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EXCESS INDUSTRIAL CAPACITY IN INDIA AND THE POSSIBILITY OF ITS UTILIZATION FOR EXPORT PURPOSES[1/]

by

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1/ The views and opinions expressed in this paper are those of the consultant and do not necessarily reflect the views of the secretariat of UNIDO.

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Introduction

1. The development of modern industries requires the judicious utilisation of scarce resources for the development of agriculture and industry, trade, commerce and the services. Under the conditions prevailing in economies where the production apparatus is mainly owned and operated by the private sector, the development of industry is usually guided by a set of norms somewhat different from those adopted under conditions of total government control or in a mixed economy. Thus, in countries like the United States of America, the level of under-utilized capacity in a particular sector of the industry may be the result of an over-estimation of demand in that sector of the economy by entrepreneurs. The imbalance is usually corrected by the diversion of resources into other productive channels, for the marginal cost of the product put on the market by the expansion of production in the same line of manufacture is likely to lead to a lower return on capital invested. Under conditions of perfect competition, therefore, capital and labour will flow into those channels where they will lead to maximization of production and profit.

2. The high levels of profits made in a particular sector of the industry will lead to those profits being ploughed back into the industry and to an increase in labour amenities and fringe benefits. This is how the industrial society of the United States emerged. However, a certain amount of excess capacity is characteristic of the United States economy, and United States businessmen find it desirable to have enough elbow-room to handle orders efficiently and promptly in periods of high demand. In this sense, the United States may differ from other industrial countries where entrepreneurs consider a higher degree of capacity utilization normal.

3. Under conditons where the instruments of production and distribution are controlled wholly by the state, and where direction of capital and labour is also in the hands of the state, under-utilization of capacity is usually not likely to occur. Both the installation of capital equipment and the production will have been pre-planned and, even if excess products are produced during one particular unit of time, say a year, production will be curtailed if it is found that the product is not socially necessary. The excess production in such a case would be added to inventories. In such an economy the question of prices and costs assumes a secondary importance. These prices and costs are usually determined by the state, which functions through an economic planning

board that has full rights to fix prices of commodities, taking into consideration the social need for products produced in a particular sector vis-à-vis the products produced in other sectors of the economy.

3. In a country like India, where industry is partly controlled by the Government and partly in the private sector, excess capacity will develop in both sectors. When total control over capital and labour resources is not in the hands of the Government, production, planning and distribution are not perfect, and excess capacity, if it comes into being, cannot be utilized fruitfully since the products of the particular sector sell neither in the domestic nor in the international market.

4. There may be several reasons why these goods cannot be sold in the internal market: the lack of demand for the item produced or the cancellation of orders by the unit or individual under whose instructions the production was undertaken. A familiar example is that of the cancellation of orders for railway [illegible] by the Ministry [illegible] of the Government of India. This led to over-production in this line which became a drag on the resources of Hindustan Steel Limited.

5. In the private sector there may be a separate set of causes altogether. The demand for the items produced may collapse either because of interdependence of industries or because of production of items that have a single buyer. The depression in the engineering industry in India at present is a result of lack of demand, for rapid economic development under the Third Five-Year Plan was followed by an almost complete halt in production, owing to the delay in the launching of the Fourth Five-Year Plan. Again, excess capacity in the private sector may develop because of lack of domestic or imported raw materials, shortage of labour, labour unrest, inflationary pressures or other factors.

6. Excess capacity, in the peculiar [illegible] of developing countries. It can also exist in developed countries such as the United States, the United Kingdom and the countries of Western Europe, but the intensity of excess capacity is more strongly felt by the developing countries, