells them. In industrial subcontracting, however, the parent firm is often a manufacturer. It uses the subcontracted finished products (accessories, mirrors, electric bulbs for an automobile, for example), half-finished parts (motors, regulators, etc.), or parts (bearings, bolts, nuts, screws etc.) as inputs in its own production processes.

In commercial subcontracting the subcontractors typically manufacture finished end-products to be collected and sold by the parent firm. Industrial subcontracting, however, is characterized by specialization and division of production process. (Watanabe, 1971 : 54). As a rule, in developing countries like Turkey, forms of commercial subcontracting are more widespread. Conversely, forms of industrial subcontracting marked by economies originating from division of labour in production processes and specialization are rare.

"If manufacturers lack financial and marketing capacity, these are sufficient conditions for commercial subcontracting to develop, while they are necessary but not sufficient conditions for industrial subcontracting. For the latter, an additional technological condition is required : the product and the production process must be divisible, and every part or process need not be produced or performed at one spot continuously. This condition is met to different extents in different industries." (Watanabe, 1971 : 56).

In general, industrial subcontracting displays three types of, or occasions for, cooperation between small and large firms:

1. "economic subcontracting, where considerable cost savings can be achieved thereby -- e.g., when the

needed quantities of a given item are too small to justify investment by the principal firm in plant of the minimum economic size;

2. specialized subcontracting, where the subcontractor has superior know-how in production of a particular item; and
3. capacity subcontracting, where the principal's need for certain components exceeds his plant capacity, and it would be unfeasible or too costly to expand capacity within a limited time -- a situation that is likely to be temporary or intermittent". (World Bank, 1980 : vol.3,44)

2.2.4. Advantages and Motivations of Subcontracting :

Small firms become subcontractors (commercial or industrial), in order to overcome bottlenecks in marketing. Parent firms, on the other hand seek to subcontract part of their work so as to :

1. economize capital and labour;
2. take advantage of lower wages in smaller firms;
3. take advantage of the subcontractor's specialized technology (e.g.patents), if any;
4. establish a buffer against business fluctuations;
5. avoid problems of labour management.

Under certain conditions subcontracting can achieve an optimum degree of division of labour and specialization. Also, reliance upon small firms paying relatively low wages may make the production processes involved more labour intensive, since the difference in the costs of capital and labour is relatively greater in small firms than in large ones. Provided there is adequate competition, this would help reduce production costs and hence prices, which, in turn, would lead to a faster rate of growth of the industry as a whole. Finally, subcontracting facilitates the entry of small entrepreneurs into industry and lowers the obstacles to their survival and further development (See : Watanabe, 1971 : 57-58).

2.2.5. Development of Subcontracting in Turkey :

As noted above, in Turkey, symbiosis of small and large industrial firms through "segmentation" weighs heavier than their symbiosis via "cooperation" i.e., industrial subcontracting. (Bademli, 1977 : 237-241). In this connection, subcontracting between small and large industries remains restricted. Yet, subcontracting practices among the smaller units enjoy a much wider scope in a variety of sectors. Such subcontracting practices often take the form of "social cooperation" where both parties stand on an equal footing. Interdependence of smaller firms in automotive repair, textiles, metal products and wood products sectors are good examples on this score. Indeed, there are instances when interdependence among smaller firms begin to yield patterns of dependency. Small industries which come to enjoy steady markets begin to subcontract parts of their work and tend to subordinate or exploit their less fortunate peers. In a 1971 study, it was found that only a fraction of artisanal enterprises in selected cities i.e., 3, 8, 8 and 19 per cent in Van, Konya, Gaziantep and Bursa, respectively, produced intermediary goods destined to another industrial enterprise. (DPT, 1971, vol.1 : 23).

Commercial subcontracting that affects small industries in Turkey is akin to subcontracting practices among smaller industries. It takes the form of either "social cooperation" among small industries and small merchants, or "exploitation" of the former by the well to do in the latter category. As noted above, subcontracting practices between the larger and smaller industrial firms in Turkey is restricted in scope. As a rule, it is limited to few sectors like the automotive and metal products sectors. Indeed, as may be imputed from the SIS data at hand, the share of larger firms in total value added tends to decline only in the automotive and metal products sectors suggesting an increased role for smaller subcontracting enterprises. The extent of subcontracting in these sectors, however, is limited as well. For example, a study puts the number of subcontractor firms in the automotive industry in the 1970-2 period around 350, and suggests that the total value of subcontracts realized by these firms hardly exceeded 20 per cent of the total production value of the automotive sector in the same period. (Kirac, 1973 : 157). In industrialized countries this ratio ranges somewhere between 40-50 per cent. (Kirac, 1973 : 157). According to a more recent study on automotive industry in Bursa, subcontracting practices

in the urban economy under scrutiny are far less than would be expected both in scope and nature. Subcontracting practices in the automotive sector in the region are found to be not only limited to a handful of small industries, but also more exploitative than stimulating. (Gupta, 1981 : 83-115). Indeed, such a finding is not surprising for, most of the subcontracting firms in the automotive sector are located in the Istanbul region. They receive orders from the two automobile factories located in Bursa as well.

Subcontracts offered by isolated pockets of large factories in the metal products sector do stimulate the development of small industries around them. These instances, however, are as rare as such industries. For example, the state-owned Arms and Ammunitions Plants in Kirikkale - Ankara account for the flourishing of metal products related artisanal and small industrial enterprises in the city. (Atalay, 1983 : 67-69). A similar pattern may be observed in the cases of Karabuk and Iskenderun Steel Mills.

However limited the scope and nature of subcontracting practices between larger and smaller industrial enterprises in Turkey may be, there are signs of a profound change. The number of large firms which offer subcontracts increases as artisanal enterprises which receive subcontracts from other industrial firms decrease but small and medium size industrial subcontractors increase in number. This process of concentration may be imputed to the decrease in the number of subcontractors in the automotive sector from 556 in 1964 to around 350 in 1972-3. (Ozguç, 1970 : 26, and Kirac, 1973 : 157). Again, a 1969 National Productivity Centre survey on subcontracting industries indicates that the bulk of such firms employed 10 to 50 workers. In a 1963 SPO survey however, it is suggested that the bulk of subcontracting firms employ 5 to 10 workers. (Ozguç, 1970 : 27).

2.2.6. The Future of Subcontracting in Turkey :

The potentials and limitations of industrial subcontracting between small and large firms are well known. For the principal firms, the potential benefits of subcontracting are :

1. lower production costs, since many SSI's have lower overhead and labour costs, and are willing

to share profits when production capacity otherwise should be unemployed;

2. greater flexibility to respond to changes in demand, with lower capital investments and a smaller permanent work force, reducing breakeven production levels;
3. utilization of specialized equipment and skills which would not be justified for a single principal firm; and
4. shifting of some working capital and carrying costs to subcontracts." (World Bank, 1980 : vol.3.45)

Doubtless, there are elements of risk involved for the principal firms. Their complaints "are usually that some subcontractors are unreliable in meeting quality and delivery requirements, due to technical or managerial weaknesses or to their desire to cut corners and thereby increase profits." (World Bank, 1980 :vol.3,45).

Potential advantages to SSI subcontractors, on the other hand, include :

1. access to markets that SSI would otherwise be unable to reach, with the selling burden shifted to the principal;
2. a certain level of guaranteed orders, and
3. a variety of services from the principal firm(s) -- e.g., designs, raw material supply, quality control and related technical assistance, shipment, and help in obtaining credit." (World Bank, 1980 : vol.3, ?).

Subcontractors are not devoid of problems either. When they depend upon single companies for large percentages of their total orders, their bargaining powers decline, and they end up with low profit margins to start with. Also, delivery and quality requirements may strain their capabilities. Furthermore, principals may delay payments, require adjustments in contract conditions, or stop putting out new contracts, all of which may be traumatic for the subcontractor.

Indeed, industrial subcontracting between small and large firms may sour into a dependency relationship favouring the latter. Yet, when cultivated and maintained properly it yields a variety of positive results difficult to ignore. In this connection, the promotion of subcontracting linkages between small and large industries in as many sectors as possible becomes a worthwhile policy to pursue. Doubtless Turkey has a long way to travel on this road. Subcontracting in the public sector, and public encouragement of private sector subcontracting are the two interrelated fields which require special attention.

"Government policies can directly and immediately promote the growth of SSI by requiring that large firms receiving public contracts must subcontract specified portions of the work to SSI." (World Bank, 1980 : vol.3,44). Otherwise the government may work out policies and programmes to encourage industrial subcontracting. Such encouragements may take the forms of :

1. compiling information regarding subcontracting opportunities and candidates, perhaps establishing subcontracting exchanges to match up needs and capabilities;
2. assisting SSI's in upgrading to meet quality and production requirements of prime contractors;
3. setting objective quality standards and specifications; and
4. assuring that subcontracting arrangements are not abused, through regulation or arbitration". (World Bank, 1980 : v.3,46).

"Other possible measures to this end include reduced import duties on machinery for subcontractors; rental of government-owned equipment to subcontractors (mostly in construction); accelerated depreciation allowance on equipment, to facilitate subcontractors' acquisition of capital assets; provision of industrial extension services, materials testing equipment and industrial estate facilities; and where opportunities exist, helping to organize joint contracting arrangements among SSI's." (World Bank, 1980 : v.3,46-47). Indeed, the ongoing UNIDO-Turkish Government (KUSGET) project to promote a services centre for smaller foundries in Ankara is a worthwhile experience to monitor on this score.

The importance of promoting industrial subcontracting between small and large firms is duly emphasized in the literature. Yet, industrial subcontracting among smaller firms on the one hand, and commercial subcontracting on the other are not equally emphasized. Given the abundance of such relations in the Turkish industrial landscape, it becomes obvious why special attention is necessary on these counts as well.

2.3. CONTRIBUTION OF SMALL AND MEDIUM SCALE INDUSTRIES TO MANUFACTURED EXPORTS

It is generally accepted that SMI can make a significant contribution to manufactured exports in sectors such as footwear and clothing, leather processing, wood products and furniture. It is equally true that at present this potential is poorly realized and export capabilities of small and medium industrial firms in Turkey are quite restricted. The basic reason for this situation is related to internal characteristics of SMI. Lacking market research and data, they are generally unable to tap export markets. Poor accounting practices and lack of managerial know-how lead to serious costing and pricing problems. Technological weaknesses result in their inability to adopt their products to meet stringent requirements of export markets. Finally, shortage of qualified personnel, lack of financial resources, and small scale of operations hinder the establishment of organizational structures needed for sustained export activities. The export trading companies established in recent years provide a partial solution to some of these problems in a few sub-sectors like clothing and leather processing where strong commercial subcontracting relations exist (World Bank, 1984 : 10).

Another factor which had an unfavourable effect on export performance of SMI is the government's export rebate system which discriminated against SMI, by granting high rebates for large volume exporters. While its bias in this direction has been reduced, it still continues to favour LSI, since additional rebates increase with the volume of exports and is nil for annual exports less than \$ 2 million. The available data do not enable us to evaluate the export performance of SMI. But there exist indirect evidence on this score. According to statistics on the activities of the largest 500 industrial firms in Turkey, 382 of them exported manufactured goods in 1983, accounting for 63.7 per cent of total manufactured exports. In 1984, the number of exporting firms out of the largest 500 industrial enterprises was 368, accounting for 51.2 per

cent of total manufactured exports. In other words, only a handful of large industrial enterprises do account for more than half of Turkey's manufactured exports. This situation implies that the contribution of SMI to manufactured exports is considerably less than their contribution to manufacturing output. Unless there are considerable improvements in their accounting and management practices and technological endowments, and they are provided with timely information on export markets, no significant change can be expected in the export performance of SMI.

2.4. ANALYSIS OF SELECTED BRANCHES

In a detailed study by the World Bank, the foundry, engineering (fabricated metal products, electrical and non-electrical machinery, transport equipment, and professional and scientific equipment), food processing, ready made garments, footwear and leather products, wood-based and furniture, plastic and construction materials sectors have been identified as "the most promising in terms of potential of growth of SMI in Turkey (World Bank, 1980, v.1, p.13; v.2, p.120). In addition to growth of domestic demand and export potential, factors such as scale economies, locational characteristics of production (local processing of bulky raw materials or local production of bulky products), complementarity with larger industry, and product differentiation (production for specialized markets) have been taken into account in determination of the most promising sectors. All the industries identified in the World Bank study are "non-process" and "belong to the so-called 'modern' SMI sector but, for a wide range of products they require small-medium scale of plant and firm size and low capital intensity. (World Bank, 1980; v.1. p.13).

In accordance with the generalization which was mentioned at the beginning of the present study, the industries identified as "most promising" in the World Bank study tend to be concentrated in sectors using relatively single, labour-intensive production techniques; in those processing spatially dispersed raw materials and those particularly dependent on proximity to the market.

The World Bank study is based on a number of sectoral studies carried out during the second half of 1970's. However, after 1980, due to the implementation of the policy measures package of January 24, 1980, certain fundamental changes have taken place in the

Turkish economy. As a result an increasing degree of liberalisation of the economy and the shift of the emphasis from import substitution to export promotion, the structure of costs and prices has changed drastically. One effect of the policies followed was a sharp rise in the interest rates and a steady and considerable fall in the exchange value of the Turkish Lira. Taken together with the relative cheapening of labour, the economic changes of the last 6 years can be argued to have a favourable effect on SMI, especially those using labour intensive production techniques and producing goods for export markets. On the other hand, there was the unfavourable effect of the rising cost of finance, needed by the SMI for working and investment capital purposes. Unfortunately, there are no recent studies which one can use to determine the net effect of the conflicting process at work during the last 6 years. Lacking such studies, one cannot decide whether the conclusions of the World Bank study still hold and, if not, to what extent and in what ways they are modified. As a result of this situation, it is still not known how the SMI reacted and how it adapted to the changing economic environment. Any research on the subject could take the World Bank study as its starting point and concentrate on sectors identified as "most promising". Therefore a brief summary of the said study is included here in order to give an idea as to which sectors must be paid special attention in any discussion concerning the growth potential of SMI in Turkey. However, such discussions would not be fruitful unless in depth sectoral studies of SMI were carried out with particular emphasis on developments after 1980.

2.4.1. The Foundry Industry :

"The Government's policy to encourage the gradual substitution of imports has led to local manufacture of more complex castings, with imports confined to specialty items. The increasing technological sophistication, product mix and output of the engineering industries have resulted in substantial growth of the number and size of foundries. Large firms (capacity over 5,000 tons/year) account for about 23% of existing capacity, medium (500-5,000 tons/year) for 55% and small (less than 500 tons/year) for 22%". (World Bank, 1980 : vol.1,13-14).

"Aside from the growing domestic market for more sophisticated and complex iron and steel castings, there is considerable potential for exports of both rough and

machined castings, provided the industry can gear up and modernize. The motor vehicle, machine tools, construction machinery, materials handling equipment and heavy electrical machinery industry are possible sources of demand. Medium scale foundries have the largest potential for exports, assuming they develop the technical and management capabilities to produce complex and high quality castings on a consistent basis. The way to penetrate foreign markets would be through development of international subcontracting linkages with European firms. Small foundries, properly reorganized and assisted, could in turn cater to the needs of an expanded domestic (and indirectly export) market for a significantly larger range of products." (World Bank, 1980 : vol.1, 14).

2.4.2. The Engineering Industries :

"The engineering industries as a group (fabricated metal products, non-electrical machinery, electrical machinery, transport equipment, professional and scientific equipment) is one of the most important manufacturing industries in terms of investment, employment and value added, and one in which the private sector is dominant. SMI employs more than two-thirds of the sector's labour force. The number of firms in the sector tripled between 1970 and 1977 while employment doubled, reflecting the rapid growth of the sector affected through new entry, and the growth of enterprises throughout the spectrum of size brackets. Some 94% of all establishments employ less than 200 workers, which demonstrates the persistent importance of SMI." (World Bank, 1980 : vol.1, 14-15).

"The technological capability of engineering firms varies with the size of establishment and products manufactured. The trend has been to introduce more sophisticated technology and to produce higher value added products. The larger firms are generally equipped with imported modern machinery. In the smaller firms, much of the equipment is home-made or second hand. Such equipment tends to be old or obsolete with limited capability to produce at required tolerances and rated capacity. Production processes often are wasteful of raw material and fail to produce goods of consistent quality. Quality control standards and procedures are inadequate. There is generally a lack of modern measuring tools and procedures. Nevertheless, the

overall picture which emerges is that of an industrial sector based on a well-diffused technological capability in both the SMI and large scale segments, with excellent prospects for growth and improved efficiency". (World Bank, 1980 : vol.1.15).

2.4.3. The Leather Processing and Footwear Industries:

"Despite the adequate resource base and the trend toward larger and modern units, the leather processing industry has not realized its full potential because of structural and production problems, and of poor quality of raw material. Efforts are underway to ameliorate the adverse conditions affecting hide and leather quality, but much remains to be done, particularly in improving pastures and feeding practices, establishment of better managed and more efficient abattoirs, tightening government inspection, improving handling, storage and transport facilities, and modernizing production facilities and technology." (World Bank, 1980: vol.1,16).

"Although Turkish production is quite well-established in world markets, there are quality and delivery problems. Performance is also hampered by the large number of inefficient producing units, shortages of qualified labor, and management and technical weaknesses. Government strategy to improve the sector, puts primary emphasis on expanding the large-scale subsector. But in view of the important complementary role of SMI, it would be prudent to concentrate attention also on the SMI subsector. The strategy should have the parallel aims (a) to facilitate the expansion of large scale firms and the adoption of appropriate technologies, and (b) to strengthen the small-medium scale firms, to the end of developing a functionally integrated sector. SSI can be upgraded as subcontractors to larger factories as well as manufacturers of special short production run items through the provision of adequate physical facilities (industrial estates), term credits for appropriate types of modern equipment (many of simple but efficient design which could be produced in Turkey), technical and marketing assistance, and training. Of fundamental importance would be incentives to foster cooperative arrangements and mergers. Larger, but still small-scale, production units -- say in the range of 10 to 40 workers each -- working in close harmony with

large production/marketing groups would contribute effectively in maintaining and enhancing Turkey's international competitiveness." (World Bank, 1980: vol.1,16-17).

"In the past, Government strategy to expand and improve the shoe industry emphasized the promotion of the large-scale segments of the industry. However, efficient shoe production can be based on linkages between well-managed SSI units and larger factories. In adopting a strategy which recognizes the potential of SSI, sectoral performance will depend on the successful integration of SSI production capacity with the production and, more importantly, the marketing capabilities of the larger-scale enterprises. Employment considerations alone would justify the rational nurturing of small labor-intensive but efficient workshops. The SSI subsector -- which currently accounts for about 90% of national leather shoe output -- cannot be ignored without risking serious social and economic effects. Corrective action will therefore be needed on many fronts to achieve: institutional strengthening of both public sector agencies concerned with the shoe industry (e.g., Pendik) and the private associations of enterprises, expansion of production and/or improvement of quality of leather; improved plant and infrastructure -- relocation on industrial estates; term credits, technical assistance, management and skilled worker training and upgrading; formation of larger, but still small-scale, and more efficient producing units through mergers of micro-shops (i.e., artisan-shops) and organization of cooperatives; promotion of subcontracting (for large-volume assembly and distribution organizations, like chain stores) and other marketing assistance, including organized procurement by public agencies and export development." (World Bank, 1980: vol.1,17).

2.4.4. The Wood-Based Industries :

"The most striking feature of the sawn-wood sector is the large number of private SMI units using simple low-capacity tools, equipment and technology, existing side by side with a small number of much larger, relatively modern public sector enterprises. Despite the persistent low capacity utilization (44%) -- resulting from the uneven supply of raw material and marketing procedures which favor the public sector --

and the outdated equipment and production techniques employed, the SMI sector has survived and grown, accounting for almost 90% of sawn-wood production. Nonetheless, the SMI sector is sustained in large measure by paying low wages and earning marginal profits, a situation that can be improved through technical assistance and better equipment to enhance operating efficiency. Downstream, the wood-based panel industry (plywood, fiberboard and particle board) has developed rapidly in the last fifteen years, particularly the particle board segment, and it is expected to grow in the immediate future. Only a small fraction of the furniture industry is modern and assistance is needed (e.g., the designing, knock-down constructions, production management, etc.) to improve its performance and to expand exports." (World Bank, 1980: vol.1,18).

2.4.5. The Garment Industry :

"Unlike the other segments of the textile sector, the garments/making-up industry is undeveloped. However, it can be expected that the factory production of garments in the organized sector will continue to erode the large share of the clothing market now held by the less efficient home and artisan production. Garments and made-up articles represent a small, though fast growing share of Turkish exports. Starting from token levels in 1970, exports increased to US\$ 60 million in 1977. There is potential for further expansion of garment exports within existing market constraints." (World Bank, 1980: vol.1,19).

3. SUPPORT POLICIES AND MEASURES

3.1. AN OVERVIEW OF OFFICIAL ATTITUDES: Small and Medium Scale Industry Policies in the Five Year Development Plans :

In all the Five Year Development Plans and Annual Programmes, the question of "small" industry has been examined and various policy measures to be implemented have been enumerated. In the First Five Year Development Plan, 1963-67, they were formulated as follows:

1. The establishment of a small scale industry development center to give assistance and

guidance to small businesses in the matters of credits, organization, marketing, establishment of cooperatives, selection of machinery and equipment, quality control, and the procurement of raw materials, in order to ensure their orderly development;

2. To expand the sources of "controlled credit" supervised credits for small industry and to reduce the cost of credits;
3. To gather the small establishments in industrial estates for small scale industry;
4. to encourage cooperation among small enterprises and the establishment of cooperatives;
5. Reorganization of the apprenticeship system;
6. To set the standards of production and the products and the prerequisites for opening up a workshop. (DPT, 1963: 72-91)

In addition to these measures, the Second Five Year Development Plan, 1967-72, put forth new ones the most important of which are:

1. Extensive educational and training programmes to accelerate progress in this sector;
2. Provision of technical information and research services for small scale industrial enterprises and setting up an organization to guide and assist them in the choice of technology. (DPT, 1968: 121-122)

It was added that:

"certain areas of production among the activities of small scale industries will be turned over to large scale industries and, consequently, the problem of excess capacity is expected to be aggravated in certain branches of small scale industry towards the end of the Second Plan period. Therefore, the responsible public establishments and professional organizations will take long-term measures to support the small scale industries." (DPT, 1968: 121-122)

The Third Five Year Development Plan, 1973-1977, put great emphasis on a selective support policy and differentiated several groups of small enterprises for this purpose:

1. The small industrial enterprises which lead to waste of raw materials and other inputs and which have no growth potential will be phased out and their employees will be transferred to other branches;
2. Those which are growing or have the growth potential in the long-run will be encouraged to do so;
3. Those based largely on engineering and requiring the collaboration of the engineer and the manager, those which cannot grow but should exist (like repair shops) and those which can enter into subcontracting relations with large scale enterprises will be encouraged. (DPT, 1972: 614)

The measures for the implementation of this policy did not differ from those in the other plans: provision of easy and cheap credit, establishment of a national center for small industry development, encouragement of cooperatives, and so on.

In the Fourth Five Year Development Plan, 1978-1983 (DPT, 1979), emphasis was put upon the planned development of industrial estates as well as the rationalization of the existing ones. Other measures included the promotion of cooperatives for procurement of inputs and marketing of output, training, and cooperation among small businesses and research and training institutions. The need for determination of basic characteristics of artisanal, craft, and small industry activities was also recognized in this plan.

The policies of the Fifth Five Year Development Plan, 1985-1989 (DPT, 1984), were in many respects similar to those of its predecessors. It also envisaged a policy of expanding support for industrial estates and providing on-the-job and technical training, as well as encouragement of associations of small industrialists. The Small Industry Development Organization was to be

strengthened to develop appropriate strategies, policies, and technical extension activities for SMI. The strategy enunciated by the Plan included the promotion of subcontracting and enlargement of the flow of investment and working capital loans to SMI. Finally, similar to the Third Five Year Development Plan, this Plan too emphasized the need for determination of priority sectors where small industry will be supported.

3.2. ANALYSIS OF SUPPORT POLICIES AND MEASURES

3.2.1. Credits for SMI :

It is generally accepted that the major operational constraint faced by SMI is the shortage of capital and unavailability of credits. In a recent study of UNIDO, the unavailability of credits was characterized as "the greatest single impediment to the growth and diversification of SMI enterprises" (UNIDO, 1984: ix). The situation in Turkey is no different from that in other developing countries. The inability of these enterprises to internally generate the funds to meet their working capital and investment requirements makes them highly dependent on outside finance. This is why the provision of short and long-term credit to SMI has always been given the highest priority in the Development Plans in Turkey.

The principal source of loans to businesses in artisanal and small industries is Halk Bankasi (HB) with more than 600 regional offices and branches all over the country. Both small tradesmen and SMI enterprises are served by the Bank. It defines SSI as firms with less than 25 workers and less than TL 80 million in assets (excluding land and building), whereas the latter figure is TL 80-300 million for MSI. During the period of 1981-84,

"HB's total lending increased by 1.5 per cent p.a. in real terms and amounted to TL 207 billion at the end of 1984... Loans to SMI for working capital and investment purposes accounted for 25 per cent of the total portfolio of HB,... which increased by 1.0 per cent p.a. in real terms during 1981-84 and amounted to TL 48 billion at the end of 1984. Working capital loans were about 70 per cent of total loans made

in 1984, the balance of 30 per cent being for fixed investment." (World Bank, 1985: 17).

At the end of 1983, the average industrial loan size was estimated to be TL 1.2 million which reflects the preponderant weight of working capital loans in the credit portfolio of HB.

The effective cost of loans for working capital to petty tradesmen and artisans was estimated to be 30-32 per cent, whereas the cost of investment loans for SSI was found to be 43-52 per cent. (World Bank, 1985: 14). On account of its giving a high importance to "the financial structure of the borrowers and the collateral of the loan," the banking practices of HB has been characterized as "conservative". (World Bank, 1984: 26).

Esnaf Kefalet Kooperatifleri Birliđi (Union of Petty Businessmen Credit Cooperatives), with 3,200 member cooperatives and close to 2 million members, occupies an important place in the Bank's activities, since they serve as conduit for the distribution of loans. However, one researcher has pointed out that, these Credit Cooperatives "help Halk Bankasi function more than they help petty producers gain access to the type of credits they actually need." (Bademli).

Furthermore, a major portion of loans extended by HB has turned into a kind of revolving credits - when a loan is paid back almost automatically a new one of approximately the same size is extended by the Bank. The relatively small size of average loan, together with the dominance of working capital loans are the basic reasons underlying this situation. Also, many entrepreneurs find it difficult to comply with the collateral requirements of the Bank. In the case of long-term loans, the lack of technical and financial capacity of artisanal and SSI enterprises to prepare projects and feasibility studies is an additional factor which limits their access to Bank sources. Even if they do have the necessary capacity and present projects to HB, the Bank itself lacks the proper machinery to evaluate them and to follow their progress. However, recently there has been a shift towards more project - oriented lending by increasing the emphasis on project viability rather than loan collateral and combining

loans with technical assistance to SSI. Accordingly, HB is in the process of strengthening its capacity for project appraisal and supervision.

For SMI units too large to qualify for HB financing (those with fixed assets in excess of TL 300 million), outside sources for funds are very limited. Sinai Yatirim ve Kalkinma Bankasi (Industrial Investment and Development Bank) was recently expanding its activities in order to cater to the needs of such enterprises. Supported by a loan from the World Bank, its total loan approvals increased from TL 2.8 billion for 29 projects in 1980 to 16.8 billion for 83 projects in 1984, which in real terms, signifies an increase of 14 per cent p.a. for the period. However, given the size of SMI in Turkey and its needs for outside finance, the situation seems far from being satisfactory.

3.2.2. Small Industry Development Organization (KUSGET):

The idea of setting up a national small industry development organization to provide technical assistance to SMI enterprises was first mentioned in the First Five Year Development Plan and repeated in the plans and programmes which followed. Towards the end of 1960's, the idea of a national organization was transformed into a pilot project in Gaziantep (KUSGEM) to be partially financed by UNDP/UNIDO. The center established in 1970 aimed at combining "the provision of technical services and the development of a model industrial estate." (Lalkaka and Nanjappa, 1977: 88).

While the activities of technical guidance and assistance by the Center have expanded considerably, its impact had been limited. There has been a rather long delay in building the model industrial estate. The Center which had common facilities for metal-working industries has been unable to attract qualified staff. The demonstration of complex machinery and technology did not produce the desired results since small enterprises were unable to assimilate advanced technologies and to make use of them in their own production. It was reported that the common facilities at Gaziantep were being used at below 30 per cent capacity as late as mid-1984.

The expansion of KUSGEM into a national organization with regional offices similar to the one in

Gaziantep was proposed by UNDP/UNIDO to the Turkish Government. One such regional center would be set up in Ankara to assist SMI enterprises in foundry industries. The project was finally approved by the Government in 1983 and currently is being implemented.

KUSGET is being developed not only as "an extension institution to promote the use of technical assistance,... (but also) to stimulate the availability of service programmes, training consultancies, and financial assistance geared to the needs of SMI and to act as a referral agency to other specialized institutions or individuals who would be able to provide more complete and specialized services." (World Bank, 1985: ?). While this integrated approach to the problem constitutes a forward step in the right direction, the basic problem faced by KUSGET seems to be no different from that of KUSGEM, i.e. finding qualified staff.

3.2.3. Industrial Training :

In all the Plans a prominent place has been given to meeting the training needs of artisanal and SMI enterprises. In 1964, the Ministry of Industry and Technology, in cooperation with the Ministry of Education, Halk Bankasi, and the Credit Cooperatives, instituted a skill upgrading programme involving apprentices, journeymen, and master craftsmen from artisanal and SMI units.

In terms of the number of courses and trainees, the programme was implemented on a very small scale, all the more so when compared with the training needs of the enterprises involved. During the period of 1965-1972 the total number of trainees was only 8,641. After 1972 the programme was severely curtailed due to inadequate funding and in 1979 training was provided for only 400 students.

Following the new code on artisans (1977) a new attempt was made for the training of trainers and apprentices. During the first four years of implementation of the programme (1979-1982), run by the Ministry of Education, the number of trainees amounted to 37,872. (DPT, 1983:162). Compared with the size of the labor force in artisanal and SMI enterprises, the new training programme seems to be inadequate as was its predecessor.

3.3. AN EVALUATION OF TURKISH EXPERIENCE IN PLANNED INDUSTRIAL DISTRICTS

3.3.1. The Importance of "Good" Location for Industries :

Location plays an important role in industrial growth and development. Easy access to major transport routes and existing technical infrastructure on the one hand, and proximity to major consumer markets, sources of cheap labour and concentration of related businesses on the other, imply lower costs of production by way of higher external economies. A good industrial location is, therefore, a bonus for profits to start with, and may later aid if not spur efforts to improve profit rates. In this connection, all industrial firms, regardless of their size, are after an optimum location which would not only minimize expenditures on real estate and transportation, but also maximize external economies of various sorts.

3.3.2. A Twofold Problem :

This quest for optimum industrial location is resolved in real estate markets. The result, however, is often problematic for smaller industrial establishments on the one hand, and the urban community on the other.

As a rule, smaller industrial establishments are more dependent on locational externalities, and are more desperate to lower expenditures on land and buildings than larger ones. In this connection, they tend to locate at the urban core where locational externalities are the highest, but are deterred by equally high land prices and rents. Nevertheless, belts of slum areas immediately around declining portions of the urban core with relatively depressed property values, offer an alternative, and smaller firms tend to form clusters there. Doubtless, small firms become more accessible, enjoy better and cheaper services and create easier and stronger business linkages with each other in such clusters than they would if scattered. Yet, these spontaneously formed industrial zones, which are also called "incubators of industrial activity" in the relevant literature, eventually generate negative environmental pressures on the urban core. These pressures i.e., pollution, fire hazards, traffic

congestion, and more important, further depression of property values, in turn, spur planned efforts to relocate industrial establishments away from the urban core. In brief, smaller industrial establishments tend to gravitate towards the urban core, but if not the market in urban real estate itself, planning operations in and around the city center force industries to decentralize into the urban periphery.

Indeed, imposed decentralization constitutes a blow on smaller establishments which are short of funds to do so. Those which may afford to decentralize on the other hand, find themselves in a different bind. Unlike the larger industries, they may not afford to establish large industrial campuses of their own on relatively cheap land away from the city. Thus they turn to already serviced lands at the urban periphery. But others do the same and the cost of industrial decentralization mounts. Indeed, the ensuing competition for location at the urban periphery settles the problem. But in the process, industrial funds, already scarce, get diverted into real estate. Not only this, but also manifold difficulties involved in building new industrial premises and starting production there act as drains on the potential for industrial growth and development. What is more, the resulting industrial location pattern marked by spontaneously formed linear clusters of industries along major arteries at the urban periphery, spurs urban problems akin to those generated by clusters of industries located in and around the urban core.

In short, when left to the market forces alone, the location of industries and the availability of suitable industrial premises degenerate into a two-folded problem. On the one hand, the growth and development processes of not only the artisanal, but small and even medium scale industries are obscured; and on the other, urban problems are deepened. The creation of special districts where an area of land in and around an urban settlement is selected, planned and serviced for industrial activity stands as a widely recognized way to tackle this problem.

3.3.3. Planned Industrial Districts -- Advantages Offered to Industries :

In general, planned industrial districts offer three main advantages to industries:

1. the concentration of firms lead to external economies which either crop up anew or get strengthened when firms are in close proximity to each other;
2. the supply of serviced land for industries and the stock of work places are enlarged and often kept within easy reach of smaller establishments;
3. the existence of organizations which not only run, but also extend various services, to promote the development of industrial districts.

1) External Economies :

Positive external economies due to concentration of industrial firms in an area are well known. As a rule, when clustered, firms become more accessible, enjoy better and cheaper services and create easier and stronger business ties with each other than they would if scattered.

First, the joint demands of various firms make feasible a greater quantity and/or higher quality of services. Furthermore, they may often be provided cheaper. There are many services which one firm alone, unless it were very large, would not be able to support, or could support only at a higher cost, but which are possible and economic for a group of firms. This applies to both public and private services which are either directed specifically at industrial needs, i.e., power communications, security, warehousing, offices, technical advice, showrooms, market services, legal services, advertising, testing and quality control, laboratory, accountancy, export agencies and the like; or oriented towards a different set of needs, like transport, banking, canteen, health care, community hall, parks, sport facilities and library.

Second, local authorities and other outside bodies react favourably to a group's problems of sewerage, parking, housing, telephones and even cultural and recreational requirements than they would to the same problems of an individual firm, unless that firm was very large. Indeed, it is often proportionately easier for these authorities to deal with a collective problem than with the problem of an individual firm. The reliance on, and the importance of, facilities

provided by public bodies make the advantage of collective demand even more important.

Third, when industrial firms are located in clusters of similar and related businesses, they are often exposed to larger groups of potential clients than those they may attract alone. Indeed, this helps smaller industrial firms a lot in their efforts to widen their respective input and output markets.

Last, but not the least, concentration of industrial firms in an area not only promotes easier exchange of information and ready dissemination of ideas, but also furthers business linkages like sub-contracting, among them. Doubtless, communication methods are today extremely advanced, and this reduces some of the advantages of proximity. Nevertheless, face-to-face contacts retain their importance in business. They also cost less. In this connection, the exchange of business related information tends to be more common, cheaper, faster and often more fruitful, between firms on the same site than between those scattered.

2) Supply of Land and Buildings :

The provision of a variety of not only serviced land, but also work places for rent and sale, and easy access to these, are an important characteristic and attraction of planned industrial districts. As a rule, planned industrial districts are not oriented towards the demand from larger industries which have the potential to create planned complexes of their own. Instead, focus is put on new industries which are relatively small in scale and limited in funds on the one hand, and smaller industries which either wish or are forced to move away from the urban core on the other. In other words, planned industrial districts aim to relieve the location and relocation problems of smaller industries left at the whim of markets in urban real estate, rather than larger industries which fare well on that score.

Work places can be provided in advance of demand for sale or for rent. Alternatively, industrial plots, i.e., serviced land can be made available for entrepreneurs who wish to build their own work places. Both the land and workplaces supplied need to display a certain variety to match the differing needs of

industries involved. Some firms may prefer to tie as little funds as possible in real estate and enlarge their working capital. Others, however, may feel the need for greater security and thus prefer to own their premises.

3) Existence of Development Oriented Organizations :

Indeed, the existence of organizations which not only run but also extend various services to promote the development of a particular area is yet another advantage of planned industrial districts. In brief, such organizations may: a) ensure that the industrial district is physically well planned, that the layout is attractive, and that infrastructure such as roads, sewers, water and the like are adequate, efficient and reliable; b) ensure that a variety of industrial plots and buildings are available both for sale and for rent at reasonable prices; c) ensure that industrial buildings are well planned and are suitable for expansion; and, d) give help and advice to firms not only in the initial settling-in period, but later as well.

4) Conditions for Effectiveness :

Doubtless, the extent to which advantages offered by planned industrial districts are actually enjoyed by firms depends on: a) the firm itself; b) the location and size of the industrial district; and c) the organization.

3.3.4. Planned Industrial districts -- Advantages Offered at National, Regional and Local Levels :

In general, planned industrial districts harness industrial decentralization by providing concentrations in selected areas. In this process of concentrated decentralization, they help alleviate location and relocation problems of industries on the one hand; and, further industrial growth and development both indirectly through externalities generated, and directly by services and subsidies offered on the other. As such, planned industrial districts stand as tools to promote industrial growth and development at not only national, but also regional and urban levels.

The advantages offered by planned industrial districts at the national level are obvious. first,

considerable savings in public funds are generated by lowering cost of infrastructure per factory. Indeed, savings actually stem from indivisibilities and economies of scale involved in the process of providing industrial infrastructure. Second, potential impacts of industrial incentive measures and support services are increased. Finally, if and when successful, planned industrial districts spur industrial growth and development.

There is no doubt that planned districts are useful in decentralizing industrial activity over the national territory. In this connection, they stand as important options in strengthening regional growth centers, and, thus, stimulating growth and development in lagging regions.

Planned industrial districts display profound impacts on not only urban economies, but urban environments. First, often conceived as segregated zones for industrial activity, they usually touch off demand for residential and other development in their vicinity. Second, by easing location and relocation problems of industries they decrease environmental problems occasioned by the tendency of smaller firms to decentralize into spontaneously formed industrial pockets at the urban periphery. Also, by the same token, they make life easier for urban rehabilitation and urban renewal projects in central cities.

3.3.5. Planned Industrial Districts in Turkey :

There are two distinct categories of planned industrial districts in Turkey: a) organized industrial districts (Organize Sanayi Bolgeleri) and b) small industrial districts or, districts organized for artisanal production (Kucuk Sanayi Siteleri). Although the former resembles the model which may be observed in other countries, the latter are quite peculiar in nature.

3.3.6. Organized Industrial districts :

Ironically, the first attempt to establish a planned industrial district in Turkey preceded the First Development Plan. IN 1961, Checci and Company, using AID funds, prepared a report on prospects of establishing organized industrial districts in Turkey, which included a feasibility study of a pilot project in

Bursa. (Checchi Co., 1962). Operations began in 1962, and the Bursa Organized Industrial District covering some 267 hectares of land was ready by 1966. (Onal, 1974:78). Indeed, Turkey was a latecomer in the field. Both in England and the USA, for example, the idea was in practice even before the Second World War. (Onal, 1974: 73-75). Actually, by the time the idea came to Turkey, planned industrial districts had already become quite widespread in the world. For instance, by early 1960's there were over 1000 such examples in the USA, around 80 in India and about 25 in Italy. (Onal, 1974: 75-76).

Inspired by the Bursa project, the First Five Year Development Plan (1963-1967) promoted the organized industrial district idea as an industrial incentive measure aimed not only to improve industrial efficiency but also to correct regional imbalances. (DPT, 1982-a: 9). In this period, a second project in Manisa took shape.

The Second (1968-1972), Third (1973-1977) and Fourth (1979-1983) Five Year Development Plans, followed the example of the First and furthered the idea. The number of projects multiplied and reached 39 in 1983. Unfortunately, however, only 6 projects out of this total actually got completed. The following table summarizes the status of projects in stock:

 TABLE-7
 ORGANIZED INDUSTRIAL DISTRICTS

| Project Status | Number of Projects | Area in Hectares | Cost Billion TL |
|---------------------|--------------------|------------------|-----------------|
| Completed (1962-83) | 6 | 1,100 | 0.3 |
| Continuing | 30 | 8,476 | 50.892 |
| New | 3 | 880 | 9.0 |
| TOTAL | 39 | 10,456 | 60.192 |

 Source: Ministry of Industry and Trade 1986.

There is no doubt that the rate of realization in the existing stock of organized industrial district projects is an indicator of policy failure on two counts. First, more projects are drafted than realized because organized industrial districts are wanted on political rather than economic grounds. For example, in 1981, at least an organized industrial district was being considered for each province except the 6 least developed in the southeast. Such an orientation would have inflated the project stock up to 66. (DPT/1982 a, pp: 26-29). This, coupled with the spreading of public funds across the projects (See: DPT/1982 a, Tb:6 "Organize Sanayi Bolgeleri Icin Kullanilan Fon", pp:39) postpone project completion dates, which in turn decreases returns on public funds. Second, by the same token, as public funds are diverted into unproductive avenues, the organized industrial district idea transforms into a burden rather than a spur for industrial development; and this, in turn, feeds the tendency to lower the total amount invested to start with. (See: DPT/1982 a, Tb:5, pp:37).

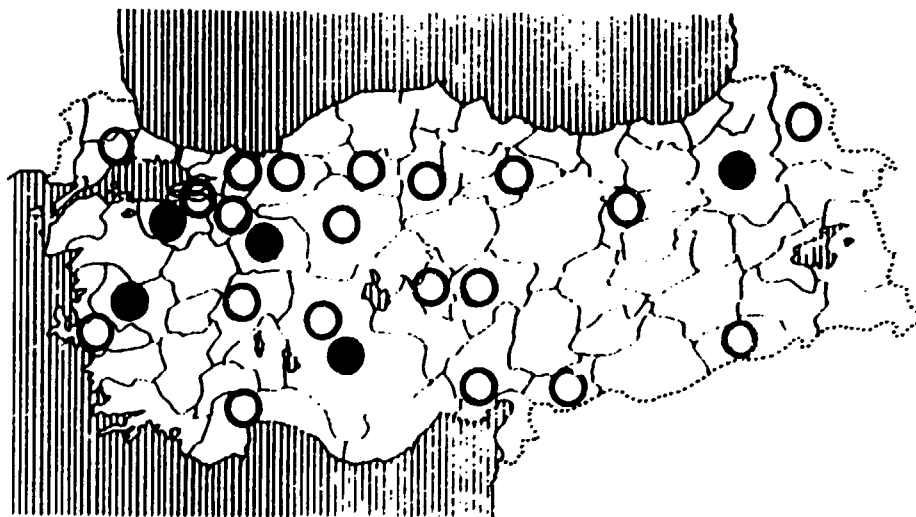
As a rule the bulk of the completed organized industrial districts and those to be completed in the near future is located in the more developed western provinces of the country. This distribution alone would suggest that organized industrial districts are far from being used as tools in correcting regional imbalances as of now. (See: MAP-1 "Distribution of Organized Industrial Districts in Turkey").

Indeed, when completed projects are examined; the list of failures may be enlarged further. First, as a rule, planned industrial districts target concentration of small and medium scale industries. In the Turkish practice, however, it is possible to observe not only large establishments, like TOFAS, an automobile plant employing around 3,000 workers, taking advantage of amenities intended for smaller units, but also very small establishments which may be catered for elsewhere. Indeed, this mix results from low levels of demand for organized industrial districts to start with. Second, by the same token, organized industrial districts in the Turkish case fail to specialize in particular lines of production and, therefore, fare with low levels of business interdependencies. Third, contrary to what is intended, serviced land sold at subsidized rates often fuels speculation in industrial real estate. Many

entrepreneurs opt for investing in real estate rather than industrial production itself, and tend to keep their lots in the organized district empty. Consequently, those industries in real need for serviced land turn elsewhere. Finally, services offered to industries located in planned districts in Turkey, do not necessarily compare well with foreign examples.

In short, the Turkish experience in organized industrial districts is not only restricted in scope, but also not instructive for others. The same, however, is not true for the Turkish experience in small industrial districts or, organized districts for artisanal production.

MAP-1
DISTRIBUTION OF ORGANIZED INDUSTRIAL DISTRICTS IN TURKEY
(1981)



- Completed Organized Industrial Districts
- Organized Industrial Districts Under Construction

Source: DPT, TURKIYE'DE ORGANIZE SANAYI BOLGELERI
(1961-1981) Ankara: DPT pub.no.1893, 1982, p.73.

3.3.7. Small Industrial Districts, or Organized districts for Artisanal Production :

Unlike organized industrial districts for small and medium scale industries, planned areas of concentration for artisanal production developed as a grass-roots idea in Turkey. Indeed, it may be interpreted as a continuation of the tradition to form business clusters in specialized bazaars, "hans", or "carsi"s.

The first examples of organized districts for artisanal production, called "kucuk sanayi carsi"s in Turkish, appeared in the early 1950's. These were grass-roots phenomena rather than products of government policy. Artisans and workshop operators joined by some merchants, all eager to own a workplace, were imitating housing cooperatives to form industrial districts on their own. These artisanal quarters which were shaped in the absence of a particular industrial policy support were mostly located in and around the urban core of larger settlements.

In many cities like Istanbul, Ankara, Bursa, Eskisehir and Gaziantep such cooperative artisanal quarters proved to be a success. They touched off various externalities due to concentration of businesses. The number of industries multiplied, production activities proliferated and initial artisanal districts got covered by layers of new industrial and services activity. Indeed, these artisanal quarters were planned at the outset. Yet, they hardly resembled typical organized industrial districts. First, they were intended primarily for artisan shops and workshops employing not more than 10-20 workers. Second, as a rule, the organization set-up to form the quarter, i.e., the cooperative, was dismantled as soon as the entrepreneurs got hold of their individual plots or workplaces. In other words, the continued services of an organization which would not only run but also develop the district were lacking. Third, externalities due to supply of physical infrastructure was not at issue, for artisanal quarters were located close to the urban core. As a rule, the existing infrastructure at the urban core would be simply extended to the artisanal quarter later by the municipality. In other words, the supply of infrastructure was a result rather than a reason of industrial concentration. Finally,

these quarters were neither envisaged nor treated by industrial policy maker as a means to further artisanal production. They just proved to be so in due course.

Official recognition of, and support for, planned artisanal quarters appeared a decade later in the 1960's. Indeed, their advantages were cleared by them:

1. they were easing the relocation of small industries away from the urban core;
2. they were providing locational externalities for small industries;
3. they were strengthening business linkages among smaller industries;
4. they were eventually generating a physical environment conducive to industrial growth and development on the one hand, and providing for easy control and supervision of smaller establishments, on the other.

Official support for organized artisanal districts began in 1964. (DPT, 1982-b: 13-14). Support was modulated through cooperatives formed by artisans and workshop operators registered at artisanal associations, called "Sinirli Sorumlu Kucuk Sanayi Sitesi Yapi Kooperatifleri" in Turkish, and touched off a boom. By 1985, over 250 such cooperatives had received government support. (See: Table-8). In general, official support covers a wide spectrum:

1. assistance in the acquisition of land;
2. supply of planning service;
3. provision of construction credits;
4. help in the supply of infrastructure and service facilities.

Nevertheless, attempts to set up planned artisanal quarters without government support continue to flourish as well.

Indeed, small industrial districts, whether government supported or not, imply concentration of

industrial firms and thus locational externalities. Furthermore, as decentralization yields lower land prices to start from, they promise opportunities for entrepreneurs not only to own workplaces of their own at a reasonable cost, but also to plough in eventual speculative gains from urban property back into production. Also, as a rule in Turkey, small industrial estates are not under strict government supervision. These, coupled with inherent externalities of concentration make small industrial districts an ideal environment for grass-roots industrial growth and development. The case of "Siteler" in Ankara is a good example on this score. The modest small industrial district (Keresteciler Kooperatifi), established at the outskirts of the city in 1959, transformed itself into a "huge conglomeration" of over 10,000 predominantly furniture production-related businesses employing around 100,000 workers in 1985. Often, however, the distance of planned small industrial districts to not only the urban core but also the sources of labour on the one hand, and the unlikelihood of their rapid implementation on the other, stand as factors which shadow success. Furthermore, relocating smaller industrial firms away from the urban core may look easy on paper. But in reality it is not. Many firms can not afford to lose externalities offered in the city center, and some do not need the larger shops and technical infrastructure promised in small industrial districts. So, there accumulates a resistance against relocation. Many firms, albeit herded into sub-divided shops clustered in dilapidated buildings, or dispersed into sub-divided first or second basement shops, which no one else is after, prefer to remain in the urban core. Others either strengthen their stakes in the existing clusters at the belt of central slum areas, or disperse into sub-centers.

In brief, not only to establish small industrial districts, but also to relocate small industries away from the urban core is a difficult task. Nevertheless the creation of industrial estates for smaller firms (mostly artisanal) remain on the agenda for, as was suggested above, it promises to serve several ends at the same time.

As can be seen from the following table, in the 1965-85 period, 253 industrial estates received government support in terms of credits and project

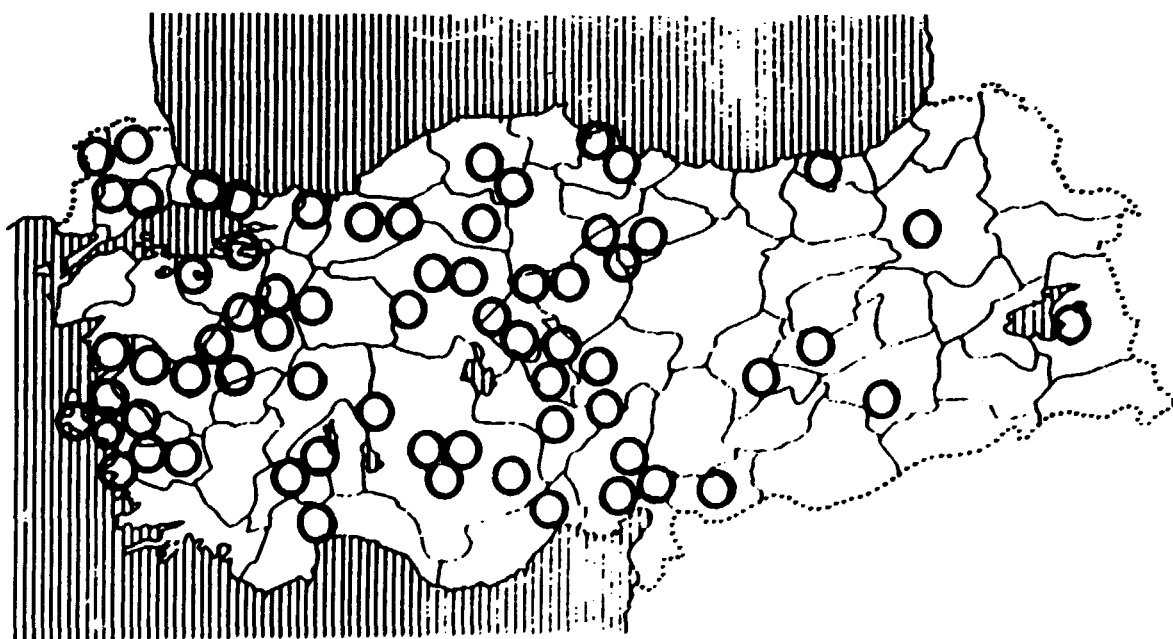
assistance, and 34 others are under consideration. If we consider those estates which were realized without government assistance the total may reach some 500.

TABLE-8
GOVERNMENT ASSISTED SMALL INDUSTRIAL DISTRICTS

| Project Status | Number of Projects | Number of Workplaces | Number of Workers | Cost Billion TL |
|---------------------|--------------------|----------------------|-------------------|-----------------|
| Completed (1965-85) | 118 | 32,938 | 197,628 | 29,795 |
| Continuing | 135 | 35,639 | 213,834 | 136,621 |
| New | 34 | 5,634 | 33,804 | 18,641 |
| TOTAL | 287 | 74,211 | 445,266 | 185,057 |

 Source: Ministry of Industry and Trade 1986.

MAP-2
DISTRIBUTION OF GOVERNMENT ASSISTED SMALL INDUSTRIAL
ESTATES IN TURKEY
(1981)



 Source: DPT, TURKIYE'DE KUCUK SANAYI SITELERI, Ankara :
 DPT pub.no.1847, 1982, p.81.

The Turkish experience in small industrial districts is a success story on several counts. First, projects have an "urban" focus. Possibilities of speculation in urban property help the mobilization of private funds. Second, private ownership of premises eventually enable luckier petty producers to plough parts of urban rents back into production. Third, government interference is kept at a minimum. Government support, guidance and supervision are stronger at the construction stage. Later, interferences are kept at a minimum level. Day to day operations and long-term transformations of small industrial districts are subject to market forces. This enables businesses not only to adapt to, but also to shape their environments, albeit improvised and often unauthorized. Finally, business and labour relations within small industrial districts are neither designed, nor strictly regulated. As a consequence, firms crop-up, grow, stagnate, decline, or disappear as market forces dictate. Similarly, subcontracting relations among smaller businesses as well as between small and large firms get established and flourish.

All these factors help small industrial districts to become and function as "incubators" of economic growth and development rather than sterile "show-piece" zones of subsidized industrial activity.

The following table indicates the increase in government assistance to small industrial districts in Turkey.

TABLE-9
GOVERNMENT ASSISTED SMALL INDUSTRIAL DISTRICTS
1965-1985

| Years | Number of SID Projects Completed | Number of Workplaces Completed | Number of Jobs |
|--------------|--|--------------------------------------|-------------------|
| 1965 | - | - | - |
| 1966 | - | - | - |
| 1967 | - | - | - |
| 1968 | 3 | 1,487 | 8,922 |
| 1969 | 6 | 971 | 5,826 |
| 1970 | 3 | 778 | 4,668 |
| 1971 | 5 | 1,268 | 7,608 |
| 1972 | 6 | 1,637 | 9,822 |
| 1973 | 4 | 798 | 4,788 |
| 1974 | 8 | 2,544 | 15,264 |
| 1975 | 4 | 971 | 5,826 |
| 1976 | 3 | 147 | 882 |
| 1977 | 8 | 1,697 | 10,182 |
| 1978 | 2 | 555 | 3,330 |
| 1979 | 12 | 4,105 | 24,630 |
| 1980 | 6 | 1,738 | 10,428 |
| 1981 | 5 | 2,137 | 12,822 |
| 1982 | 10 | 2,817 | 16,902 |
| 1983 | 5 | 1,094 | 6,564 |
| 1984 | 15 | 4,800 | 28,800 |
| 1985 | 25 | 7,079 | 42,468 |
| TOTAL | 130 | 36,622 | 219,732 |

 Source: Ministry of Industry and Commerce, 1986

4. CONCLUSIONS AND RECOMMENDATIONS BASED ON THE TURKISH EXPERIENCE

The analysis of SMI in Turkey is made very difficult by the lack of comprehensive and detailed time-series data. The foregoing study primarily based on existing data collected by the SIS is therefore limited in scope. However, even on the basis of such an incomplete study, one can delineate the development trends and main characteristics of SMI which can be summarized as follows:

1. From 1963 to 1980, the share of SMI in manufacturing output remained more or less constant, the fall in the share of SSI having been offset by the rise in the share of MSI. The sharp fall in the share of artisanal units, on the other hand, was accompanied by the significant rise in that of LSI.
2. Similar to other developing countries, SMI enterprises in Turkey are concentrated in industries using relatively simple, labor-intensive production techniques, industries processing spatially dispersed raw materials, and industries dependent on proximity to the market.
3. While the growth of LSI was, as a general rule, at the expense of artisanal and SSI enterprises, in several sectors the growth of the former created new business opportunities for the latter (e.g., electrical appliances, transport equipment) and in some others the latter were able to hold their ground due to segmentation of product markets.
4. As one of the major factors affecting the development potential of SMI, labor productivity was found to be considerably lower in SSI compared with LSI; MSI being closer to the latter in this respect.
5. The wage levels in manufacturing are highly differentiated and vary directly with establishment size. Furthermore, the wage differentials were found to increase over time. These persistent and growing wage differentials

can be explained by the existence of segmented labor markets in Turkey. The ability to pay lower wages, on the other hand, can partially account for the viability of SSI enterprises.

6. The profitability of manufacturing enterprises, measured by price-cost margins, was also found to vary directly with enterprise size. Their lower labor productivity and profitability result in the inability of SSI to generate the funds which can be invested for growth purposes. Together with their limited access to outside financial sources, this situation accounts for their poor investment performance.
7. Despite the significant role which it can play in promoting the development of SMI, subcontracting in Turkey can be regarded to be in its infancy. Furthermore, commercial subcontracting and that among small firms need to be given due attention since they are abundant in the Turkish industrial landscape.
8. Even though the statistical information is scanty, it is generally agreed that export capabilities of SMI firms are rather restricted. In recent years, the problems faced by SMI in exporting their products were only partially alleviated in a few sub-sectors by export trading companies.
9. A paper authored by two UNIDO experts and published in 1977 included the following evaluation of the government policies to support SMI development in Turkey:

"Although the strengthening of small scale industry has been continuously discussed since the First Five Year Plan (1963 - 1967), government policy has been uncertain, the incentive system tends to favor large capital-intensive industry, and efforts to promote tangible assistance have been sporadic. The idea of setting up a National Center for Developing Small Industries to provide the required technical inputs still needs to be given final shape. Effective policies to stimulate indigenous

entrepreneurship and channel skills into new lines suited to a modern economy are yet to be implemented." (Lalkaka and Nanjappa, 1977: 86-87).

In many respects this evaluation still seems to be valid. The credit system does not fully cater the financial needs of SMI, despite considerable expansion of credit volume. Moreover, they did not produce the desired effect, for credits were not combined with technical assistance. Various programmes designed to meet the training needs of artisanal and small enterprises had only a limited impact since they were implemented on a very modest scale. However, there were also positive developments. The Small Industry Development Organization (KUSGET) was finally established and started its operations, albeit slowly. Similarly, there was a recent shift towards project financing by the Halk Bankasi, together with measures to strengthen its project evaluation and technical assistance capacity.

10. Contrary to organized industrial districts, small industrial estates in Turkey constitute a success story. As a rule, they have an "urban focus" and "government interference" is kept at a minimum. As such, they function as "incubators" of grass-roots industrial growth and development; and not only help ease the employment problem, but also further subcontracting linkages among industrial establishments. Doubtless, the Turkish experience in small industrial districts, which diverges from the model proposed by international agencies, has lessons in stock for other developing countries; and therefore, deserves closer scrutiny.

5. POTENTIAL FOR INTRA-OIC COOPERATION TO ENHANCE SMALL AND MEDIUM SCALE INDUSTRIAL DEVELOPMENT

The Charter of the OIC, adopted in 1972, stipulates, among other things, the consolidation of economic cooperation among the Member States as a principal objective of the Conference. The Member States have established an organisational infrastructure comprising a number of specialised agencies and the Islamic Development Bank, and a legal framework in the form of a General Agreement for Economic, Technical and Commercial Cooperation, and Agreement on Promotion, Protection and Guarantee of Investments to realise the said objective since 1972. The efforts in this direction culminated in the adoption of a comprehensive Plan of Action to Strengthen Economic Cooperation in 1981 which provided a set of recommendations for joint action in different economic fields.

In the subsequent ministerial and expert meetings, specific measures were developed for the implementation of the recommendations of the Plan of Action. The Member States established the Standing Committee for Economic and Commercial Cooperation (COMCEC) to coordinate, among others, the implementation of the Plan of Action.

The industry ministers of the OIC Member States met in 1982 to discuss the measures for the implementation of the recommendations of the Plan of Action for industry and adopted the 'Islamabad Declaration on Industrial Development'. The ministers also established a follow-up mechanism in the form of a Task Force which met periodically to monitor the implementation of the Declaration. The Second Ministerial Conference on Industrial Cooperation, which was held concurrently with the First Session of COMCEC in 1984, reviewed the progress achieved in the implementation of the Declaration, and agreed on a set of measures suggested by the Task Force. A Follow-up Committee was established, comprising the industry ministers of four Member States and the representatives of specialised agencies, to further develop these measures and oversee their implementation and to report to the Third Ministerial Conference which will meet in 1987.

The role of small and medium scale enterprises in industrial cooperation was first discussed at length in

the third meeting of the Task Force which was convened to discuss the agenda of the Second Ministerial Conference. The Task Force members, noting the significant contribution made to industrialisation by the small and medium scale enterprises in all of the Member States, agreed that a study should be prepared on the cooperation possibilities in this area. The UNIDO agreed to prepare a paper which was later submitted to the Second Ministerial Conference. The UNIDO paper entitled "The Role of Small and Medium Scale Industries in OIC Member States" (1984) surveyed the developments in small and medium scale enterprises in the Member States, and suggested an integrated programme for cooperation among these enterprises. The ministers, after reviewing the said study, decided that joint programmes for the exchange of information and expertise among the relevant national agencies dealing with the development of small and medium scale industries may be developed in cooperation with regional and international organisations such as AIDO, UNIDO and UNCTAD. The Follow-up Committee established by this Conference further discussed the issue in its 1985 and 1986 meetings and requested the UNIDO and SESRTCIC to further study the issue and submit a new report to the Third Ministerial Conference.

As evident from the foregoing, the OIC has established an institutional framework with periodic ministerial meetings where the issues of economic cooperation in general and industrial cooperation in particular are deliberated upon at the highest level.

In what follows, some possible OIC actions to promote cooperation among member countries at various levels are summarised to provide an input to the deliberations in this important area of industrial cooperation

In view of the limitations imposed on SMI by small local markets, the inadequacy of outside finance available, and the lack of technical and managerial expertise, any attempt to utilize their development potential necessitates measures at the national and regional levels for their support "which are being pursued - to a varying degree - in all OIC member countries," (UNIDO, 1984;67). Indeed, in many OIC countries there already exists a whole set of institutions and policy instruments and a considerable

accumulation of expertise in the field of industrial development in SMI sectors. In almost all the member countries, there is considerable room for improvement of the existing machinery and for refinement of policy instruments geared towards support of SMI. In this respect, intra-OIC experience with regard to promotion of SMI can provide a very valuable source of inspiration and guidance.

A systematic utilization of the experience of OIC member countries would require, first of all, a comprehensive data base on the present situation of their SMI sectors as well as needs for development of SMI. Such a data base should also cover activities of the member countries which are relevant for the support of SMI. A start has already been made in this direction by UNIDO in the study entitled The Role of Small and Medium Scale Industries in OIC Member States (1984). The present study on SMI in Turkey constitutes a further step towards such a stock-taking which may contribute not only to a pooling of intra-OIC experience but also may provide clues as to the effectiveness of particular support measures in different national settings. To take an example, the development of industrial estates in Turkey was characterised as a "success story" in the present study. It may be quite illuminating to examine the way in which this instrument was used in countries such as Pakistan and Bangladesh and compare the degree of success under varying circumstances. As a start, such an inventory could be confined to a few countries where quite sophisticated and highly developed institutional machinery designed to deal with SMI development does exist. On the basis of this inventory, a comparative study concentrating on a limited number of major policy instruments can be undertaken which could help widen the perspectives of policy makers in the member countries and could help pinpoint various problem areas limiting the effectiveness of policy measures studied. Obviously, such studies can be useful if their findings are properly disseminated among and discussed by the relevant institutions in OIC Member States. The countries to be studied should be selected so as to have regionally representative characteristics in order to be able to cover as wide a range of problems as possible.

One of the main objectives of this exercise would be to forge links and to develop cooperative and

collaborative relationships among the concerned organisations. Once communication channels among them are established, an exchange of information and expertise can take place in an efficient manner. Countries with a highly developed institutional structure and accumulation of know-how on the matter can play a significant role in providing training opportunities for participants from other member countries. International agencies within the OIC system as well as others such as UNIDO can be quite instrumental in the planning and implementation of such training schemes where priority should be given to "the training of trainers and the development and distribution of training materials". (UNIDO, 1984; 68).

In all the phases of such a joint OIC programme, it would be highly recommended to secure the active involvement of associations of small and medium-scale entrepreneurs which exist in many member countries. Not only would they make significant contributions to the planning and implementation of the programme in question but also through such involvement direct links among such organisations in different countries can be established.

The joint OIC programme should also make allowance for the institutionalisation of regular consultations among governmental and entrepreneurial organisations in the Member States either at bilateral or multilateral levels. Such consultations would be concerned with the "improvement of information flows", the refinement of support techniques and, "joint elaboration of innovative approaches to encourage the growth and efficiency of SMI". (UNIDO, 1984; 67).

In view of the complexity of the problems and the financial constraints, the OIC programme on the subject could be built up gradually and start with a limited number of countries and concentrate on a few selected key sectors initially. Later the programme could be expanded largely through regional initiatives.

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STATISTICAL APPENDIX

Table : A1

TOTAL MANUFACTURING INDUSTRY (1963)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|----------------|----------------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 15,409 | 49,437 | 75,536 | 214,805 | - | - | 4,278,483 | 5,027,013 | 748,530 |
| Beverages | 1,051 | 2,300 | 4,045 | 8,678 | - | - | 71,664 | 107,733 | 36,069 |
| Tobacco | 73 | 6,803 | 6,916 | 21,712 | - | - | 338,514 | 407,818 | 69,304 |
| Textiles | 10,864 | 78,803 | 97,761 | 390,976 | - | - | 2,900,956 | 4,096,283 | 1,195,327 |
| Footwear and Clothing | 54,268 | 29,701 | 96,766 | 60,127 | - | - | 480,254 | 785,766 | 305,512 |
| Wood Products | 12,784 | 12,659 | 31,223 | 40,124 | - | - | 472,242 | 644,332 | 172,090 |
| Furniture | 4,661 | 5,374 | 11,839 | 15,476 | - | - | 128,890 | 192,525 | 63,635 |
| Paper and Paper Products | 376 | 1,260 | 1,815 | 6,964 | - | - | 78,355 | 104,035 | 25,680 |
| Printing and Publishing | 1,698 | 7,358 | 9,625 | 58,207 | - | - | 179,698 | 340,877 | 161,179 |
| Fur and Leather Products | 4,921 | 4,291 | 10,825 | 21,452 | - | - | 251,260 | 322,440 | 71,180 |
| Rubber Products | 900 | 6,239 | 7,653 | 34,031 | - | - | 154,027 | 228,435 | 74,408 |
| Chemicals | 919 | 10,199 | 11,536 | 89,181 | - | - | 613,208 | 951,275 | 338,067 |
| Petroleum and Coal Products | 83 | 138 | 276 | 385 | - | - | 3,248 | 4,635 | 1,387 |
| Non-Metallic Mineral Prod. | 2,929 | 19,263 | 24,077 | 105,124 | - | - | 287,397 | 582,439 | 295,042 |
| Basic Metals | 29 | 2061 | 2105 | 15745 | - | - | 121491 | 178168 | 56,677 |
| Metalware | 29,625 | 31,477 | 71,921 | 129,312 | - | - | 1,119,568 | 1,600,272 | 480,704 |
| Machinery | 1,390 | 5,695 | 7,827 | 37,728 | - | - | 263,344 | 419,141 | 155,797 |
| Electrical Machinery | 3,209 | 6,799 | 11,074 | 45,801 | - | - | 320,582 | 523,567 | 202,985 |
| Appliances and Supplies | 9,311 | 10,828 | 24,201 | 35,059 | - | - | 277,894 | 428,968 | 151,074 |
| Transport Vehicles and Equip. | 5,849 | 5,349 | 12,870 | 24,558 | - | - | 222,675 | 346,450 | 123,775 |
| TOTAL | 160,349 | 296,034 | 519,891 | 1,355,445 | - | - | 12,563,750 | 17,292,172 | 4,728,422 |

Table : A2

ARTISANAL MANUFACTURING INDUSTRY (1963)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES ('000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT ('000 TL) | INPUTS ('000 TL) | OUTPUT ('000 TL) | VALUE ADDED ('000 TL) |
|-------------------------------|------------------|---------|-----------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 14,469 | 19,706 | 43,672 | 59,906 | | | 1,159,483 | 1,389,158 | 229,675 |
| Beverages | 1,012 | 1,457 | 3,123 | 3,704 | | | 39,193 | 52,881 | 13,688 |
| Tobacco | 17 | 46 | 83 | 261 | | | 9,205 | 9,901 | 696 |
| Textiles | 9,991 | 9,713 | 26,620 | 29,028 | | | 603,741 | 829,434 | 135,693 |
| Footwear and Clothing | 54,231 | 29,018 | 96,018 | 56,989 | | | 463,148 | 759,945 | 296,797 |
| Wood Products | 12,695 | 10,081 | 28,453 | 25,951 | | | 380,125 | 513,730 | 133,605 |
| Furniture | 4,606 | 4,353 | 10,708 | 9,712 | | | 97,021 | 144,061 | 47,040 |
| Paper and Paper Products | 348 | 625 | 1,134 | 2,673 | | | 51,750 | 64,976 | 13,226 |
| Printing and Publishing | 1,567 | 3,098 | 5,140 | 12,586 | | | 77,491 | 118,332 | 40,861 |
| Fur and Leather Products | 4,854 | 2,396 | 8,777 | 6,347 | | | 142,395 | 181,494 | 39,099 |
| Rubber Products | 797 | 1,020 | 2,222 | 2,059 | | | 39,036 | 46,501 | 7,465 |
| Chemicals | 753 | 1,264 | 2,359 | 5,473 | | | 144,587 | 168,946 | 24,359 |
| Petroleum and Coal Products | 83 | 138 | 276 | 385 | | | 3,248 | 4,635 | 1,387 |
| Non-Metallic Mineral Prod. | 2,767 | 4,528 | 9,036 | 13,008 | | | 105,007 | 148,407 | 43,400 |
| Basic Metals | 0 | 0 | 0 | 0 | | | 0 | 0 | 0 |
| Metalware | 29,358 | 19,857 | 59,785 | 46,567 | | | 642,413 | 808,014 | 255,601 |
| Machinery | 1,307 | 1,633 | 3,606 | 4,826 | | | 50,114 | 77,511 | 27,397 |
| Electrical Machinery | 3,162 | 1,894 | 6,071 | 5,685 | | | 97,068 | 139,971 | 42,903 |
| Appliances and Supplies | 9,257 | 8,711 | 22,030 | 16,772 | | | 103,425 | 194,495 | 91,070 |
| Transport Vehicles and Equip. | 5,772 | 3,124 | 10,502 | 10,036 | | | 161,601 | 243,216 | 81,615 |
| TOTAL | 157,044 | 122,662 | 339,615 | 311,946 | | | 4,460,051 | 5,985,608 | 1,525,557 |

Table : A3

SHARE IN TOTAL
(ARTISANAL MANUFACTURING INDUSTRY - 1963)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|---------|-----------|-------|-----------------|------------------|--------|--------|----------------|
| Food | 93.90 | 39.86 | 57.82 | 27.89 | - | - | 27.10 | 27.63 | 30.68 |
| Beverages | 96.29 | 63.35 | 77.21 | 42.11 | - | - | 54.69 | 49.09 | 37.95 |
| Tobacco | 23.29 | 0.68 | 1.20 | 0.83 | - | - | 2.72 | 2.43 | 1.00 |
| Textiles | 91.96 | 12.33 | 27.25 | 9.31 | - | - | 23.91 | 23.25 | 11.35 |
| Footwear and Clothing | 99.93 | 97.70 | 99.73 | 54.78 | - | - | 96.44 | 96.71 | 97.15 |
| Wood Products | 99.29 | 77.64 | 9.00 | 4.68 | - | - | 80.49 | 79.73 | 77.64 |
| Furniture | 98.82 | 81.00 | 96.00 | 62.76 | - | - | 75.27 | 74.83 | 73.92 |
| Paper and Paper Products | 92.55 | 69.60 | 62.49 | 38.38 | - | - | 66.05 | 62.46 | 51.50 |
| Printing and Publishing | 92.29 | 42.16 | 51.40 | 21.62 | - | - | 43.12 | 34.71 | 25.34 |
| Fur and Leather Products | 98.64 | 55.84 | 81.08 | 29.59 | - | - | 56.67 | 56.29 | 54.93 |
| Rubber Products | 88.56 | 16.35 | 29.33 | 6.05 | - | - | 25.34 | 20.36 | 10.03 |
| Chemicals | 81.94 | 12.39 | 20.45 | 6.14 | - | - | 23.58 | 17.76 | 7.21 |
| Petroleum and Coal Products | - | 100.00 | 100.00 | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | 94.47 | 23.51 | 37.53 | 12.37 | - | - | 36.54 | 25.48 | 14.71 |
| Basic Metals | 0.00 | 0.00 | 0.00 | 0.00 | - | - | 0.00 | 0.00 | 0.00 |
| Metalware | 99.10 | 63.08 | 83.13 | 36.01 | - | - | 57.38 | 56.12 | 53.17 |
| Machinery | 94.03 | 28.67 | 46.07 | 12.79 | - | - | 19.03 | 18.49 | 17.59 |
| Electrical Machinery | 98.54 | 27.86 | 54.82 | 12.41 | - | - | 30.28 | 26.73 | 21.14 |
| Appliances and Supplies | 99.42 | 80.45 | 91.03 | 47.84 | - | - | 37.22 | 45.34 | 60.28 |
| Transport Vehicles and Equip. | 93.68 | 58.40 | 81.60 | 40.87 | - | - | 72.57 | 70.20 | 65.94 |
| TOTAL | 97.94 | 41.44 | 65.32 | 23.01 | - | - | 35.50 | 34.61 | 32.26 |

SOME CHARACTERISTICS OF ARTISANAL MANUFACTURING (1963)

| SECTORS | AVERAGE | | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. | OUTPUT PER ESTAB. | VALUE ADDED PER ESTAB. | VALUE ADDED PER EMPLOYEE | (1) PRICE COST MARGIN (%) | (2) PRICE COST MARGIN (%) |
|-------------------------------|---------------------------------|--------|------------------------------------|-----------------------------------|-------------------------|---------------------------------|-----------------------------------|------------------------------------|------------------------------------|
| | ANNUAL WAGE PER WORKER | ESTAB. | | | | | | | |
| | PER ESTAB. | ESTAB. | | | | | | | |
| | (1000 TL) | (MP) | | | | | | | |
| Food | 3.0 | 3.0 | - | - | 96.0 | 15.9 | 5.3 | 6.98 | 12.22 |
| Beverages | 3.1 | 2.5 | - | - | 52.3 | 13.5 | 4.4 | 10.87 | 18.88 |
| Tobacco | 4.9 | 5.2 | - | - | 582.4 | 40.9 | 8.4 | 2.64 | 4.60 |
| Textiles | 2.7 | 3.0 | - | - | 83.0 | 13.6 | 5.1 | 6.77 | 12.86 |
| Footwear and Clothing | 1.8 | 2.0 | - | - | 14.0 | 5.5 | 3.1 | 14.24 | 31.56 |
| Wood Products | 2.2 | 2.6 | - | - | 40.5 | 10.5 | 4.7 | 11.75 | 20.96 |
| Furniture | 2.3 | 2.2 | - | - | 31.3 | 10.2 | 4.4 | 16.07 | 25.91 |
| Paper and Paper Products | 3.3 | 4.3 | - | - | 186.7 | 38.0 | 11.7 | 12.89 | 16.24 |
| Printing and Publishing | 3.3 | 4.1 | - | - | 75.5 | 26.1 | 7.9 | 16.87 | 23.88 |
| Fur and Leather Products | 1.8 | 2.6 | - | - | 37.4 | 8.1 | 4.5 | 8.73 | 18.05 |
| Rubber Products | 2.8 | 2.0 | - | - | 58.3 | 9.4 | 3.4 | 6.41 | 11.63 |
| Chemicals | 3.1 | 4.3 | - | - | 224.4 | 32.3 | 10.3 | 8.37 | 11.18 |
| Petroleum and Coal Products | 3.3 | 2.8 | - | - | 55.8 | 16.7 | 5.0 | 13.31 | 21.62 |
| Non-Metallic Mineral Prod. | 3.3 | 2.9 | - | - | 53.6 | 15.7 | 4.8 | 11.75 | 20.48 |
| Basic Metals | - | - | - | - | - | - | - | - | - |
| Metalware | 2.0 | 2.3 | - | - | 30.6 | 8.7 | 4.3 | 12.85 | 23.28 |
| Machinery | 2.8 | 3.0 | - | - | 59.3 | 21.0 | 7.6 | 21.60 | 29.12 |
| Electrical Machinery | 1.9 | 3.0 | - | - | 44.3 | 13.6 | 7.1 | 17.63 | 26.59 |
| Appliances and Supplies | 2.4 | 1.9 | - | - | 21.0 | 9.8 | 4.1 | 25.02 | 38.20 |
| Transport Vehicles and Equip. | 1.8 | 3.2 | - | - | 42.1 | 14.1 | 7.8 | 19.68 | 29.43 |
| TOTAL | 2.2 | 2.5 | - | - | 38.1 | 9.7 | 4.5 | 11.06 | 20.28 |

Table : A5

SMALL-SCALE MANUFACTURING INDUSTRY (1963)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|---------|-----------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 819 | | | 54,124 | 38,365 | 51,486 | 1,391,776 | 1,584,418 | 192,642 |
| Beverages | 35 | | | 2,844 | 384 | 3,065 | 23,831 | 37,020 | 13,189 |
| Tobacco | 22 | | | 2,454 | 207 | 21 | 38,760 | 51,978 | 13,218 |
| Textiles | 658 | | | 54,820 | 77,441 | 30,419 | 767,065 | 933,955 | 166,890 |
| Footwear and Clothing | 35 | | | 2,492 | 328 | 441 | 14,789 | 22,606 | 7,817 |
| Wood Products | 80 | | | 5,243 | 5,058 | 4,283 | 56,547 | 72,012 | 15,465 |
| Furniture | 50 | | | 3,595 | 879 | 565 | 22,079 | 33,463 | 11,384 |
| Paper and Paper Products | 26 | | | 3,017 | 388 | 1,526 | 23,504 | 32,992 | 9,488 |
| Printing and Publishing | 109 | | | 13,815 | 1,041 | 7,155 | 31,941 | 64,320 | 32,379 |
| Fur and Leather Products | 55 | | | 6,408 | 4,235 | 1,418 | 70,675 | 86,438 | 15,763 |
| Rubber Products | 87 | | | 8,127 | 9,051 | 4,812 | 38,284 | 58,136 | 19,852 |
| Chemicals | 113 | | | 14,204 | 4,572 | 8,452 | 158,186 | 223,152 | 64,966 |
| Petroleum and Coal Products | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Metallic Mineral Prod. | 107 | | | 6,058 | 5,668 | 5,434 | 16,965 | 31,463 | 14,498 |
| Basic Metals | 23 | | | 2,960 | 6,773 | 2,243 | 40,106 | 51,491 | 11,335 |
| Metalware | 211 | | | 19,909 | 13,836 | 14,542 | 176,366 | 239,040 | 62,674 |
| Machinery | 68 | | | 8,428 | 3,884 | 5,976 | 49,785 | 73,829 | 24,044 |
| Electrical Machinery | 25 | | | 3,043 | 666 | 3,075 | 24,647 | 36,500 | 11,853 |
| Appliances and Supplies | 45 | | | 4,226 | 1,529 | 2,501 | 12,265 | 24,625 | 12,360 |
| Transport Vehicles and Equip. | 68 | | | 8,244 | 3,074 | 4,548 | 35,526 | 61,801 | 26,275 |
| TOTAL | 2,636 | | | 224,009 | 177,379 | 151,962 | 2,995,097 | 3,719,239 | 726,142 |

Table : A6

SHARE IN TOTAL
(SMALL SCALE MANUFACTURING INDUSTRY - 1963)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|---------|-----------|--------------|-----------------|------------------|--------------|--------------|----------------|
| Food | 5.32 | - | - | 25.20 | - | - | 32.53 | 31.52 | 25.74 |
| Beverages | 3.33 | - | - | 32.77 | - | - | 33.25 | 34.36 | 36.57 |
| Tobacco | 30.14 | - | - | 11.30 | - | - | 11.45 | 12.75 | 19.07 |
| Textiles | 6.05 | - | - | 14.02 | - | - | 26.44 | 22.80 | 13.96 |
| Footwear and Clothing | 0.06 | - | - | 4.14 | - | - | 3.08 | 2.88 | 2.56 |
| Wood Products | 0.63 | - | - | 13.07 | - | - | 11.97 | 11.18 | 8.99 |
| Furniture | 1.07 | - | - | 23.22 | - | - | 17.13 | 17.38 | 17.89 |
| Paper and Paper Products | 6.91 | - | - | 43.32 | - | - | 30.00 | 31.71 | 36.95 |
| Printing and Publishing | 6.42 | - | - | 23.73 | - | - | 17.77 | 18.87 | 20.09 |
| Fur and Leather Products | 1.12 | - | - | 29.87 | - | - | 28.13 | 26.81 | 22.15 |
| Rubber Products | 9.67 | - | - | 23.88 | - | - | 24.86 | 25.45 | 26.68 |
| Chemicals | 12.30 | - | - | 15.93 | - | - | 25.80 | 23.46 | 19.22 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | 3.65 | - | - | 5.76 | - | - | 5.90 | 5.40 | 4.91 |
| Basic Metals | 79.31 | - | - | 18.80 | - | - | 33.01 | 28.90 | 21.09 |
| Metalware | 0.71 | - | - | 15.40 | - | - | 15.75 | 14.94 | 15.04 |
| Machinery | 4.89 | - | - | 22.34 | - | - | 18.90 | 17.61 | 19.43 |
| Electrical Machinery | 0.78 | - | - | 6.64 | - | - | 7.69 | 6.97 | 5.84 |
| Appliances and Supplies | 0.48 | - | - | 12.05 | - | - | 4.41 | 5.74 | 11.18 |
| Transport Vehicles and Equip. | 1.16 | - | - | 33.57 | - | - | 15.95 | 17.84 | 21.23 |
| TOTAL | 1.64 | | | 16.53 | | | 23.82 | 21.51 | 19.34 |

Table : A7

SOME CHARACTERISTICS OF SMALL-SCALE MANUFACTURING (1963)

| SECTORS | AVERAGE | | POWER EQUIP. PER ESTAB. | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. | OUTPUT PER ESTAB. | VALUE ADDED PER ESTAB. | VALUE ADDED PER EMPLOYEE | (1) PRICE COST MARGIN | (2) PRICE COST MARGIN |
|-------------------------------|----------------------------|---------------------------------|----------------------------------|------------------------------------|-----------------------------------|-------------------------|---------------------------------|-----------------------------------|--------------------------------|--------------------------------|
| | EMPLOYEES PER ESTAB. | ANNUAL WAGE PER WORKER | | | | | | | | |
| | PER ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) |
| | ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) |
| Food | - | - | 46.8 | - | 63 | 1,935 | 235 | - | - | 8.74 |
| Beverages | - | - | 11.0 | - | 88 | 1,058 | 377 | - | - | 27.94 |
| Tobacco | - | - | 9.4 | - | 1 | 2,363 | 601 | - | - | 20.71 |
| Textiles | - | - | 117.7 | - | 46 | 1,419 | 254 | - | - | 12.00 |
| Footwear and Clothing | - | - | 9.4 | - | 13 | 646 | 225 | - | - | 23.56 |
| Wood Products | - | - | 63.2 | - | 54 | 900 | 195 | - | - | 14.19 |
| Furniture | - | - | 17.6 | - | 11 | 669 | 228 | - | - | 23.28 |
| Paper and Paper Products | - | - | 14.9 | - | 59 | 1,289 | 365 | - | - | 19.61 |
| Printing and Publishing | - | - | 9.6 | - | 66 | 590 | 297 | - | - | 28.86 |
| Fur and Leather Products | - | - | 77.0 | - | 26 | 1,572 | 287 | - | - | 10.82 |
| Rubber Products | - | - | 104.0 | - | 55 | 668 | 228 | - | - | 20.17 |
| Chemicals | - | - | 40.5 | - | 75 | 1,975 | 575 | - | - | 22.75 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | - | - | 53.0 | - | 51 | 294 | 135 | - | - | 26.83 |
| Basic Metals | - | - | 294.5 | - | 98 | 2,239 | 495 | - | - | 16.36 |
| Metalware | - | - | 65.6 | - | 69 | 1,133 | 297 | - | - | 17.89 |
| Machinery | - | - | 57.1 | - | 88 | 1,086 | 354 | - | - | 21.15 |
| Electrical Machinery | - | - | 26.6 | - | 123 | 1,460 | 474 | - | - | 24.14 |
| Appliances and Supplies | - | - | 34.0 | - | 56 | 547 | 275 | - | - | 33.03 |
| Transport Vehicles and Equip. | - | - | 45.2 | - | 67 | 909 | 386 | - | - | 29.18 |
| TOTAL | - | - | 67.3 | - | 58 | 1,411 | 275 | - | - | 13.50 |

Table : A8

MEDIUM-SCALE MANUFACTURING INDUSTRY (1963)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER | GROSS | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|---------|-----------|--------------------|----------------|-------------------------|---------------------|---------------------|--------------------------|
| | | | | | EQUIP. (HP) | INVESTMENT (1000 TL) | | | |
| Food | 99 | | | 48,982 | 34,135 | 27,761 | 1,011,243 | 1,163,748 | 152,505 |
| Beverages | 4 | | | 2,130 | 347 | 3,165 | 8,640 | 17,832 | 9,192 |
| Tobacco | 25 | | | 6,454 | 359 | 795 | 135,328 | 155,320 | 19,992 |
| Textiles | 156 | | | 60,199 | 23,239 | 17,799 | 484,772 | 647,294 | 162,522 |
| Footwear and Clothing | 2 | | | 646 | 28 | 95 | 2,317 | 3,215 | 898 |
| Wood Products | 10 | | | 5,535 | 1,956 | 5,063 | 29,530 | 44,864 | 15,334 |
| Furniture | 5 | | | 2,171 | 276 | 1,449 | 9,790 | 15,001 | 5,211 |
| Paper and Paper Products | 2 | | | 1,274 | 495 | 257 | 3,101 | 6,067 | 2,966 |
| Printing and Publishing | 19 | | | 20,711 | 612 | 2,729 | 38,257 | 84,014 | 45,777 |
| Fur and Leather Products | 12 | | | 8,697 | 3,579 | 1,787 | 38,190 | 54,508 | 16,318 |
| Rubber Products | 14 | | | 6,763 | 4,716 | 2,999 | 27,348 | 45,545 | 18,197 |
| Chemicals | 45 | | | 39,925 | 7,774 | 14,744 | 198,298 | 336,940 | 138,642 |
| Petroleum and Coal Products | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Metallic Mineral Prod. | 40 | | | 19,933 | 14,632 | 5,725 | 23,760 | 68,972 | 45,212 |
| Basic Metals | 2 | | | 915 | 392 | 1,166 | 9,707 | 13,089 | 3,382 |
| Metalware | 47 | | | 33,437 | 16,832 | 18,056 | 173,909 | 260,790 | 86,881 |
| Machinery | 11 | | | 7,475 | 1,661 | 4,104 | 38,107 | 55,382 | 17,275 |
| Electrical Machinery | 16 | | | 13,500 | 1,438 | 5,043 | 84,650 | 139,926 | 55,276 |
| Appliances and Supplies | 6 | | | 5,478 | 710 | 334 | 21,580 | 31,539 | 9,959 |
| Transport Vehicles and Equip. | 8 | | | 4,942 | 1,581 | 1,279 | 21,410 | 34,195 | 12,785 |
| TOTAL | 523 | | | 289,177 | 114,762 | 114,352 | 2,359,917 | 3,178,241 | 818,324 |

Table : A9

SHARE IN TOTAL
(MEDIUM SCALE MANUFACTURING INDUSTRY - 1963)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER | GROSS | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|---------|-----------|--------------|--------|---------|--------------|--------------|----------------|
| | | | | | EQUIP. | INVEST. | | | |
| Food | 0.64 | - | - | 22.80 | - | - | 23.64 | 23.15 | 20.37 |
| Beverages | 0.38 | - | - | 26.54 | - | - | 12.06 | 16.55 | 25.48 |
| Tobacco | 34.25 | - | - | 29.73 | - | - | 39.98 | 38.09 | 28.85 |
| Textiles | 1.44 | - | - | 15.40 | - | - | 16.71 | 15.80 | 13.60 |
| Footwear and Clothing | .00 | - | - | 1.07 | - | - | 0.48 | 0.41 | 0.29 |
| Wood Products | 0.08 | - | - | 13.79 | - | - | 6.25 | 6.96 | 8.91 |
| Furniture | 0.11 | - | - | 14.13 | - | - | 7.60 | 7.79 | 8.19 |
| Paper and Paper Products | 0.53 | - | - | 18.29 | - | - | 3.96 | 5.83 | 11.55 |
| Printing and Publishing | 1.12 | - | - | 35.58 | - | - | 21.28 | 24.65 | 28.40 |
| Fur and Leather Products | 0.24 | - | - | 40.54 | - | - | 15.20 | 16.90 | 22.92 |
| Rubber Products | 1.56 | - | - | 19.87 | - | - | 17.76 | 19.94 | 24.46 |
| Chemicals | 4.90 | - | - | 44.78 | - | - | 32.34 | 35.42 | 41.01 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | 1.37 | - | - | 18.96 | - | - | 8.27 | 11.84 | 15.32 |
| Basic Metals | 6.90 | - | - | 5.81 | - | - | 7.99 | 7.35 | 5.97 |
| Metalware | 0.16 | - | - | 25.86 | - | - | 15.53 | 16.30 | 18.07 |
| Machinery | 0.79 | - | - | 19.81 | - | - | 14.47 | 13.21 | 11.09 |
| Electrical Machinery | 0.50 | - | - | 29.48 | - | - | 26.41 | 26.73 | 27.23 |
| Appliances and Supplies | 0.06 | - | - | 15.63 | - | - | 7.77 | 7.35 | 6.59 |
| Transport Vehicles and Equip. | 0.14 | - | - | 20.12 | - | - | 9.61 | 9.87 | 10.33 |
| TOTAL | 0.33 | | | 21.33 | | | 18.78 | 18.38 | 17.31 |

SOME CHARACTERISTICS OF MEDIUM-SCALE MANUFACTURING (1963)

| SECTORS | AVERAGE | | | | | | | | | |
|-------------------------------|----------------------------|--|---------------|-----------------|---------------|--------------------------------------|---------------|-----------------|-------|-------|
| | EMPLOYEES PER ESTAB. | ANNUAL WAGE PER WORKER (1000 TL) | POWER | POWER | GROSS | OUTPUT PER ESTAB. (1000 TL) | VALUE | VALUE | (1) | (2) |
| | | | EQUIP. | EQUIP. | INVEST. | | ADDED | ADDED | PRICE | PRICE |
| | | | PER ESTAB. | PER EMPLOYEE | PER ESTAB. | | PER ESTAB. | PER EMPLOYEE | COST | COST |
| (MP) | (MP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) | | | |
| Food | - | - | 344.8 | - | 280 | 11,755 | 1,540 | - | - | 8.90 |
| Beverages | - | - | 86.8 | - | 791 | 4,458 | 2,298 | - | - | 39.60 |
| Tobacco | - | - | 14.4 | - | 32 | 6,213 | 800 | - | - | 8.72 |
| Textiles | - | - | 149.0 | - | 114 | 4,149 | 1,042 | - | - | 15.81 |
| Footwear and Clothing | - | - | 14.0 | - | 48 | 1,608 | 449 | - | - | 7.84 |
| Wood Products | - | - | 195.6 | - | 506 | 4,486 | 1,533 | - | - | 21.84 |
| Furniture | - | - | 55.2 | - | 290 | 3,000 | 1,042 | - | - | 20.27 |
| Paper and Paper Products | - | - | 267.5 | - | 129 | 3,084 | 1,483 | - | - | 27.89 |
| Printing and Publishing | - | - | 32.2 | - | 144 | 4,422 | 2,409 | - | - | 29.84 |
| Fur and Leather Products | - | - | 298.3 | - | 149 | 4,542 | 1,360 | - | - | 13.98 |
| Rubber Products | - | - | 336.9 | - | 214 | 3,253 | 1,300 | - | - | 25.10 |
| Chemicals | - | - | 172.8 | - | 328 | 7,488 | 3,081 | - | - | 29.30 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | - | - | 365.8 | - | 143 | 1,724 | 1,130 | - | - | 36.65 |
| Basic Metals | - | - | 196.0 | - | 583 | 6,545 | 1,691 | - | - | 18.85 |
| Metalware | - | - | 358.1 | - | 384 | 5,549 | 1,849 | - | - | 20.49 |
| Machinery | - | - | 151.0 | - | 373 | 5,086 | 1,570 | - | - | 17.70 |
| Electrical Machinery | - | - | 89.9 | - | 315 | 8,745 | 3,455 | - | - | 29.86 |
| Appliances and Supplies | - | - | 118.3 | - | 56 | 5,257 | 1,660 | - | - | 14.21 |
| Transport Vehicles and Equip. | - | - | 197.6 | - | 160 | 4,274 | 1,598 | - | - | 22.94 |
| TOTAL | - | - | 219.4 | - | 219 | 6,077 | 1,565 | - | - | 16.65 |

Table : A11

LARGE-SCALE MANUFACTURING INDUSTRY (1963)

| SECTOR | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|---------|-----------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 22 | | | 51,795 | 22,353 | 26,192 | 715,981 | 889,689 | 173,708 |
| Beverages | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Tobacco | 9 | | | 12,563 | 1,349 | 3,422 | 155,221 | 190,619 | 35,398 |
| Textiles | 59 | | | 246,929 | 262,210 | 119,834 | 955,378 | 1,685,600 | 730,222 |
| Footwear and Clothing | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Wood Products | 1 | | | 3,395 | 25,442 | 669 | 6,040 | 13,726 | 7,686 |
| Furniture | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Paper and Paper Products | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Printing and Publishing | 3 | | | 11,095 | 221 | 9,008 | 32,029 | 74,211 | 42,182 |
| Fur and Leather Products | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Rubber Products | 2 | | | 17,082 | 4,908 | 4,148 | 49,359 | 78,253 | 28,894 |
| Chemicals | 8 | | | 29,569 | 1,858 | 4,552 | 112,137 | 222,237 | 110,100 |
| Petroleum and Coal Products | 0 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Metallic Mineral Prod. | 15 | | | 66,125 | 43,133 | 53,506 | 141,665 | 333,597 | 191,932 |
| Basic Metals | 4 | | | 11,870 | 6,802 | 13,532 | 71,678 | 113,588 | 41,910 |
| Metalware | 9 | | | 29,399 | 9,150 | 10,971 | 126,880 | 202,428 | 75,548 |
| Machinery | 4 | | | 17,001 | 2,778 | 8,565 | 125,338 | 212,419 | 87,081 |
| Electrical Machinery | 6 | | | 23,573 | 3,821 | 11,724 | 114,217 | 207,170 | 92,953 |
| Appliances and Supplies | 3 | | | 8,583 | 1,798 | 5,370 | 140,624 | 178,309 | 37,685 |
| Transport Vehicles and Equip. | 1 | | | 1,336 | 113 | 126 | 4,138 | 7,238 | 3,100 |
| TOTAL | 146 | | | 530,313 | 385,936 | 271,619 | 2,750,685 | 4,409,084 | 1,658,399 |

Table : A12

SHARE IN TOTAL
(LARGE SCALE MANUFACTURING INDUSTRY - 1963)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|---------|-----------|--------------|-----------------|------------------|--------------|--------------|----------------|
| Food | 0.143 | - | - | 26.11 | - | - | 16.73 | 17.70 | 23.21 |
| Beverages | 0.000 | - | - | 0.00 | - | - | 0.00 | 0.00 | 0.00 |
| Tobacco | 12.329 | - | - | 57.86 | - | - | 45.85 | 46.74 | 51.08 |
| Textiles | 0.543 | - | - | 63.16 | - | - | 32.95 | 41.15 | 61.09 |
| Footwear and Clothing | 0.000 | - | - | 0.00 | - | - | 0.00 | 0.00 | 0.00 |
| Wood Products | 0.008 | - | - | 8.46 | - | - | 1.28 | 2.13 | 4.47 |
| Furniture | 0.000 | - | - | 0.00 | - | - | 0.00 | 0.00 | 0.00 |
| Paper and Paper Products | 0.000 | - | - | 0.00 | - | - | 0.00 | 0.00 | 0.00 |
| Printing and Publishing | 0.177 | - | - | 19.06 | - | - | 17.82 | 21.77 | 26.17 |
| Fur and Leather Products | 0.000 | - | - | 0.00 | - | - | 0.00 | 0.00 | 0.00 |
| Rubber Products | 0.222 | - | - | 50.20 | - | - | 32.05 | 34.26 | 38.83 |
| Chemicals | 0.871 | - | - | 33.16 | - | - | 18.29 | 23.36 | 32.57 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | 0.512 | - | - | 62.90 | - | - | 49.29 | 57.28 | 65.05 |
| Basic Metals | 13.793 | - | - | 75.39 | - | - | 59.00 | 63.75 | 73.95 |
| Metalware | 0.030 | - | - | 22.73 | - | - | 11.33 | 12.65 | 15.72 |
| Machinery | 0.288 | - | - | 45.06 | - | - | 47.59 | 50.68 | 55.89 |
| Electrical Machinery | 0.187 | - | - | 51.47 | - | - | 35.63 | 39.57 | 45.79 |
| Appliances and Supplies | 0.032 | - | - | 24.48 | - | - | 50.60 | 41.57 | 24.94 |
| Transport Vehicles and Equip. | 0.017 | - | - | 5.44 | - | - | 1.86 | 2.09 | 2.50 |
| TOTAL | 0.091 | | | 39.12 | | | 21.89 | 25.50 | 35.07 |

SOME CHARACTERISTICS OF LARGE-SCALE MANUFACTURING (1963)

| SECTOR | AVERAGE | | | | | | | | | |
|-------------------------------|-----------|--------|----------|-----------|-----------|-----------|-----------|--------|--------|-------|
| | ANNUAL | POWER | POWER | CROSS | | VALUE | VALUE | (1) | (2) | |
| | WAGE | EQUIP. | EQUIP. | INVEST. | OUTPUT | ADDED | ADDED | PRICE | PRICE | |
| | EMPLOYEES | PER | PER | PER | PER | PER | PER | COST | COST | |
| PER | WORKER | ESTAB. | EMPLOYEE | ESTAB. | ESTAB. | ESTAB. | EMPLOYEE | MARGIN | MARGIN | |
| ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) | |
| Food | - | - | 1,016.0 | - | 1,191 | 40,440 | 7,896 | - | - | 13.70 |
| Beverages | - | - | - | - | - | - | - | - | - | - |
| Tobacco | - | - | 149.9 | - | 380 | 21,180 | 3,933 | - | - | 11.98 |
| Textiles | - | - | 4,444.2 | - | 2,031 | 28,560 | 12,377 | - | - | 28.67 |
| Footwear and Clothing | - | - | - | - | - | - | - | - | - | - |
| Wood Products | - | - | 25,442.0 | - | 669 | 13,726 | 7,686 | - | - | 31.26 |
| Furniture | - | - | - | - | - | - | - | - | - | - |
| Paper and Paper Products | - | - | - | - | - | - | - | - | - | - |
| Printing and Publishing | - | - | 73.7 | - | 3,003 | 26,737 | 14,061 | - | - | 41.89 |
| Fur and Leather Products | - | - | - | - | - | - | - | - | - | - |
| Rubber Products | - | - | 2,454.0 | - | 2,074 | 39,127 | 14,447 | - | - | 15.09 |
| Chemicals | - | - | 232.3 | - | 569 | 27,780 | 13,763 | - | - | 36.24 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | - | - | 2,875.5 | - | 3,567 | 22,240 | 12,795 | - | - | 37.71 |
| Basic Metals | - | - | 1,700.5 | - | 3,383 | 22,397 | 11,478 | - | - | 26.45 |
| Metalware | - | - | 1,016.7 | - | 1,219 | 22,432 | 9,394 | - | - | 22.80 |
| Machinery | - | - | 694.5 | - | 2,141 | 53,105 | 21,776 | - | - | 32.99 |
| Electrical Machinery | - | - | 636.8 | - | 1,954 | 34,528 | 15,492 | - | - | 33.49 |
| Appliances and Supplies | - | - | 599.3 | - | 1,750 | 59,436 | 12,562 | - | - | 16.32 |
| Transport Vehicles and Equip. | - | - | 113.0 | - | 126 | 7,228 | 3,100 | - | - | 24.37 |
| TOTAL | - | - | 2,643.4 | - | 1,860 | 30,199 | 11,359 | - | - | 25.59 |

Table : A14

TOTAL MANUFACTURING INDUSTRY (1970)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|----------------|----------------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 17,934 | 59,343 | 85,791 | 555,952 | 668,219 | 189,299 | 8,902,753 | 11,241,092 | 2,338,339 |
| Beverages | 785 | 6,045 | 7,280 | 69,428 | 9,737 | 75,192 | 323,676 | 578,872 | 255,196 |
| Tobacco | 27 | 5,875 | 5,901 | 40,416 | 5,463 | 3,882 | 340,349 | 447,534 | 107,185 |
| Textiles | 8,738 | 106,455 | 118,984 | 1,158,881 | 275,449 | 356,162 | 5,948,326 | 9,285,118 | 3,356,792 |
| Footwear and Clothing | 52,050 | 20,635 | 83,644 | 124,978 | 14,077 | 29,848 | 1,429,099 | 2,250,186 | 821,087 |
| Wood Products | 17,116 | 13,589 | 38,279 | 96,553 | 624,784 | 59,802 | 1,090,931 | 1,610,594 | 519,663 |
| Furniture | 6,149 | 7,426 | 16,270 | 48,011 | 40,543 | 12,726 | 429,308 | 647,796 | 218,488 |
| Paper and Paper Products | 474 | 3,768 | 4,428 | 46,282 | 9,558 | 8,349 | 351,693 | 510,948 | 159,255 |
| Printing and Publishing | 2,464 | 11,029 | 14,400 | 187,072 | 12,046 | 570,522 | 544,362 | 1,126,188 | 581,826 |
| Fur and Leather Products | 4,490 | 4,267 | 9,906 | 40,864 | 14,438 | 42,950 | 358,525 | 505,748 | 147,223 |
| Rubber Products | 1,207 | 9,625 | 11,018 | 151,411 | 55,435 | 47,482 | 692,294 | 1,216,132 | 523,838 |
| Chemicals | 860 | 24,721 | 25,873 | 464,457 | 47,094 | 273,173 | 2,065,107 | 3,624,907 | 1,559,800 |
| Petroleum and Coal Products | 4 | 185 | 188 | 3,791 | 322 | 4,469 | 33,016 | 47,197 | 14,181 |
| Non-Metallic Mineral Prod. | 4,898 | 32,733 | 38,258 | 413,086 | 173,243 | 134,162 | 1,072,385 | 2,393,852 | 1,321,467 |
| Basic Metals | 174 | 9,292 | 9,507 | 150,650 | 123,654 | 135,931 | 1,126,025 | 1,635,227 | 509,202 |
| Metalware | 26,472 | 39,731 | 75,755 | 451,244 | 197,754 | 593,481 | 2,720,647 | 4,262,430 | 1,541,783 |
| Machinery | 4,309 | 19,593 | 26,332 | 298,480 | 89,368 | 113,074 | 1,317,856 | 2,366,415 | 1,048,559 |
| Electrical Machinery | 4,515 | 11,652 | 17,240 | 168,721 | 291,057 | 322,564 | 830,681 | 1,322,862 | 492,181 |
| Appliances and Supplies | 15,112 | 21,263 | 42,897 | 224,787 | 135,013 | 653,127 | 1,515,382 | 2,224,013 | 708,621 |
| Transport Vehicles and Equip. | 1,236 | 11,088 | 19,902 | 130,089 | 39,716 | 154,632 | 1,179,896 | 1,796,846 | 616,950 |
| TOTAL | 175,014 | 418,315 | 651,853 | 4,825,133 | 2,826,970 | 3,780,825 | 32,272,311 | 49,093,947 | 16,821,636 |

Table : A15

ARTISANAL MANUFACTURING INDUSTRY (1970)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|----------------|---------------|----------------|-----------------|-------------------|----------------------------|------------------|-------------------|-----------------------|
| Food | 16,843 | 17,412 | 42,084 | 112,748 | 76,492 | 17,185 | 1,945,489 | 2,529,621 | 584,132 |
| Beverages | 734 | 1,054 | 2,202 | 6,498 | 2,171 | 1,814 | 63,182 | 99,861 | 36,679 |
| Tobacco | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Textiles | 7,839 | 6,901 | 18,246 | 74,624 | 26,908 | 16,521 | 714,391 | 965,814 | 251,423 |
| Footwear and Clothing | 51,941 | 17,519 | 80,342 | 82,950 | 4,641 | 15,700 | 1,152,762 | 1,804,365 | 741,603 |
| Wood Products | 16,983 | 8,736 | 33,204 | 46,758 | 602,439 | 21,930 | 762,483 | 1,096,015 | 333,532 |
| Furniture | 6,045 | 4,926 | 13,566 | 25,941 | 27,711 | 10,198 | 316,049 | 474,343 | 158,294 |
| Paper and Paper Products | 413 | 799 | 1,307 | 5,338 | 1,415 | 380 | 86,848 | 110,688 | 23,840 |
| Printing and Publishing | 2,264 | 2,875 | 6,042 | 19,503 | 5,112 | 16,994 | 111,470 | 201,254 | 89,784 |
| Fur and Leather Products | 4,398 | 1,687 | 7,177 | 9,679 | 4,572 | 4,947 | 146,591 | 213,208 | 66,617 |
| Rubber Products | 1,112 | 1,004 | 2,247 | 6,230 | 5,034 | 1,135 | 57,487 | 87,345 | 29,858 |
| Chemicals | 608 | 1,034 | 1,974 | 7,869 | 3,643 | 8,360 | 238,159 | 293,505 | 55,346 |
| Petroleum and Coal Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Metallic Mineral Prod. | 4,599 | 4,690 | 9,833 | 27,615 | 19,229 | 12,171 | 258,470 | 378,848 | 120,378 |
| Basic Metals | 21 | 106 | 137 | 781 | 4,106 | 1,604 | 15,114 | 19,780 | 4,666 |
| Metalware | 26,121 | 14,024 | 49,594 | 82,504 | 68,686 | 38,275 | 1,104,156 | 1,663,066 | 548,910 |
| Machinery | 4,113 | 3,322 | 9,802 | 19,551 | 25,141 | 18,314 | 193,154 | 305,230 | 112,076 |
| Electrical Machinery | 4,384 | 2,100 | 7,528 | 12,580 | 4,220 | 4,721 | 195,037 | 303,254 | 108,217 |
| Appliances and Supplies | 14,986 | 8,552 | 30,050 | 37,735 | 114,046 | 360,222 | 299,858 | 631,888 | 332,030 |
| Transport Vehicles and Equip. | 7,034 | 2,943 | 11,424 | 18,509 | 18,562 | 8,054 | 721,240 | 893,485 | 172,245 |
| TOTAL | 170,448 | 99,684 | 326,839 | 597,393 | 1,013,923 | 558,525 | 8,381,940 | 12,151,570 | 3,769,630 |

Table : A16

SHARE IN TOTAL
(ARTISANAL MANUFACTURING INDUSTRY - 1970)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|---------------|--------------|--------------|--------------|--------------|---------------|--------------|--------------|--------------|
| Food | 93.92 | 29.34 | 49.05 | 20.28 | 11.45 | 9.08 | 21.85 | 22.50 | 24.97 |
| Beverages | 93.50 | 17.44 | 30.25 | 9.36 | 22.30 | 2.41 | 19.52 | 17.25 | 14 |
| Tobacco | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 |
| Textiles | 39.71 | 6.48 | 15.33 | 6.44 | 9.77 | 4.64 | 12.01 | 10.40 | 7.53 |
| Footwear and Clothing | 99.79 | 84.90 | 96.05 | 66.37 | 32.97 | 52.60 | 80.66 | 84.19 | 90.32 |
| Wood Products | 99.22 | 64.29 | 86.74 | 48.43 | 96.42 | 36.67 | 69.89 | 68.05 | 64.18 |
| Furniture | 98.31 | 66.33 | 83.38 | 54.03 | 68.35 | 80.15 | 73.62 | 73.22 | 72.45 |
| Paper and Paper Products | 87.13 | 21.20 | 31.32 | 11.53 | 14.80 | 4.55 | 26.69 | 21.66 | 14.97 |
| Printing and Publishing | 92.69 | 26.07 | 41.96 | 10.43 | 42.44 | 2.98 | 26.48 | 17.87 | 15.43 |
| Fur and Leather Products | 97.95 | 39.54 | 72.45 | 23.69 | 30.28 | 11.52 | 40.89 | 42.16 | 45.25 |
| Rubber Products | 91.30 | 10.43 | 20.39 | 4.11 | 9.08 | 2.39 | 8.30 | 7.18 | 5.70 |
| Chemicals | 70.70 | 4.18 | 7.63 | 1.69 | 7.74 | 3.06 | 11.53 | 8.10 | 3.55 |
| Petroleum and Coal Products | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-Metallic Mineral Prod. | 93.90 | 14.33 | 25.70 | 6.69 | 11.10 | 9.07 | 26.10 | 15.83 | 9.11 |
| Basic Metals | 12.07 | 1.14 | 1.44 | 0.52 | 3.32 | 1.18 | 1.34 | 1.21 | 0.92 |
| Metalware | 98.67 | 35.30 | 65.47 | 18.28 | 34.73 | 6.45 | 40.58 | 38.78 | 35.60 |
| Machinery | 95.45 | 16.96 | 37.22 | 6.54 | 28.13 | 16.20 | 14.66 | 12.90 | 10.69 |
| Electrical Machinery | 97.10 | 18.02 | 43.67 | 7.46 | 1.45 | 1.46 | 23.48 | 22.92 | 21.99 |
| Appliances and Supplies | 99.17 | 40.22 | 70.05 | 16.79 | 84.47 | 55.15 | 19.79 | 28.41 | 46.86 |
| Transport Vehicles and Equip. | 97.21 | 26.54 | 57.10 | 14.23 | 46.74 | 5.21 | 61.13 | 49.73 | 27.92 |
| TOTAL | 97.39 | 23.85 | 50.14 | 12.38 | 35.87 | 14.77 | 25.97 | 24.75 | 22.41 |

Table : A17

SOME CHARACTERISTICS OF ARTISANAL MANUFACTURING (1970)

| SECTOR | AVERAGE | | POWER EQUIP. PER ESTAB. | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. | OUTPUT PER ESTAB. | VALUE ADDED PER ESTAB. | VALUE ADDED PER EMPLOYEE | (1) PRICE COST MARGIN | (2) PRICE COST MARGIN |
|-------------------------------|---------------------------------|---------------|----------------------------------|------------------------------------|-----------------------------------|-------------------------|---------------------------------|-----------------------------------|--------------------------------|--------------------------------|
| | ANNUAL WAGE PER WORKER | PER ESTAB. | | | | | | | | |
| | PER ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) |
| | ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) |
| Food | 2.5 | 6.5 | 4.5 | 1.82 | 1.0 | 150.2 | 34.7 | 13.9 | 12.32 | 18.63 |
| Beverages | 3.0 | 6.2 | 3.0 | 0.99 | 2.5 | 136.1 | 50.0 | 16.7 | 23.14 | 30.22 |
| Tobacco | - | - | - | - | - | - | - | - | - | - |
| Textiles | 2.3 | 10.8 | 3.4 | 1.47 | 2.1 | 123.2 | 32.1 | 13.8 | 5.60 | 18.31 |
| Footwear and Clothing | 1.5 | 4.7 | 0.1 | 0.06 | 0.3 | 36.5 | 14.3 | 9.2 | 19.07 | 34.77 |
| Wood Products | 2.0 | 5.4 | 35.5 | 18.14 | 1.3 | 64.5 | 19.6 | 10.0 | 14.22 | 26.17 |
| Furniture | 2.2 | 5.3 | 4.6 | 2.04 | 1.7 | 78.5 | - | 11.7 | 18.31 | 27.90 |
| Paper and Paper Products | 3.4 | 6.7 | 3.4 | 1.02 | 0.9 | 268.0 | - | 17.2 | 13.17 | 16.72 |
| Printing and Publishing | 2.6 | 6.8 | 2.2 | 0.85 | 7.4 | 88.1 | - | 14.9 | 24.25 | 34.92 |
| Fur and Leather Products | 1.6 | 5.7 | 1.0 | 0.61 | 1.1 | 48.5 | 15.1 | 9.3 | 11.93 | 26.71 |
| Rubber Products | 2.0 | 6.2 | 4.6 | 2.24 | 1.0 | 79.3 | 27.1 | 13.3 | 18.22 | 27.05 |
| Chemicals | 3.2 | 7.6 | 6.0 | 1.85 | 13.8 | 482.7 | 91.0 | 28.0 | 13.74 | 16.18 |
| Petroleum and Coal Products | - | - | - | - | - | - | - | - | - | - |
| Non-Metallic Mineral Prod. | 2.1 | 5.9 | 4.2 | 1.96 | 2.6 | 82.4 | 26.2 | 12.2 | 16.49 | 24.49 |
| Basic Metals | 6.5 | 7.4 | 195.5 | 29.97 | 76.4 | 941.9 | 222.2 | 34.1 | 18.49 | 19.64 |
| Metalware | 1.9 | 5.9 | 2.6 | 1.38 | 1.5 | 53.3 | 21.0 | 11.1 | 15.56 | 28.21 |
| Machinery | 2.4 | 5.9 | 6.1 | 2.56 | 4.5 | 74.2 | 27.2 | 11.4 | 17.84 | 30.32 |
| Electrical Machinery | 1.7 | 6.0 | 1.0 | 0.56 | 1.1 | 69.2 | 24.7 | 14.4 | 20.81 | 31.54 |
| Appliances and Supplies | 2.0 | 4.4 | 7.6 | 3.80 | 24.0 | 42.2 | 22.2 | 11.0 | 31.56 | 46.57 |
| Transport Vehicles and Equip. | 1.6 | 6.3 | 2.6 | 1.62 | 1.1 | 127.0 | 24.5 | 15.1 | 11.24 | 17.21 |
| TOTAL | 1.9 | 6.0 | 5.9 | 3.10 | 3.3 | 71.3 | 22.1 | 11.5 | 14.90 | 26.11 |

Table : A18

SMALL-SCALE MANUFACTURING INDUSTRY (1970)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER | GROSS | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|---------|-----------|--------------------|----------------|-------------------------|---------------------|---------------------|--------------------------|
| | | | | | EQUIP. (HP) | INVESTMENT (1000 TL) | | | |
| Food | 914 | 16,837 | 18,431 | 150,767 | 508,485 | 56,162 | 3,050,693 | 3,790,437 | 739,744 |
| Beverages | 32 | 533 | 603 | 4,384 | 504 | 3,328 | 27,624 | 52,209 | 24,585 |
| Tobacco | 3 | 90 | 92 | 1,678 | 127 | 0 | 45,529 | 50,470 | 4,941 |
| Textiles | 636 | 12,648 | 13,610 | 231,800 | 45,629 | 31,139 | 1,599,078 | 1,969,063 | 369,985 |
| Footwear and Clothing | 92 | 1,578 | 1,738 | 25,088 | 8,557 | 11,655 | 107,958 | 148,254 | 40,696 |
| Wood Products | 109 | 1,771 | 1,968 | 12,891 | 8,150 | 4,865 | 151,569 | 196,591 | 45,022 |
| Furniture | 91 | 1,454 | 1,636 | 10,723 | 11,619 | 2,034 | 70,689 | 105,952 | 35,263 |
| Paper and Paper Products | 43 | 1,067 | 1,108 | 13,060 | 1,940 | 4,126 | 91,501 | 136,606 | 45,105 |
| Printing and Publishing | 147 | 2,875 | 3,067 | 40,149 | 3,413 | 511,365 | 114,409 | 220,769 | 106,360 |
| Fur and Leather Products | 80 | 1,640 | 1,781 | 17,012 | 5,913 | 33,757 | 142,417 | 193,651 | 51,234 |
| Rubber Products | 75 | 1,614 | 1,723 | 13,946 | 10,413 | 12,372 | 74,164 | 112,549 | 38,385 |
| Chemicals | 157 | 3,259 | 3,429 | 78,919 | 14,535 | 20,969 | 356,313 | 512,579 | 156,266 |
| Petroleum and Coal Products | 2 | 37 | 40 | 399 | 180 | 599 | 2,470 | 3,955 | 1,485 |
| Non-Metallic Mineral Prod. | 188 | 3,917 | 4,213 | 34,177 | 15,944 | (123,607) | 83,373 | 170,364 | 86,991 |
| Basic Metals | 103 | 2,187 | 2,339 | 23,904 | 53,824 | 28,082 | 264,660 | 347,254 | 82,594 |
| Metalware | 241 | 4,833 | 5,205 | 64,591 | 21,884 | 27,698 | 406,094 | 628,570 | 222,476 |
| Machinery | 123 | 2,740 | 2,934 | 35,635 | 9,761 | 13,116 | 134,774 | 208,782 | 74,003 |
| Electrical Machinery | 85 | 1,730 | 1,857 | 19,565 | 7,207 | 109,154 | 127,563 | 184,879 | 57,316 |
| Appliances and Supplies | 79 | 1,531 | 1,639 | 14,922 | 3,589 | 232,846 | 53,877 | 88,631 | 34,754 |
| Transport Vehicles and Equip. | 162 | 3,322 | 3,565 | 37,172 | 5,216 | 108,770 | 170,311 | 311,597 | 141,286 |
| TOTAL | 3,362 | 65,643 | 70,978 | 830,782 | 736,800 | 1,088,430 | 7,074,671 | 9,433,162 | 2,358,491 |

Table : A19

SHARE IN TOTAL
(SMALL-SCALE MANUFACTURING INDUSTRY - 1970)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER | GROSS | INPUTS | OUTPUT | VALUE |
|-------------------------------|------------------|---------|-----------|-------|--------|---------|--------|--------|-------|
| | | | | | EQUIP. | INVEST. | | | ADDED |
| Food | 5.10 | 28.37 | 21.48 | 27.12 | 76.10 | 29.67 | 34.27 | 33.72 | 31.64 |
| Beverages | 4.08 | 8.82 | 8.28 | 6.31 | 5.18 | 4.43 | 8.53 | 9.02 | 9.63 |
| Tobacco | 11.11 | 1.53 | 1.56 | 4.15 | 2.32 | 0.00 | 13.38 | 11.28 | 4.61 |
| Textiles | 7.28 | 11.88 | 11.44 | 20.00 | 16.57 | 8.74 | 26.88 | 21.21 | 11.09 |
| Footwear and Clothing | 0.18 | 7.65 | 2.08 | 20.07 | 60.79 | 39.05 | 7.53 | 6.59 | 4.96 |
| Wood Products | 0.64 | 13.03 | 5.14 | 13.35 | 1.30 | 8.14 | 13.89 | 12.21 | 8.66 |
| Furniture | 1.48 | 19.58 | 10.06 | 22.33 | 28.66 | 15.99 | 16.47 | 16.36 | 16.14 |
| Paper and Paper Products | 9.07 | 27.79 | 25.02 | 28.22 | 20.30 | 49.42 | 26.02 | 26.74 | 28.32 |
| Printing and Publishing | 5.77 | 26.07 | 21.30 | 21.46 | 28.33 | 89.63 | 21.02 | 19.60 | 18.28 |
| Fur and Leather Products | 1.78 | 38.43 | 17.98 | 41.63 | 40.95 | 78.60 | 39.72 | 38.29 | 34.80 |
| Rubber Products | 6.21 | 16.77 | 15.64 | 9.21 | 18.78 | 26.06 | 10.71 | 9.25 | 7.33 |
| Chemicals | 18.26 | 13.18 | 13.25 | 16.99 | 30.86 | 7.68 | 17.25 | 14.14 | 10.02 |
| Petroleum and Coal Products | 50.00 | 20.00 | 21.28 | 10.52 | 55.90 | 13.40 | 7.48 | 8.38 | 10.47 |
| Non-Metallic Mineral Prod. | 3.84 | 11.97 | 11.01 | 8.27 | 9.20 | (92.13) | 7.77 | 7.12 | 6.58 |
| Basic Metals | 59.20 | 23.54 | 26.60 | 15.87 | 43.53 | 20.66 | 23.50 | 21.24 | 16.22 |
| Metalware | 0.91 | 12.16 | 6.87 | 14.31 | 11.07 | 4.67 | 14.93 | 11.75 | 14.43 |
| Machinery | 2.85 | 13.98 | 11.14 | 11.94 | 10.92 | 11.60 | 10.23 | 8.82 | 7.06 |
| Electrical Machinery | 1.88 | 14.85 | 10.77 | 11.60 | 2.48 | 33.84 | 15.36 | 13.98 | 11.65 |
| Appliances and Supplies | 0.52 | 7.20 | 3.82 | 6.64 | 2.66 | 35.65 | 3.56 | 3.99 | 4.90 |
| Transport Vehicles and Equip. | 2.24 | 29.96 | 17.91 | 28.57 | 13.13 | 70.34 | 14.43 | 17.34 | 22.90 |
| TOTAL | 1.92 | 15.69 | 10.89 | 17.22 | 26.07 | 28.79 | 21.92 | 19.21 | 14.02 |

Table : A20

SOME CHARACTERISTICS OF SMALL-SCALE MANUFACTURING (1970)

| SECTORS | AVERAGE | | POWER EQUIP. PER ESTAB. | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. | OUTPUT PER ESTAB. | VALUE ADDED PER ESTAB. | VALUE ADDED PER EMPLOYEE | (1) PRICE COST MARGIN (%) | (2) PRICE COST MARGIN (%) |
|-------------------------------|---------------------------------|---------------------|----------------------------------|------------------------------------|-----------------------------------|-------------------------|---------------------------------|-----------------------------------|------------------------------------|------------------------------------|
| | ANNUAL WAGE PER WORKER | ESTAB. (1000 TL) | | | | | | | | |
| | PER ESTAB. | (1000 TL) | | | | | | | | |
| | ESTAB. | (1000 TL) | | | | | | | | |
| Food | 20.2 | 9.0 | 556.3 | 27.59 | 61.4 | 4,147.1 | 809.3 | 40.1 | 15.16 | 15.54 |
| Beverages | 18.8 | 8.2 | 15.8 | 0.86 | 106.0 | 1,631.5 | 768.3 | 40.8 | 37.59 | 38.69 |
| Tobacco | 30.7 | 18.6 | 42.3 | 1.38 | 0.0 | 16,823.3 | 1,647.0 | 53.7 | 6.39 | 6.47 |
| Textiles | 21.4 | 18.3 | 71.7 | 3.35 | 49.0 | 3,096.0 | 581.7 | 27.2 | 6.12 | 7.02 |
| Footwear and Clothing | 18.9 | 15.9 | 93.0 | 4.92 | 126.7 | 1,611.5 | 442.3 | 23.4 | 8.81 | 10.53 |
| Wood Products | 18.1 | 7.3 | 74.8 | 4.14 | 44.6 | 1,803.6 | 413.0 | 22.9 | 15.61 | 16.34 |
| Furniture | 18.0 | 7.4 | 127.7 | 7.10 | 22.4 | 1,164.3 | 387.5 | 21.6 | 21.89 | 23.16 |
| Paper and Paper Products | 25.8 | 12.5 | 45.1 | 1.75 | 96.0 | 3,176.9 | 1,049.0 | 40.7 | 22.90 | 23.46 |
| Printing and Publishing | 20.9 | 14.0 | 23.2 | 1.11 | 3,478.7 | 1,501.8 | 723.5 | 34.7 | 28.78 | 29.99 |
| Fur and Leather Products | 22.3 | 10.4 | 73.9 | 3.32 | 422.0 | 2,420.6 | 640.4 | 28.8 | 16.92 | 17.67 |
| Rubber Products | 23.0 | 8.6 | 138.8 | 6.04 | 165.0 | 1,500.7 | 511.8 | 22.3 | 20.88 | 21.71 |
| Chemicals | 21.8 | 24.2 | 92.6 | 4.26 | 133.6 | 3,264.8 | 995.3 | 45.6 | 14.29 | 15.09 |
| Petroleum and Coal Products | 20.0 | 10.8 | 90.0 | 4.50 | 299.5 | 1,977.5 | 742.5 | 37.1 | 26.64 | 27.46 |
| Non-Metallic Mineral Prod. | 22.4 | 8.7 | 84.8 | 3.78 | (657.5) | 906.2 | 462.7 | 20.6 | 29.48 | 31.00 |
| Basic Metals | 22.7 | 10.9 | 522.6 | 23.01 | 272.6 | 3,371.4 | 801.9 | 35.3 | 16.42 | 16.90 |
| Metalware | 21.6 | 13.4 | 90.8 | 4.20 | 114.9 | 2,608.2 | 923.1 | 42.7 | 24.33 | 25.12 |
| Machinery | 23.9 | 13.0 | 79.4 | 3.33 | 106.6 | 1,697.4 | 601.7 | 25.2 | 17.17 | 18.38 |
| Electrical Machinery | 21.8 | 11.3 | 84.8 | 3.88 | 1,751.2 | 2,175.0 | 674.3 | 30.9 | 19.64 | 20.42 |
| Appliances and Supplies | 20.7 | 9.7 | 45.4 | 2.19 | 2,574.4 | 1,121.9 | 439.9 | 21.2 | 21.19 | 22.38 |
| Transport Vehicles and Equip. | 22.0 | 11.2 | 32.2 | 1.46 | 671.4 | 1,923.4 | 872.1 | 39.6 | 32.54 | 33.41 |
| TOTAL | 21.1 | 12.7 | 219.2 | 10.38 | 323.7 | 2,805.8 | 701.5 | 33.2 | 15.48 | 16.20 |

Table : A21

MEDIUM-SCALE MANUFACTURING INDUSTRY (1970)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER | GROSS | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|---------|-----------|--------------------|----------------|-------------------------|---------------------|---------------------|--------------------------|
| | | | | | EQUIP. (HP) | INVESTMENT (1000 TL) | | | |
| Food | 140 | 11,902 | 12,070 | 122,752 | 43,058 | 26,443 | 2,344,017 | 2,744,395 | 400,378 |
| Beverages | 13 | 1,212 | 1,229 | 12,065 | 4,880 | 17,443 | 46,098 | 89,844 | 43,746 |
| Tobacco | 11 | 1,349 | 1,362 | 9,196 | 245 | 294 | 47,072 | 66,035 | 18,963 |
| Textiles | 164 | 15,223 | 15,402 | 190,456 | 50,577 | 46,441 | 970,669 | 1,356,205 | 385,556 |
| Footwear and Clothing | 16 | 1,275 | 1,300 | 13,502 | 782 | 1,402 | 157,308 | 189,172 | 31,864 |
| Wood Products | 18 | 1,586 | 1,611 | 15,146 | 4,656 | 10,959 | 104,232 | 163,619 | 59,387 |
| Furniture | 12 | 836 | 858 | 10,313 | 1,177 | 492 | 39,073 | 62,153 | 23,180 |
| Paper and Paper Products | 18 | 1,922 | 1,933 | 27,884 | 6,203 | 3,843 | 173,344 | 263,654 | 90,310 |
| Printing and Publishing | 24 | 2,227 | 2,230 | 44,111 | 1,082 | 4,610 | 83,301 | 194,865 | 111,564 |
| Fur and Leather Products | 12 | 940 | 948 | 14,173 | 4,153 | 4,246 | 69,517 | 98,889 | 29,372 |
| Rubber Products | 24 | 1,857 | 1,898 | 27,596 | 6,274 | 3,075 | 77,789 | 132,624 | 54,835 |
| Chemicals | 59 | 5,787 | 5,823 | 102,788 | 9,722 | 89,723 | 491,487 | 942,169 | 450,682 |
| Petroleum and Coal Products | 2 | 148 | 148 | 3,392 | 142 | 3,870 | 30,546 | 43,242 | 12,696 |
| Non-Metallic Mineral Prod. | 81 | 8,144 | 8,228 | 77,904 | 21,689 | 23,451 | 117,663 | 298,284 | 180,621 |
| Basic Metals | 42 | 3,445 | 3,475 | 49,028 | 46,217 | 83,658 | 403,284 | 565,709 | 162,425 |
| Metalware | 88 | 8,394 | 8,474 | 109,689 | 41,883 | 30,585 | 501,551 | 814,913 | 313,362 |
| Machinery | 59 | 5,578 | 5,633 | 73,011 | 40,843 | 47,966 | 372,681 | 587,198 | 214,517 |
| Electrical Machinery | 34 | 3,347 | 3,374 | 53,744 | 250,571 | 180,230 | 211,287 | 348,907 | 137,620 |
| Appliances and Supplies | 31 | 3,112 | 3,134 | 31,527 | 4,395 | 16,383 | 158,949 | 282,979 | 124,030 |
| Transport Vehicles and Equip. | 35 | 3,153 | 3,243 | 46,006 | 10,800 | 18,283 | 135,355 | 350,916 | 215,561 |
| TOTAL | 883 | 81,437 | 82,373 | 1,034,263 | 549,329 | 613,397 | 6,535,203 | 9,595,772 | 3,060,569 |

Table : A22

SHARE IN TOTAL
(MEDIUM-SCALE MANUFACTURING INDUSTRY - 1970)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER | GROSS | INPUTS | OUTPUT | VALUE |
|-------------------------------|------------------|---------|-----------|-------|--------|---------|--------|--------|-------|
| | | | | | EQUIP. | INVEST. | | | ADDED |
| Food | 0.78 | 20.06 | 14.07 | 22.08 | 6.44 | 13.97 | 26.33 | 26.41 | 17.12 |
| Beverages | 1.66 | 20.05 | 16.88 | 17.35 | 50.12 | 23.20 | 14.26 | 15.52 | 17.14 |
| Tobacco | 40.74 | 22.96 | 23.08 | 22.75 | 4.48 | 7.57 | 13.83 | 14.76 | 17.69 |
| Textiles | 1.88 | 14.30 | 12.94 | 16.43 | 18.36 | 13.04 | 16.32 | 14.61 | 11.55 |
| Footwear and Clothing | 0.03 | 6.18 | 1.55 | 10.80 | 5.56 | 4.70 | 11.01 | 8.41 | 3.88 |
| Wood Products | 0.11 | 11.67 | 4.21 | 15.69 | 0.75 | 18.33 | 9.55 | 10.16 | 11.43 |
| Furniture | 0.20 | 11.26 | 5.27 | 21.48 | 2.90 | 3.87 | 9.10 | 9.59 | 10.56 |
| Paper and Paper Products | 3.80 | 51.01 | 43.65 | 60.25 | 64.90 | 46.08 | 49.29 | 51.60 | 56.71 |
| Printing and Publishing | 0.97 | 20.19 | 15.49 | 23.58 | 8.98 | 0.81 | 15.30 | 17.30 | 19.17 |
| Fur and Leather Products | 0.27 | 22.03 | 9.57 | 34.68 | 28.76 | 9.89 | 19.39 | 19.55 | 19.95 |
| Rubber Products | 1.59 | 19.29 | 17.23 | 18.23 | 11.32 | 6.48 | 11.26 | 10.91 | 10.47 |
| Chemicals | 6.86 | 23.41 | 22.51 | 22.13 | 20.64 | 32.04 | 23.80 | 25.99 | 28.89 |
| Petroleum and Coal Products | 50.00 | 80.00 | 78.72 | 89.48 | 44.10 | 86.60 | 92.52 | 91.62 | 89.53 |
| Non-Metallic Mineral Prod. | 1.65 | 26.88 | 21.51 | 18.86 | 12.51 | 17.48 | 10.97 | 12.46 | 13.67 |
| Basic Metals | 24.14 | 37.07 | 36.55 | 32.54 | 37.38 | 61.54 | 35.81 | 34.60 | 31.90 |
| Metalware | 0.33 | 21.13 | 11.19 | 24.31 | 21.18 | 5.15 | 18.43 | 19.12 | 20.32 |
| Machinery | 1.37 | 28.47 | 21.39 | 24.46 | 45.70 | 42.42 | 28.28 | 24.81 | 20.46 |
| Electrical Machinery | 0.75 | 28.72 | 19.57 | 31.85 | 86.09 | 55.87 | 25.44 | 26.38 | 27.96 |
| Appliances and Supplies | 0.21 | 14.64 | 7.31 | 14.03 | 3.26 | 2.51 | 10.49 | 12.72 | 17.50 |
| Transport Vehicles and Equip. | 0.48 | 28.44 | 16.29 | 35.37 | 27.19 | 11.82 | 11.47 | 19.53 | 34.94 |
| TOTAL | 0.50 | 19.47 | 12.64 | 21.43 | 19.43 | 16.22 | 20.25 | 19.55 | 18.19 |

SOME CHARACTERISTICS OF MEDIUM-SCALE MANUFACTURING (1970)

| SECTORS | AVERAGE | | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. (1000 TL) | OUTPUT PER ESTAB. (1000 TL) | VALUE ADDED PER ESTAB. (1000 TL) | VALUE ADDED PER EMPLOYEE (1000 TL) | (1) PRICE COST MARGIN (%) | |
|-------------------------------|----------------------------|--|------------------------------------|--|--------------------------------------|--|--|---------------------------------------|-------|
| | EMPLOYEES PER ESTAB. | ANNUAL WAGE PER WORKER (1000 TL) | | | | | | | |
| Food | 86.2 | 10.3 | 307.6 | 3.57 | 188.7 | 19,602.8 | 2,859.8 | 33.2 | 10.05 |
| Beverages | 94.5 | 9.9 | 375.4 | 3.97 | 1,341.8 | 6,911.1 | 3,365.1 | 35.6 | 35.90 |
| Tobacco | 125.8 | 6.8 | 22.3 | 0.18 | 26.7 | 6,008.2 | 1,723.9 | 13.9 | 14.66 |
| Textiles | 95.9 | 12.5 | 308.4 | 3.28 | 283.2 | 8,289.5 | 2,351.0 | 25.0 | 14.22 |
| Footwear and Clothing | 81.3 | 10.6 | 48.9 | 0.60 | 87.6 | 11,823.3 | 1,991.5 | 26.5 | 9.57 |
| Wood Products | 89.5 | 9.5 | 258.7 | 2.89 | 608.8 | 9,089.9 | 3,299.3 | 36.9 | 26.89 |
| Furniture | 71.5 | 12.3 | 98.1 | 1.37 | 41.0 | 5,179.4 | 1,923.3 | 26.9 | 20.10 |
| Paper and Paper Products | 107.4 | 14.5 | 344.6 | 3.21 | 213.5 | 14,647.4 | 5,017.2 | 46.7 | 23.62 |
| Printing and Publishing | 92.9 | 19.8 | 45.1 | 0.49 | 192.1 | 8,119.4 | 4,648.5 | 50.0 | 34.58 |
| Fur and Leather Products | 79.0 | 15.1 | 34.1 | 4.38 | 353.8 | 8,240.8 | 2,447.7 | 31.0 | 15.25 |
| Rubber Products | 79.1 | 14.9 | 261.4 | 3.31 | 128.1 | 5,526.0 | 2,284.8 | 28.9 | 20.08 |
| Chemicals | 98.7 | 17.8 | 164.8 | 1.67 | 1,520.7 | 15,989.0 | 7,638.7 | 77.4 | 36.86 |
| Petroleum and Coal Products | 74.0 | 22.9 | 71.0 | 0.96 | 1,935.0 | 21,621.0 | 6,348.0 | 85.8 | 21.52 |
| Non-Metallic Mineral Prod. | 101.6 | 9.6 | 267.5 | 2.63 | 289.5 | 3,682.5 | 2,229.9 | 22.0 | 34.17 |
| Basic Metals | 82.7 | 14.2 | 1,100.4 | 13.30 | 1,991.9 | 13,469.3 | 3,867.3 | 46.7 | 19.97 |
| Metalware | 96.3 | 13.1 | 475.9 | 4.94 | 347.6 | 9,260.4 | 3,560.9 | 37.0 | 24.86 |
| Machinery | 95.5 | 13.1 | 692.3 | 7.25 | 813.0 | 9,952.5 | 3,635.9 | 38.1 | 23.98 |
| Electrical Machinery | 99.2 | 16.1 | 7,369.7 | 74.27 | 5,300.9 | 10,262.0 | 4,047.6 | 40.8 | 23.92 |
| Appliances and Supplies | 101.1 | 10.1 | 141.8 | 1.40 | 528.5 | 9,128.4 | 4,001.0 | 39.6 | 32.61 |
| Transport Vehicles and Equip. | 92.7 | 14.6 | 308.6 | 3.33 | 522.4 | 10,026.2 | 6,158.9 | 66.5 | 47.94 |
| TOTAL | 93.3 | 12.7 | 622.1 | 6.67 | 694.7 | 10,867.2 | 3,466.1 | 37.2 | 20.99 |

Table : A24

LARGE-SCALE MANUFACTURING INDUSTRY (1970)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|----------------|----------------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 37 | 13,192 | 13,206 | 169,665 | 40,184 | 89,509 | 1,562,554 | 2,175,639 | 614,085 |
| Beverages | 6 | 3,246 | 3,246 | 46,501 | 2,182 | 52,607 | 136,772 | 336,958 | 150,186 |
| Tobacco | 13 | 4,436 | 4,447 | 29,542 | 5,091 | 3,588 | 267,748 | 331,029 | 83,281 |
| Textiles | 99 | 71,683 | 71,726 | 662,001 | 152,340 | 262,061 | 2,664,208 | 4,994,036 | 2,329,828 |
| Footwear and Clothing | 1 | 263 | 264 | 3,438 | 97 | 1,091 | 11,471 | 18,395 | 6,924 |
| Wood Products | 5 | 1,496 | 1,496 | 21,758 | 9,539 | 22,048 | 72,647 | 154,369 | 81,722 |
| Furniture | 1 | 210 | 210 | 1,084 | 36 | 0 | 3,497 | 5,348 | 1,851 |
| Paper and Paper Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Printing and Publishing | 9 | 3,052 | 3,061 | 83,309 | 2,439 | 37,553 | 235,182 | 509,300 | 274,113 |
| Fur and Leather Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rubber Products | 6 | 5,150 | 5,150 | 103,639 | 33,714 | 30,900 | 482,854 | 883,614 | 400,760 |
| Chemicals | 36 | 14,641 | 14,647 | 274,881 | 19,194 | 154,121 | 979,148 | 1,876,654 | 897,506 |
| Petroleum and Coal Products | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Non-Metallic Mineral Prod. | 30 | 15,982 | 15,984 | 273,390 | 116,401 | 222,147 | 612,879 | 1,546,356 | 933,477 |
| Basic Metals | 8 | 3,554 | 3,556 | 76,937 | 19,507 | 22,587 | 442,967 | 702,484 | 259,517 |
| Metalware | 22 | 12,480 | 12,482 | 194,460 | 65,301 | 496,923 | 708,846 | 1,165,881 | 457,035 |
| Machinery | 14 | 7,953 | 7,963 | 170,303 | 13,623 | 33,678 | 617,242 | 1,265,205 | 647,963 |
| Electrical Machinery | 12 | 4,475 | 4,481 | 82,832 | 29,059 | 28,459 | 296,794 | 485,822 | 189,028 |
| Appliances and Supplies | 16 | 8,068 | 8,074 | 140,603 | 12,983 | 43,676 | 1,002,698 | 1,220,505 | 217,807 |
| Transport Vehicles and Equip. | 5 | 1,670 | 1,670 | 28,402 | 5,138 | 19,525 | 152,990 | 240,848 | 87,858 |
| TOTAL | 321 | 171,551 | 171,663 | 2,362,695 | 526,828 | 1,520,473 | 10,280,497 | 17,913,443 | 7,632,946 |

Table : A25

SHARE IN TOTAL
(LARGE-SCALE MANUFACTURING INDUSTRY - 1970)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|--------------|--------------|--------------|-----------------|------------------|--------------|--------------|----------------|
| Food | 0.206 | 22.23 | 15.39 | 30.52 | 6.01 | 47.28 | 17.55 | 19.36 | 26.26 |
| Beverages | 0.764 | 53.70 | 44.59 | 66.98 | 22.41 | 69.96 | 57.70 | 58.21 | 58.85 |
| Tobacco | 48.148 | 75.51 | 75.36 | 73.09 | 93.19 | 92.43 | 72.79 | 73.97 | 77.70 |
| Textiles | 1.133 | 67.34 | 60.28 | 57.12 | 55.31 | 73.58 | 44.79 | 53.79 | 69.82 |
| Footwear and Clothing | 0.002 | 1.27 | 0.32 | 2.75 | 0.69 | 3.66 | 0.80 | 0.82 | 0.84 |
| Wood Products | 0.035 | 11.01 | 3.91 | 22.53 | 1.53 | 36.87 | 6.66 | 9.58 | 15.73 |
| Furniture | 0.016 | 2.83 | 1.29 | 2.15 | 0.09 | 0.00 | 0.81 | 0.83 | 0.85 |
| Paper and Paper Products | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Printing and Publishing | 0.365 | 27.67 | 21.26 | 44.53 | 20.25 | 6.58 | 43.20 | 45.22 | 47.11 |
| Fur and Leather Products | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Rubber Products | 0.497 | 53.51 | 46.74 | 68.45 | 60.82 | 65.08 | 69.75 | 72.66 | 76.50 |
| Chemicals | 4.186 | 59.22 | 56.61 | 59.18 | 40.76 | 56.42 | 47.41 | 51.77 | 57.54 |
| Petroleum and Coal Products | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Non-Metallic Mineral Prod. | 0.612 | 48.83 | 41.78 | 66.18 | 67.19 | 165.58 | 57.15 | 64.60 | 70.64 |
| Basic Metals | 4.598 | 38.25 | 37.40 | 51.07 | 15.78 | 16.62 | 39.34 | 42.96 | 50.97 |
| Metalware | 0.083 | 31.41 | 16.48 | 43.09 | 33.02 | 83.73 | 26.05 | 27.35 | 29.64 |
| Machinery | 0.325 | 40.59 | 30.24 | 57.06 | 15.24 | 29.78 | 46.84 | 53.47 | 61.80 |
| Electrical Machinery | 0.266 | 38.41 | 25.99 | 49.09 | 9.98 | 8.82 | 35.73 | 36.73 | 38.41 |
| Appliances and Supplies | 0.106 | 37.94 | 18.82 | 62.55 | 9.62 | 6.69 | 66.17 | 54.88 | 30.74 |
| Transport Vehicles and Equip. | 0.069 | 15.06 | 8.39 | 21.83 | 12.94 | 12.63 | 12.97 | 13.40 | 14.24 |
| TOTAL | 0.183 | 41.01 | 26.33 | 48.97 | 18.64 | 40.22 | 31.86 | 36.49 | 45.38 |

Table : A26

SOME CHARACTERISTICS OF LARGE-SCALE MANUFACTURING (1970)

| SECTORS | AVERAGE | | | | | | | | (1) PRICE MARGIN (%) |
|-----------|-----------|--------|----------|-----------|-----------|-----------|-----------|------|-------------------------------|
| | ANNUAL | POWER | POWER | GROSS | | VALUE | VALUE | | |
| | WAGE | EQUIP. | EQUIP. | INVEST. | OUTPUT | ADDED | ADDED | | |
| | PER | PER | PER | PER | PER | PER | PER | | |
| EMPLOYEES | WORKER | ESTAB. | EMPLOYEE | ESTAB. | ESTAB. | ESTAB. | EMPLOYEE | | |
| PER | ESTAB. | ESTAB. | ESTAB. | ESTAB. | ESTAB. | ESTAB. | ESTAB. | | |
| ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | | |
| Food | 356.9 | 12.9 | 1,085.1 | 3.04 | 2,419.2 | 58,828.1 | 16,996.9 | 46.5 | 20.41 |
| Beverag | 541.0 | 14.3 | 363.7 | 0.67 | 8,767.8 | 56,159.7 | 25,031.0 | 46.3 | 30.77 |
| Tobacco | 342.1 | 6.7 | 391.6 | 1.14 | 276.0 | 25,463.8 | 6,406.2 | 18.7 | 16.21 |
| Textile | 726.5 | 9.2 | 1,538.8 | 2.12 | 2,667.1 | 50,444.8 | 23,533.6 | 32.5 | 33.39 |
| Footwear | 264.0 | 13.1 | 97.0 | 0.37 | 1,091.0 | 18,395.0 | 6,926.0 | 26.2 | 18.88 |
| Wood Pr | 249.3 | 14.5 | 1,589.8 | 6.38 | 3,674.7 | 25,728.2 | 13,620.3 | 54.6 | 38.84 |
| Furnitu | 210.0 | 4.9 | 36.0 | 0.17 | 0.0 | 5,348.0 | 1,851.0 | 8.8 | 15.28 |
| Paper a | - | - | - | - | - | - | - | - | - |
| Printin | 340.1 | 27.3 | 271.0 | 0.80 | 4,172.6 | 56,588.9 | 30,457.6 | 89.6 | 37.42 |
| Fur and | - | - | - | - | - | - | - | - | - |
| Rubber | 858.3 | 20.1 | 5,619.0 | 6.55 | 5,150.0 | 147,269.0 | 66,793.3 | 77.8 | 33.63 |
| Chemica | 406.9 | 18.8 | 533.2 | 1.31 | 4,281.1 | 52,129.3 | 26,930.7 | 61.3 | 33.17 |
| Petrole | - | - | - | - | - | - | - | - | - |
| Non-Met | 532.8 | 17.1 | 3,880.0 | 7.28 | 7,404.9 | 51,545.2 | 31,115.9 | 58.4 | 42.68 |
| Basic M | 444.5 | 21.6 | 2,438.4 | 5.49 | 2,823.4 | 87,810.5 | 32,439.6 | 73.0 | 25.98 |
| Metalwa | 567.4 | 15.6 | 2,968.2 | 5.23 | 22,587.4 | 52,994.6 | 20,774.3 | 36.6 | 22.52 |
| Machine | 568.8 | 21.4 | 973.1 | 1.71 | 2,405.6 | 90,371.8 | 46,283.1 | 81.4 | 37.74 |
| Electri | 373.4 | 18.5 | 2,421.6 | 6.48 | 2,371.6 | 40,485.2 | 15,752.3 | 42.2 | 21.84 |
| Applian | 504.6 | 17.4 | 811.4 | 1.61 | 2,729.8 | 76,281.6 | 13,612.9 | 27.0 | 6.32 |
| Transpo | 334.0 | 17.0 | 1,027.6 | 3.08 | 3,905.0 | 48,169.6 | 17,571.6 | 52.6 | 26.69 |
| TOTAL | 534.8 | 13.8 | 1,641.2 | 3.07 | 4,736.7 | 55,805.1 | 23,778.6 | 44.5 | 29.41 |

TOTAL MANUFACTURING INDUSTRY (1980)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|----------------|------------------|--------------------|-------------------------|----------------------------------|----------------------|----------------------|--------------------------|
| Food | 15,844 | 91,368 | 119,852 | 16,989,909 | 763,426 | 4,990,007 | 223,753,747 | 299,349,565 | 75,595,818 |
| Beverages | 310 | 6,658 | 7,198 | 2,228,401 | 47,407 | 891,206 | 7,780,198 | 17,154,555 | 9,394,357 |
| Tobacco | 18 | 2,546 | 2,556 | 319,826 | 6,411 | 59,895 | 4,659,301 | 7,566,702 | 2,907,401 |
| Textiles | 8,954 | 142,434 | 156,976 | 30,644,742 | 796,072 | 11,535,670 | 154,833,295 | 260,925,473 | 106,092,178 |
| Footwear and Clothing | 40,208 | 46,228 | 102,161 | 4,247,444 | 153,620 | 871,244 | 43,350,064 | 63,886,319 | 20,536,255 |
| Wood Products | 20,941 | 23,562 | 58,382 | 2,965,548 | 528,240 | 1,419,544 | 29,044,573 | 43,508,476 | 14,463,903 |
| Furniture | 13,304 | 23,105 | 44,759 | 1,819,980 | 152,219 | 580,285 | 14,585,655 | 23,375,145 | 8,789,490 |
| Paper and Paper Products | 660 | 7,341 | 8,161 | 1,957,185 | 91,984 | 825,964 | 15,940,928 | 25,252,996 | 9,317,068 |
| Printing and Publishing | 3,381 | 14,134 | 18,718 | 2,837,319 | 56,292 | 542,054 | 17,033,973 | 26,911,008 | 9,877,035 |
| Fur and Leather Products | 2,135 | 5,988 | 8,931 | 999,409 | 75,899 | 110,868 | 7,435,198 | 10,275,625 | 2,840,427 |
| Rubber Products | 2,452 | 16,205 | 19,309 | 4,381,861 | 387,733 | 1,819,756 | 29,120,156 | 47,408,199 | 18,288,043 |
| Chemicals | 1,438 | 32,073 | 33,940 | 12,423,081 | 236,858 | 3,170,801 | 111,536,278 | 166,380,224 | 54,843,946 |
| Petroleum and Coal Products | 89 | 2,721 | 2,789 | 968,320 | 18,261 | 835,507 | 21,186,945 | 36,732,934 | 15,545,989 |
| Non-Metallic Mineral Prod. | 6,023 | 55,789 | 64,930 | 12,741,472 | 700,611 | 4,619,238 | 51,332,592 | 100,382,458 | 49,049,866 |
| Basic Metals | 1,080 | 26,043 | 27,287 | 8,028,400 | 379,418 | 7,452,263 | 86,008,547 | 117,410,132 | 31,401,585 |
| Metalware | 26,561 | 56,108 | 95,793 | 8,793,707 | 563,894 | 4,166,062 | 62,864,063 | 101,939,718 | 39,075,655 |
| Machinery | 9,356 | 54,880 | 68,878 | 10,989,446 | 436,868 | 3,818,333 | 67,093,228 | 107,106,630 | 40,013,402 |
| Electrical Machinery | 5,085 | 35,068 | 42,637 | 10,842,264 | 175,622 | 2,803,951 | 57,743,230 | 94,796,804 | 37,053,574 |
| Appliances and Supplies | 21,431 | 52,009 | 86,893 | 12,082,060 | 335,119 | 4,929,263 | 71,169,110 | 107,617,854 | 36,448,744 |
| Transport Vehicles and Equip. | 6,161 | 23,180 | 31,927 | 3,832,628 | 1,525,061 | 1,400,754 | 33,631,884 | 50,267,830 | 16,635,946 |
| TOTAL | 185,461 | 717,440 | 1,002,127 | 150,093,002 | 7,430,913 | 61,842,593 | 1,110,082,965 | 1,708,248,647 | 598,165,682 |

Table : A28

ARTISANAL MANUFACTURING INDUSTRY (1980)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER | GROSS | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|----------------|----------------|--------------------|------------------|-------------------------|---------------------|---------------------|--------------------------|
| | | | | | EQUIP. (HP) | INVESTMENT (1000 TL) | | | |
| Food | 14,252 | 28,072 | 54,278 | 2,528,683 | 210,921 | 878,859 | 59,677,376 | 78,672,660 | 18,995,284 |
| Beverages | 244 | 525 | 987 | 36,442 | 2,081 | 19,191 | 501,758 | 732,165 | 230,407 |
| Tobacco | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Textiles | 7,845 | 13,789 | 27,303 | 942,829 | 83,177 | 555,309 | 30,457,868 | 38,253,557 | 7,795,689 |
| Footwear and Clothing | 39,812 | 30,052 | 85,608 | 1,776,334 | 106,151 | 555,105 | 26,988,463 | 39,831,044 | 12,842,581 |
| Wood Products | 20,746 | 15,303 | 49,896 | 964,226 | 285,553 | 951,803 | 19,065,316 | 27,861,270 | 8,795,954 |
| Furniture | 13,086 | 17,532 | 38,871 | 1,057,042 | 119,475 | 380,023 | 10,229,890 | 16,226,470 | 5,996,580 |
| Paper and Paper Products | 557 | 1,673 | 2,384 | 147,227 | 2,854 | 96,496 | 4,275,025 | 5,373,411 | 1,098,386 |
| Printing and Publishing | 3,165 | 6,180 | 10,650 | 464,414 | 17,235 | 288,073 | 5,467,091 | 9,179,005 | 3,711,914 |
| Fur and Leather Products | 1,997 | 1,980 | 4,745 | 146,217 | 18,079 | 25,613 | 1,985,456 | 2,965,994 | 980,538 |
| Rubber Products | 2,280 | 6,131 | 9,027 | 410,982 | 81,694 | 1,297,967 | 5,835,814 | 8,832,549 | 2,996,735 |
| Chemicals | 1,021 | 2,647 | 4,235 | 215,404 | 12,558 | 110,337 | 6,721,370 | 8,686,528 | 1,965,158 |
| Petroleum and Coal Products | 58 | 135 | 193 | 36,237 | 858 | 594 | 154,776 | 224,002 | 69,226 |
| Non-Metallic Mineral Prod. | 5,453 | 8,275 | 16,865 | 525,877 | 62,838 | 227,563 | 4,407,598 | 6,723,856 | 2,316,258 |
| Basic Metals | 599 | 1,411 | 2,224 | 98,975 | 8,109 | 41,525 | 2,054,210 | 2,727,552 | 673,342 |
| Metalware | 25,869 | 25,214 | 64,191 | 1,617,392 | 375,869 | 2,462,381 | 27,814,784 | 40,437,973 | 12,623,189 |
| Machinery | 8,759 | 20,894 | 34,219 | 1,456,149 | 257,998 | 926,942 | 20,517,928 | 30,466,092 | 9,948,164 |
| Electrical Machinery | 4,676 | 6,975 | 14,228 | 462,042 | 41,391 | 365,565 | 8,671,814 | 11,640,940 | 2,969,126 |
| Appliances and Supplies | 21,035 | 23,117 | 57,649 | 1,270,398 | 165,110 | 778,565 | 9,956,051 | 18,595,312 | 8,639,261 |
| Transport Vehicles and Equip. | 5,665 | 7,729 | 16,013 | 517,877 | 69,831 | 301,822 | 9,765,305 | 14,253,201 | 4,487,896 |
| TOTAL | 177,159 | 217,634 | 493,666 | 14,674,715 | 1,921,782 | 10,263,733 | 254,547,895 | 361,683,581 | 107,135,688 |

Table : A29

SHARE IN TOTAL
(ARTISANAL MANUFACTURING INDUSTRY - 1980)

(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER | GROSS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|--------------|--------------|-------------|--------------|--------------|--------------|----------------|
| | | | | | EQUIP. | INVEST. | | |
| Food | 90.20 | 30.72 | 45.29 | 14.88 | 27.63 | 17.61 | 26.67 | 25.13 |
| Beverages | 78.71 | 7.89 | 13.71 | 1.63 | 4.39 | 2.15 | 6.47 | 2.45 |
| Tobacco | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Textiles | 87.61 | 9.68 | 17.39 | 3.08 | 10.45 | 4.81 | 19.67 | 7.35 |
| Footwear and Clothing | 99.02 | 65.01 | 83.80 | 41.82 | 69.10 | 63.71 | 62.26 | 62.54 |
| Wood Products | 99.07 | 64.95 | 85.46 | 32.51 | 54.06 | 65.64 | 65.64 | 60.81 |
| Furniture | 98.36 | 75.88 | 86.85 | 58.08 | 78.49 | 65.49 | 70.14 | 68.22 |
| Paper and Paper Products | 80.72 | 22.79 | 29.21 | 7.52 | 3.10 | 11.68 | 26.82 | 21.28 |
| Printing and Publishing | 93.61 | 43.72 | 56.90 | 16.37 | 30.62 | 53.17 | 32.10 | 37.58 |
| Fur and Leather Products | 93.54 | 33.07 | 53.13 | 14.63 | 23.82 | 23.10 | 26.70 | 34.52 |
| Rubber Products | 92.99 | 37.83 | 46.75 | 9.38 | 21.07 | 71.33 | 20.04 | 16.39 |
| Chemicals | 71.00 | 8.25 | 12.75 | 1.73 | 5.30 | 1.35 | 6.03 | 3.58 |
| Petroleum and Coal Products | 45.17 | 4.96 | 6.92 | 3.74 | 4.70 | 0.07 | 0.73 | 0.45 |
| Non-Metallic Mineral Prod. | 90.54 | 14.83 | 25.97 | 4.13 | 8.97 | 4.93 | 8.59 | 4.72 |
| Basic Metals | 55.46 | 5.42 | 8.15 | 1.23 | 2.14 | 0.56 | 2.39 | 2.14 |
| Metalware | 97.39 | 44.94 | 67.01 | 18.39 | 66.66 | 59.11 | 44.25 | 32.30 |
| Machinery | 93.62 | 38.07 | 49.68 | 17.25 | 59.06 | 24.28 | 30.58 | 24.86 |
| Electrical Machinery | 91.96 | 19.89 | 33.37 | 4.26 | 23.57 | 13.04 | 15.02 | 8.01 |
| Appliances and Supplies | 98.15 | 44.45 | 66.34 | 10.51 | 49.27 | 15.79 | 13.99 | 23.70 |
| Transport Vehicles and Equip. | 91.95 | 33.34 | 50.16 | 13.51 | 4.58 | 21.55 | 29.04 | 26.98 |
| TOTAL | 95.52 | 30.33 | 49.26 | 9.78 | 25.86 | 16.56 | 22.93 | 17.91 |

Table : A30

SOME CHARACTERISTICS OF ARTISANAL MANUFACTURING (1980)

| SECTORS | AVERAGE | | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. | OUTPUT PER ESTAB. | VALUE ADDED PER ESTAB. | VALUE ADDED PER EMPLOYEE | (1) PRICE MARGIN (%) | (2) PRICE COST MARGIN (%) | |
|-------------------------------|---------------------------------|----------------------------------|------------------------------------|-----------------------------------|-------------------------|---------------------------------|-----------------------------------|----------------------------|------------------------------------|-------|
| | ANNUAL WAGE PER WORKER | POWER EQUIP. PER ESTAB. | | | | | | | | |
| | ESTAB. | (1000 TL) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) | |
| | ESTAB. | (1000 TL) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (%) | (%) | |
| Food | 3.8 | 90.1 | 14.8 | 3.89 | 61.5 | 5,504.7 | 1,329.1 | 350.0 | 17.93 | 20.93 |
| Beverages | 4.0 | 69.4 | 8.5 | 2.11 | 78.7 | 3,000.7 | 94.3 | 233.4 | 22.12 | 26.50 |
| Tobacco | - | - | - | - | - | - | - | - | - | - |
| Textiles | 3.5 | 68.4 | 10.6 | 3.05 | 70.8 | 4,876.2 | 953.7 | 285.5 | 15.50 | 17.91 |
| Footwear and Clothing | 2.2 | 59.1 | 2.7 | 1.26 | 13.9 | 1,000.5 | 322.6 | 150.0 | 19.54 | 27.78 |
| Wood Products | 2.4 | 63.0 | 13.8 | 5.72 | 44.9 | 1,343.0 | 426.0 | 176.3 | 20.29 | 28.11 |
| Furniture | 3.0 | 60.3 | 9.1 | 3.07 | 29.0 | 1,240.0 | 458.2 | 154.3 | 22.51 | 30.44 |
| Paper and Paper Products | 4.3 | 88.0 | 5.1 | 1.20 | 173.2 | 9,647.1 | 1,972.0 | 460.7 | 16.54 | 17.70 |
| Printing and Publishing | 3.4 | 75.1 | 5.4 | 1.62 | 91.0 | 2,900.2 | 1,172.8 | 348.5 | 31.72 | 35.38 |
| Fur and Leather Products | 2.4 | 73.8 | 9.1 | 3.81 | 12.8 | 1,485.2 | 491.0 | 206.6 | 21.25 | 28.13 |
| Rubber Products | 4.0 | 67.0 | 35.8 | 9.05 | 569.3 | 3,873.9 | 1,314.4 | 332.0 | 27.08 | 29.28 |
| Chemicals | 4.2 | 81.4 | 12.3 | 2.90 | 108.1 | 8,507.9 | 1,926.7 | 453.3 | 18.56 | 20.14 |
| Petroleum and Coal Products | 3.3 | 268.4 | 14.8 | 4.45 | 10.2 | 3,862.1 | 1,193.6 | 358.7 | 7.78 | 14.73 |
| Non-Metallic Mineral Prod. | 3.1 | 63.6 | 11.5 | 3.73 | 41.7 | 1,233.1 | 42.8 | 137.3 | 18.51 | 26.63 |
| Basic Metals | 3.7 | 70.1 | 13.5 | 3.65 | 69.3 | 4,553.5 | 1,126.1 | 302.8 | 18.97 | 21.06 |
| Metalware | 2.5 | 64.1 | 14.5 | 5.86 | 95.2 | 1,563.2 | 488.0 | 196.7 | 21.03 | 27.22 |
| Machinery | 3.9 | 69.7 | 29.5 | 7.54 | 105.8 | 3,478.3 | 1,135.8 | 290.7 | 26.83 | 27.87 |
| Electrical Machinery | 3.0 | 66.2 | 8.9 | 2.91 | 78.2 | 2,489.5 | 635.0 | 208.7 | 17.41 | 21.54 |
| Appliances and Supplies | 2.7 | 55.0 | 7.8 | 2.86 | 37.0 | 884.0 | 410.7 | 149.9 | 29.42 | 39.63 |
| Transport Vehicles and Equip. | 2.8 | 67.0 | 12.3 | 4.36 | 53.3 | 2,516.0 | 792.2 | 280.3 | 23.96 | 27.85 |
| TOTAL | 2.8 | 67.4 | 10.8 | 3.89 | 57.8 | 2,041.6 | 604.7 | 217.0 | 20.42 | 25.56 |

Table : A31

SMALL-SCALE MANUFACTURING INDUSTRY (1980)

| SECTORS | NO. OF ESTABL. | WORKERS | EMPLOYEES | WAGES | POWER | GROSS | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|-------------------|----------------|----------------|-------------------|------------------|-------------------------|---------------------|---------------------|--------------------------|
| | | | | | EQUIP. (HP) | INVESTMENT (1000 TL) | | | |
| Food | 1,290 | 25,889 | 25,974 | 3,262,321 | 173,566 | 1,416,996 | 61,751,532 | 76,632,946 | 14,881,414 |
| Beverages | 42 | 859 | 922 | 158,851 | 2,605 | 49,711 | 880,314 | 1,728,354 | 848,040 |
| Tobacco | 2 | 32 | 32 | 12,356 | 663 | 0 | 259,694 | 470,940 | 211,246 |
| Textiles | 781 | 15,462 | 16,367 | 1,821,766 | 113,962 | 422,385 | 26,882,619 | 35,990,734 | 9,108,115 |
| Footwear and Clothing | 332 | 6,340 | 6,681 | 585,848 | 26,255 | 68,310 | 6,306,375 | 8,485,644 | 2,187,269 |
| Wood Products | 155 | 2,718 | 2,929 | 274,785 | 57,056 | 207,638 | 3,111,325 | 4,418,367 | 1,307,044 |
| Furniture | 197 | 3,366 | 3,672 | 295,339 | 24,946 | 114,138 | 2,214,726 | 3,206,172 | 991,446 |
| Paper and Paper Products | 104 | 2,081 | 2,185 | 350,051 | 14,058 | 129,015 | 3,689,705 | 5,570,401 | 1,900,686 |
| Printing and Publishing | 188 | 3,540 | 3,654 | 514,620 | 30,727 | 57,786 | 4,141,647 | 6,299,638 | 2,157,991 |
| Fur and Leather Products | 122 | 2,532 | 2,706 | 485,799 | 46,648 | 43,196 | 2,976,322 | 4,148,621 | 1,172,299 |
| Rubber Products | 143 | 2,887 | 3,060 | 410,581 | 219,207 | 58,647 | 3,005,115 | 4,414,004 | 1,408,889 |
| Chemicals | 307 | 6,426 | 6,640 | 1,369,072 | 36,141 | 502,644 | 16,707,283 | 24,143,012 | 7,435,729 |
| Petroleum and Coal Products | 18 | 375 | 385 | 132,813 | 2,145 | 134,184 | 4,058,649 | 5,833,277 | 1,794,628 |
| Non-Metallic Mineral Prod. | 366 | 8,305 | 8,772 | 770,741 | 74,664 | 417,251 | 6,054,547 | 9,176,981 | 3,122,434 |
| Basic Metals | 376 | 7,437 | 7,853 | 1,218,716 | 137,215 | 532,567 | 20,750,004 | 26,601,211 | 5,851,207 |
| Metalware | 569 | 10,664 | 11,337 | 1,382,920 | 97,946 | 515,379 | 12,128,187 | 17,850,000 | 5,721,886 |
| Machinery | 477 | 8,751 | 9,378 | 1,108,142 | 68,686 | 450,111 | 7,852,266 | 12,668,000 | 4,816,333 |
| Electrical Machinery | 305 | 5,664 | 5,975 | 792,496 | 26,148 | 192,298 | 7,397,895 | 10,480,105 | 3,082,212 |
| Appliances and Supplies | 307 | 5,754 | 6,086 | 796,992 | 42,822 | 313,573 | 5,965,381 | 9,964,498 | 3,999,117 |
| Transport Vehicles and Equip. | 428 | 7,663 | 8,108 | 1,108,889 | 78,163 | 486,303 | 9,759,905 | 13,980,554 | 4,220,651 |
| TOTAL | 6,509 | 126,745 | 132,714 | 16,851,096 | 1,273,621 | 6,112,112 | 205,853,465 | 282,072,100 | 66,218,666 |

Table : A32

SHARE IN TOTAL
(SMALL-SCALE MANUFACTURING INDUSTRY - 1980)
(%)

| SECTORS | NO. OF ESTABL. | WORKERS | EMPLOYEES | WAGES | POWER | GROSS | INPUTS | OUTPUT | VALUE |
|-------------------------------|-------------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|
| | | | | | EQUIP. | INVEST. | | | ADDED |
| Food | 8.14 | 26.15 | 21.67 | 19.20 | 27.74 | 28.40 | 27.60 | 25.60 | 19.69 |
| Beverages | 13.55 | 12.90 | 12.81 | 7.13 | 5.49 | 5.58 | 11.34 | 10.08 | 9.03 |
| Tobacco | 11.11 | 1.26 | 1.25 | 3.86 | 10.34 | 0.00 | 5.57 | 6.22 | 7.27 |
| Textiles | 8.72 | 10.86 | 10.47 | 5.94 | 14.32 | 3.66 | 17.36 | 13.79 | 8.59 |
| Footwear and Clothing | 0.83 | 13.71 | 6.54 | 13.79 | 17.09 | 7.84 | 14.55 | 13.29 | 10.65 |
| Wood Products | 0.74 | 11.54 | 5.02 | 9.27 | 10.80 | 14.63 | 10.71 | 10.16 | 9.04 |
| Furniture | 1.48 | 14.57 | 8.20 | 16.12 | 16.39 | 19.67 | 15.18 | 13.72 | 11.28 |
| Paper and Paper Products | 15.07 | 28.35 | 26.75 | 17.89 | 15.29 | 15.62 | 23.02 | 22.06 | 20.61 |
| Printing and Publishing | 5.54 | 25.05 | 19.52 | 18.14 | 54.59 | 10.66 | 24.31 | 23.41 | 21.85 |
| Fur and Leather Products | 5.71 | 42.28 | 30.30 | 48.61 | 61.46 | 38.96 | 40.03 | 40.37 | 41.27 |
| Rubber Products | 5.83 | 17.82 | 15.85 | 9.37 | 56.54 | 3.22 | 10.32 | 9.31 | 7.70 |
| Chemicals | 21.35 | 20.04 | 19.54 | 11.02 | 15.26 | 6.15 | 14.98 | 14.51 | 13.56 |
| Petroleum and Coal Products | 20.22 | 13.78 | 13.80 | 13.72 | 11.76 | 16.06 | 19.06 | 15.88 | 11.54 |
| Non-Metallic Mineral Prod. | 6.08 | 14.89 | 13.51 | 6.05 | 10.66 | 9.03 | 11.79 | 9.14 | 6.37 |
| Basic Metals | 34.81 | 28.56 | 28.78 | 15.18 | 36.16 | 7.15 | 24.13 | 22.66 | 18.63 |
| Metalware | 2.14 | 19.01 | 11.83 | 15.73 | 17.37 | 12.37 | 19.29 | 17.51 | 14.64 |
| Machinery | 5.10 | 15.95 | 13.62 | 10.08 | 15.72 | 11.79 | 11.70 | 11.83 | 12.04 |
| Electrical Machinery | 6.00 | 16.15 | 14.01 | 7.31 | 14.89 | 6.86 | 12.81 | 11.06 | 8.32 |
| Appliances and Supplies | 1.43 | 11.06 | 7.00 | 6.60 | 12.78 | 6.36 | 8.38 | 9.26 | 10.97 |
| Transport Vehicles and Equip. | 6.95 | 33.06 | 25.40 | 28.93 | 5.13 | 34.72 | 29.02 | 27.81 | 25.37 |
| TOTAL | 3.51 | 17.39 | 13.24 | 11.23 | 17.14 | 9.88 | 18.54 | 16.51 | 12.74 |

Table : A33

SOME CHARACTERISTICS OF MEDIUM-SCALE MANUFACTURING (1973)

| SECTORS | AVERAGE | | | | | | | | |
|-------------------------------|-----------|--------|----------|-----------|-----------|-----------|-----------|-------|--------|
| | ANNUAL | POWER | POWER | GROSS | | VALUE | VALUE | PRICE | |
| | WAGE | EQUIP. | EQUIP. | INVEST. | OUTPUT | ADDED | ADDED | COST | MARGIN |
| | EMPLOYEES | PER | PER | PER | PER | PER | PER | PER | (%) |
| PER | WORKER | ESTAB. | EMPLOYEE | ESTAB. | ESTAB. | ESTAB. | EMPLOYEE | | |
| ESTAB. | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | | (%) |
| Food | 20.1 | 136.6 | 134.5 | 6.68 | 1,098 | 59,405 | 11,536 | 573 | 14.79 |
| Beverages | 22.0 | 186.9 | 62.0 | 2.82 | 1,186 | 41,151 | 20,191 | 920 | 39.20 |
| Tobacco | 16.0 | 385.1 | 331.5 | 20.72 | 0 | 235,470 | 105,623 | 6,601 | 42.23 |
| Textiles | 21.0 | 117.8 | 145.9 | 6.96 | 541 | 46,083 | 11,662 | 556 | 19.95 |
| Footwear and Clothing | 20.1 | 92.4 | 79.1 | 3.95 | 206 | 25,583 | 6,588 | 327 | 18.48 |
| Wood Products | 18.9 | 101.1 | 368.1 | 19.48 | 1,340 | 28,506 | 8,433 | 446 | 22.88 |
| Furniture | 18.6 | 87.1 | 126.6 | 6.79 | 579 | 16,275 | 5,083 | 270 | 20.94 |
| Paper and Paper Products | 21.0 | 168.2 | 135.2 | 6.44 | 1,241 | 53,562 | 18,276 | 871 | 27.53 |
| Printing and Publishing | 19.4 | 145.4 | 163.4 | 8.41 | 307 | 33,509 | 11,479 | 591 | 25.82 |
| Fur and Leather Products | 22.2 | 191.9 | 382.4 | 17.26 | 354 | 34,005 | 9,609 | 433 | 15.74 |
| Rubber Products | 21.4 | 142.2 | 1,532.9 | 71.64 | 410 | 30,867 | 9,852 | 460 | 22.06 |
| Chemicals | 21.6 | 213.1 | 117.7 | 5.44 | 1,637 | 78,642 | 26,221 | 1,120 | 26.94 |
| Petroleum and Coal Products | 21.4 | 354.2 | 119.2 | 5.57 | 7,455 | 324,071 | 99,702 | 4,661 | 28.43 |
| Non-Metallic Mineral Prod. | 24.0 | 92.8 | 204.0 | 8.51 | 1,140 | 25,074 | 8,531 | 356 | 25.15 |
| Basic Metals | 20.9 | 163.9 | 364.9 | 17.47 | 1,416 | 76,748 | 15,562 | 745 | 17.16 |
| Metalware | 19.9 | 129.7 | 172.1 | 8.64 | 906 | 31,371 | 10,056 | 505 | 23.82 |
| Machinery | 19.7 | 126.6 | 144.0 | 7.32 | 944 | 26,959 | 10,077 | 514 | 28.64 |
| Electrical Machinery | 19.6 | 139.9 | 85.7 | 4.38 | 630 | 34,361 | 10,106 | 516 | 21.43 |
| Appliances and Supplies | 19.8 | 138.5 | 139.5 | 7.04 | 1,021 | 32,458 | 13,026 | 657 | 31.67 |
| Transport Vehicles and Equip. | 18.9 | 144.7 | 182.6 | 9.64 | 1,136 | 32,665 | 9,861 | 521 | 21.80 |
| TOTAL | 20.4 | 135.1 | 195.7 | 9.60 | 999 | 43,336 | 11,710 | 574 | 20.67 |

Table : A34

MEDIUM-SCALE MANUFACTURING INDUSTRY (1980)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES ('000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT ('000 TL) | INPUTS ('000 TL) | OUTPUT ('000 TL) | VALUE ADDED ('000 TL) |
|-------------------------------|------------------|----------------|----------------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| Food | 216 | 19,472 | 19,659 | 4,326,002 | 306,666 | 1,628,866 | 57,699,761 | 76,288,164 | 18,588,403 |
| Beverages | 15 | 1,618 | 1,633 | 455,379 | 6,487 | 85,669 | 1,676,381 | 2,920,405 | 1,244,024 |
| Tobacco | 15 | 2,016 | 2,026 | 246,762 | 5,748 | 59,803 | 3,850,807 | 6,201,470 | 2,350,663 |
| Textiles | 209 | 20,239 | 20,360 | 4,161,820 | 106,558 | 1,777,544 | 26,958,305 | 39,048,034 | 14,109,729 |
| Footwear and Clothing | 53 | 4,891 | 4,927 | 1,092,566 | 11,599 | 95,649 | 5,826,511 | 8,155,451 | 2,328,940 |
| Wood Products | 31 | 2,772 | 2,788 | 632,867 | 156,265 | 144,943 | 3,752,023 | 5,873,658 | 2,121,635 |
| Furniture | 20 | 1,783 | 1,792 | 367,638 | 5,234 | 55,915 | 1,780,126 | 2,913,471 | 1,133,345 |
| Paper and Paper Products | 24 | 2,218 | 2,225 | 663,478 | 8,844 | 124,756 | 5,094,670 | 7,741,621 | 2,646,951 |
| Printing and Publishing | 22 | 1,606 | 1,606 | 410,808 | 4,627 | 81,979 | 1,853,971 | 2,950,341 | 996,370 |
| Fur and Leather Products | 15 | 1,147 | 1,151 | 261,855 | 11,172 | 29,800 | 1,629,891 | 2,245,191 | 615,300 |
| Rubber Products | 22 | 1,756 | 1,791 | 336,914 | 10,955 | 137,984 | 1,240,573 | 2,123,879 | 883,306 |
| Chemicals | 76 | 7,523 | 7,538 | 2,905,610 | 28,088 | 8,487,857 | 26,018,786 | 41,657,044 | 15,638,258 |
| Petroleum and Coal Products | 11 | 1,137 | 1,137 | 597,806 | 4,838 | 73,062 | 10,540,807 | 20,497,305 | 9,956,498 |
| Non-Metallic Mineral Prod. | 156 | 13,855 | 13,939 | 2,438,508 | 140,344 | 628,947 | 7,276,023 | 13,568,705 | 6,292,682 |
| Basic Metals | 84 | 7,482 | 7,497 | 2,316,500 | 95,602 | 872,518 | 26,144,847 | 34,780,283 | 8,635,356 |
| Metalware | 100 | 9,553 | 9,587 | 2,446,425 | 46,461 | 656,004 | 10,865,245 | 21,177,263 | 10,312,018 |
| Machinery | 95 | 8,879 | 8,923 | 2,392,668 | 43,516 | 1,230,470 | 12,939,712 | 21,193,889 | 8,254,177 |
| Electrical Machinery | 67 | 6,254 | 6,259 | 1,956,158 | 31,895 | 1,382,609 | 14,307,655 | 23,223,457 | 8,915,802 |
| Appliances and Supplies | 65 | 6,666 | 6,686 | 2,089,333 | 35,329 | 1,261,084 | 7,657,869 | 14,895,413 | 7,257,544 |
| Transport Vehicles and Equip. | 59 | 4,874 | 4,882 | 1,142,808 | 875,479 | 396,985 | 7,445,921 | 11,281,196 | 3,835,275 |
| TOTAL | 1,355 | 125,741 | 126,416 | 31,239,860 | 1,933,687 | 19,212,534 | 232,539,884 | 358,636,160 | 126,096,276 |

Table : A35

SHARE IN TOTAL
(MEDIUM-SCALE MANUFACTURING INDUSTRY - 1980)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|--------------|--------------|--------------|-----------------|------------------|--------------|--------------|----------------|
| Food | 1.36 | 21.31 | 16.40 | 25.45 | 39.91 | 32.64 | 25.79 | 25.48 | 26.59 |
| Beverages | 4.84 | 24.30 | 22.69 | 20.44 | 13.68 | 9.61 | 21.60 | 17.02 | 13.24 |
| Tobacco | 83.33 | 79.18 | 79.26 | 77.16 | 89.66 | 100.00 | 82.65 | 81.96 | 80.85 |
| Textiles | 2.33 | 14.21 | 12.97 | 13.58 | 13.39 | 15.41 | 16.11 | 14.97 | 13.30 |
| Footwear and Clothing | 0.13 | 10.58 | 4.82 | 25.72 | 7.55 | 10.98 | 13.44 | 12.77 | 11.34 |
| Wood Products | 0.15 | 11.76 | 4.78 | 21.34 | 29.58 | 10.21 | 12.92 | 13.50 | 14.67 |
| Furniture | 0.15 | 7.72 | 4.00 | 20.20 | 3.44 | 9.64 | 12.20 | 12.46 | 12.87 |
| Paper and Paper Products | 3.48 | 30.21 | 27.36 | 33.90 | 9.62 | 15.10 | 31.96 | 30.66 | 28.42 |
| Printing and Publishing | 0.65 | 11.36 | 8.58 | 14.47 | 8.22 | 15.12 | 10.88 | 10.59 | 10.09 |
| Fur and Leather Products | 0.70 | 19.15 | 12.89 | 26.20 | 14.72 | 26.88 | 21.92 | 21.85 | 21.66 |
| Rubber Products | 0.90 | 10.84 | 9.28 | 7.69 | 2.85 | 7.58 | 4.26 | 4.48 | 4.83 |
| Chemicals | 5.29 | 23.46 | 22.18 | 23.39 | 11.85 | 105.88 | 23.33 | 25.04 | 28.51 |
| Petroleum and Coal Products | 12.36 | 41.79 | 40.77 | 61.74 | 26.52 | 8.74 | 49.75 | 55.80 | 64.85 |
| Non-Metallic Mineral Prod. | 2.59 | 24.83 | 21.47 | 19.14 | 20.03 | 13.62 | 14.17 | 13.52 | 12.83 |
| Basic Metals | 7.78 | 28.73 | 27.47 | 28.85 | 25.20 | 11.71 | 30.40 | 29.62 | 27.50 |
| Metalware | 0.38 | 17.03 | 10.01 | 27.82 | 8.24 | 15.75 | 17.28 | 20.77 | 26.39 |
| Machinery | 1.02 | 16.18 | 12.95 | 21.77 | 9.96 | 32.23 | 19.29 | 19.79 | 20.63 |
| Electrical Machinery | 1.32 | 17.83 | 14.68 | 18.04 | 18.16 | 49.31 | 24.78 | 24.50 | 24.06 |
| Appliances and Supplies | 0.30 | 12.82 | 7.69 | 17.29 | 10.54 | 25.58 | 10.76 | 13.84 | 19.86 |
| Transport Vehicles and Equip. | 0.96 | 21.03 | 15.32 | 29.82 | 57.41 | 28.34 | 22.14 | 22.44 | 23.05 |
| TOTAL | 0.73 | 17.53 | 12.61 | 20.81 | 26.02 | 31.07 | 20.95 | 20.99 | 21.08 |

Table : A36

SOME CHARACTERISTICS OF MEDIUM-SCALE MANUFACTURING (1980)

| SECTORS | AVERAGE | | | | | | | | PRICE COST MARGIN (%) |
|-------------------------------|---------------|----------------|----------------------------------|------------------------------------|-----------------------------------|-------------------------|---------------------------------|-----------------------------------|--------------------------------|
| | EMPLOYEES | ANNUAL WAGE | POWER EQUIP. PER ESTAB. | POWER EQUIP. PER EMPLOYEE | GROSS INVEST. PER ESTAB. | OUTPUT PER ESTAB. | VALUE ADDED PER ESTAB. | VALUE ADDED PER EMPLOYEE | |
| | PER ESTAB. | PER WORKER | (MP) | (MP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | |
| | (1900 TL) | (1000 TL) | (MP) | (MP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | |
| Food | 91.0 | 222.1 | 1,410.5 | 15.50 | 7,541 | 353,186 | 86,057 | 946 | 18.64 |
| Beverages | 108.9 | 281.4 | 432.5 | 3.97 | 5,711 | 194,694 | 82,935 | 762 | 26.86 |
| Tobacco | 135.1 | 122.4 | 383.2 | 2.84 | 3,993 | 413,431 | 156,711 | 1,160 | 33.91 |
| Textiles | 97.4 | 205.6 | 509.8 | 5.23 | 8,505 | 186,833 | 67,511 | 695 | 25.41 |
| Footwear and Clothing | 93.0 | 223.4 | 218.8 | 2.35 | 1,805 | 153,876 | 43,942 | 473 | 15.06 |
| Wood Products | 89.9 | 228.3 | 5,040.2 | 56.04 | 4,676 | 189,473 | 68,440 | 761 | 25.28 |
| Furniture | 89.6 | 206.2 | 261.7 | 2.92 | 2,796 | 145,674 | 56,667 | 632 | 26.22 |
| Paper and Paper Products | 92.7 | 299.1 | 368.5 | 3.97 | 5,113 | 322,568 | 110,290 | 1,190 | 25.59 |
| Printing and Publishing | 73.0 | 255.7 | 210.3 | 2.88 | 3,726 | 129,561 | 45,290 | 620 | 20.55 |
| Fur and Leather Products | 76.7 | 228.3 | 744.8 | 9.71 | 1,987 | 149,679 | 41,020 | 535 | 15.70 |
| Rubber Products | 81.4 | 191.9 | 468.0 | 6.12 | 6,272 | 96,540 | 40,150 | 495 | 25.41 |
| Chemicals | 99.2 | 386.2 | 369.6 | 3.73 | 111,682 | 548,119 | 205,767 | 2,075 | 30.55 |
| Petroleum and Coal Products | 103.4 | 525.8 | 439.8 | 4.26 | 6,642 | 1,811,091 | 905,136 | 8,757 | 45.66 |
| Non-Metallic Mineral Prod. | 89.4 | 176.0 | 899.6 | 10.07 | 4,032 | 85,979 | 40,338 | 451 | 28.30 |
| Basic Metals | 89.3 | 309.6 | 1,138.1 | 12.75 | 10,387 | 414,050 | 102,802 | 1,152 | 18.15 |
| Metalware | 95.9 | 256.1 | 464.6 | 4.85 | 6,560 | 211,773 | 103,120 | 1,076 | 37.10 |
| Machinery | 95.9 | 269.5 | 458.1 | 4.88 | 12,952 | 225,094 | 86,886 | 925 | 27.60 |
| Electrical Machinery | 95.4 | 312.8 | 476.0 | 5.10 | 20,636 | 346,619 | 133,072 | 1,424 | 29.96 |
| Appliances and Supplies | 102.9 | 313.4 | 543.5 | 5.28 | 19,401 | 229,160 | 111,347 | 1,082 | 34.52 |
| Transport Vehicles and Equip. | 82.9 | 234.5 | 14,838.6 | 178.75 | 6,729 | 191,207 | 65,005 | 784 | 23.83 |
| TOTAL | 93.3 | 248.4 | 1,427.1 | 15.30 | 14,179 | 264,676 | 95,060 | 977 | 26.40 |

Table : A37

LARGE-SCALE MANUFACTURING INDUSTRY (1980)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES (1000 TL) | POWER EQUIP. (HP) | GROSS INVESTMENT (1000 TL) | INPUTS (1000 TL) | OUTPUT (1000 TL) | VALUE ADDED (1000 TL) |
|-------------------------------|------------------|----------------|----------------|--------------------|-------------------------|----------------------------------|---------------------|---------------------|--------------------------|
| | | | | | | | | | |
| Food | 46 | 19,935 | 19,941 | 6,874,908 | 74,271 | 1,085,286 | 44,625,078 | 67,755,795 | 23,130,717 |
| Beverages | 9 | 3,656 | 3,656 | 1,577,759 | 36,236 | 736,635 | 4,701,745 | 11,773,631 | 7,071,886 |
| Tobacco | 1 | 498 | 498 | 60,708 | 0 | 0 | 548,800 | 804,292 | 345,492 |
| Textiles | 119 | 92,944 | 92,946 | 23,718,327 | 492,375 | 8,780,432 | 72,554,508 | 147,633,148 | 75,078,645 |
| Footwear and Clothing | 11 | 4,945 | 4,945 | 792,696 | 9,615 | 152,180 | 4,228,715 | 7,406,180 | 3,177,465 |
| Wood Products | 9 | 2,769 | 2,769 | 1,093,694 | 29,386 | 135,160 | 3,115,911 | 5,355,181 | 2,239,270 |
| Furniture | 1 | 424 | 424 | 101,961 | 2,564 | 30,159 | 360,913 | 1,029,032 | 668,119 |
| Paper and Paper Products | 5 | 1,369 | 1,369 | 796,429 | 66,168 | 475,697 | 2,901,528 | 6,567,563 | 3,666,035 |
| Printing and Publishing | 6 | 2,808 | 2,808 | 1,447,587 | 3,735 | 114,216 | 5,571,264 | 8,582,024 | 3,010,760 |
| Fur and Leather Products | 1 | 329 | 329 | 105,538 | 0 | 12,259 | 843,529 | 915,819 | 72,290 |
| Rubber Products | 7 | 5,431 | 5,431 | 3,223,386 | 75,877 | 325,158 | 19,038,654 | 32,037,767 | 12,999,113 |
| Chemicals | 34 | 15,477 | 15,477 | 7,932,995 | 160,071 | (930,037) | 62,088,839 | 91,895,640 | 29,804,801 |
| Petroleum and Coal Products | 2 | 1,074 | 1,074 | 201,464 | 10,400 | 627,667 | 6,452,713 | 10,178,350 | 3,725,637 |
| Non-Metallic Mineral Prod. | 48 | 25,354 | 25,354 | 9,006,351 | 422,765 | 3,345,497 | 33,594,424 | 70,912,916 | 37,318,492 |
| Basic Metals | 21 | 9,713 | 9,713 | 4,394,209 | 138,492 | 6,005,633 | 37,059,486 | 53,301,166 | 16,261,680 |
| Metalware | 23 | 10,677 | 10,678 | 3,346,970 | 43,618 | 532,298 | 12,055,847 | 22,474,409 | 10,418,562 |
| Machinery | 25 | 16,356 | 16,358 | 6,032,487 | 66,648 | 1,210,810 | 25,783,322 | 42,778,050 | 16,994,728 |
| Electrical Machinery | 37 | 16,175 | 16,175 | 7,631,568 | 76,188 | 863,479 | 27,366,868 | 49,452,302 | 22,086,434 |
| Appliances and Supplies | 24 | 16,472 | 16,472 | 7,925,337 | 91,858 | 2,576,061 | 47,589,809 | 64,162,631 | 16,572,822 |
| Transport Vehicles and Equip. | 9 | 2,914 | 2,914 | 1,052,964 | 501,568 | 215,644 | 6,660,755 | 10,752,879 | 4,092,124 |
| TOTAL | 438 | 249,320 | 249,331 | 87,327,331 | 2,301,823 | 26,274,214 | 417,141,703 | 705,856,775 | 288,715,072 |

Table : A38

SHARE IN TOTAL
(LARGE SCALE MANUFACTURING INDUSTRY - 1980)
(%)

| SECTORS | NO. OF ESTAB. | WORKERS | EMPLOYEES | WAGES | POWER EQUIP. | GROSS INVEST. | INPUTS | OUTPUT | VALUE ADDED |
|-------------------------------|------------------|--------------|--------------|--------------|-----------------|------------------|--------------|--------------|----------------|
| | | | | | | | | | |
| Food | 0.29 | 21.82 | 16.64 | 40.46 | 9.73 | 21.35 | 19.94 | 22.63 | 30.60 |
| Beverages | 2.90 | 54.91 | 50.79 | 70.80 | 76.44 | 82.66 | 60.59 | 68.63 | 75.28 |
| Tobacco | 5.56 | 19.56 | 19.48 | 18.98 | 0.00 | 0.00 | 11.78 | 11.82 | 11.88 |
| Textiles | 1.33 | 65.25 | 59.21 | 77.40 | 61.85 | 76.12 | 46.86 | 56.58 | 70.77 |
| Footwear and Clothing | 0.03 | 10.70 | 4.84 | 18.66 | 6.26 | 17.47 | 9.75 | 11.59 | 15.47 |
| Wood Products | 0.04 | 11.75 | 4.74 | 36.88 | 5.56 | 9.52 | 10.73 | 12.31 | 15.48 |
| Furniture | 0.01 | 1.84 | 0.95 | 5.60 | 1.68 | 5.20 | 2.47 | 4.40 | 7.60 |
| Paper and Paper Products | 0.72 | 18.65 | 16.77 | 40.69 | 71.98 | 57.59 | 18.20 | 26.01 | 39.37 |
| Printing and Publishing | 0.18 | 19.87 | 15.00 | 51.02 | 6.58 | 21.07 | 32.71 | 31.89 | 30.48 |
| Fur and Leather Products | 0.05 | 5.49 | 3.68 | 10.56 | 0.00 | 11.06 | 11.35 | 8.91 | 2.55 |
| Rubber Products | 0.27 | 33.51 | 28.13 | 73.56 | 19.57 | 17.87 | 65.38 | 67.58 | 71.08 |
| Chemicals | 2.36 | 48.26 | 45.53 | 63.86 | 67.58 | (11.38) | 55.67 | 55.23 | 54.34 |
| Petroleum and Coal Products | 2.25 | 39.47 | 38.51 | 20.81 | 57.01 | 75.12 | 30.46 | 27.71 | 23.97 |
| Non-Metallic Mineral Prod. | 0.80 | 45.45 | 39.05 | 70.69 | 60.34 | 72.43 | 65.44 | 70.64 | 76.08 |
| Basic Metals | 1.94 | 37.30 | 35.60 | 54.73 | 36.50 | 80.59 | 43.09 | 45.40 | 51.72 |
| Metalware | 0.09 | 19.03 | 11.15 | 38.06 | 7.74 | 12.78 | 19.18 | 22.05 | 26.66 |
| Machinery | 0.27 | 29.80 | 23.75 | 54.89 | 15.26 | 31.71 | 38.43 | 39.94 | 42.47 |
| Electrical Machinery | 0.73 | 46.12 | 37.94 | 70.39 | 43.28 | 30.80 | 47.39 | 52.17 | 59.61 |
| Appliances and Supplies | 0.11 | 31.67 | 18.96 | 65.60 | 27.41 | 52.26 | 66.87 | 59.62 | 45.47 |
| Transport Vehicles and Equip. | 0.15 | 12.57 | 9.13 | 27.73 | 32.89 | 15.39 | 19.80 | 21.39 | 24.60 |
| TOTAL | 0.24 | 34.75 | 24.88 | 58.18 | 30.98 | 42.49 | 37.58 | 41.32 | 48.27 |

Table : A39

SOME CHARACTERISTICS OF LARGE-SCALE MANUFACTURING (1980)

| SECTORS | AVERAGE ANNUAL | | POWER | POWER | GROSS | OUTPUT | VALUE | VALUE | PRICE |
|-------------------------------|----------------|--------|----------|-----------|-----------|-----------|-----------|-----------|--------|
| | EMPLOYEES | WAGE | EQUIP. | EQUIP. | INVEST. | | ADDED | ADDED | |
| | PER | PER | PER | PER | PER | PER | PER | PER | MARGIN |
| | ESTAB. | WORKER | ESTAB. | EMPLOYEE | ESTAB. | ESTAB. | ESTAB. | EMPLOYEE | (%) |
| | (1000 TL) | (HP) | (HP) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | (1000 TL) | |
| Food | 433.5 | 344.9 | 1,614.6 | 3.7 | 23,158 | 1,472,952 | 502,842 | 1,160 | 23.99 |
| Beverages | 406.2 | 431.6 | 4,026.2 | 9.9 | 81,848 | 1,308,181 | 785,765 | 1,934 | 46.66 |
| Tobacco | 498.0 | 121.9 | 0.0 | 0.0 | 0 | 894,292 | 345,492 | 694 | 31.84 |
| Textiles | 781.1 | 255.2 | 4,137.6 | 5.3 | 73,785 | 1,240,615 | 630,913 | 808 | 34.79 |
| Footwear and Clothing | 449.5 | 160.3 | 874.1 | 1.9 | 13,835 | 673,289 | 288,860 | 643 | 32.20 |
| Wood Products | 307.7 | 395.0 | 3,265.1 | 10.6 | 15,018 | 595,020 | 248,808 | 809 | 21.39 |
| Furniture | 424.0 | 240.5 | 2,564.0 | 6.0 | 30,159 | 1,029,032 | 668,119 | 1,576 | 55.02 |
| Paper and Paper Products | 273.8 | 581.8 | 13,233.6 | 48.3 | 95,139 | 1,313,513 | 733,207 | 2,678 | 43.69 |
| Printing and Publishing | 468.0 | 515.5 | 617.2 | 1.3 | 19,036 | 1,430,337 | 501,793 | 1,072 | 18.21 |
| Fur and Leather Products | 329.0 | 320.8 | 0.0 | 0.0 | 12,259 | 915,819 | 72,290 | 220 | (3.63) |
| Rubber Products | 775.9 | 593.5 | 10,839.6 | 14.0 | 46,451 | 4,576,824 | 1,857,016 | 2,394 | 30.51 |
| Chemicals | 455.2 | 512.6 | 4,708.0 | 10.3 | (27,354) | 2,702,754 | 876,612 | 1,926 | 23.80 |
| Petroleum and Coal Products | 537.0 | 187.6 | 5,200.0 | 9.7 | 313,834 | 5,089,175 | 1,862,819 | 3,469 | 34.62 |
| Non-Metallic Mineral Prod. | 528.2 | 355.2 | 8,807.6 | 16.7 | 69,698 | 1,477,352 | 777,469 | 1,472 | 39.93 |
| Basic Metals | 462.5 | 452.4 | 6,594.9 | 14.3 | 285,983 | 2,538,151 | 773,413 | 1,672 | 22.23 |
| Metalware | 464.3 | 313.5 | 1,896.4 | 4.1 | 23,143 | 977,148 | 452,981 | 976 | 31.46 |
| Machinery | 654.3 | 368.8 | 2,666.7 | 4.1 | 48,432 | 1,711,122 | 679,789 | 1,039 | 25.62 |
| Electrical Machinery | 437.2 | 471.8 | 2,059.1 | 4.7 | 23,337 | 1,336,549 | 596,931 | 1,365 | 29.23 |
| Appliances and Supplies | 686.3 | 481.1 | 3,827.4 | 5.6 | 107,335 | 2,673,443 | 690,534 | 1,006 | 13.48 |
| Transport Vehicles and Equip. | 323.8 | 364.8 | 55,729.8 | 172.1 | 23,960 | 1,194,764 | 454,680 | 1,404 | 28.17 |
| TOTAL | 569.2 | 350.3 | 5,255.3 | 9.2 | 59,987 | 1,611,545 | 659,167 | 1,158 | 28.53 |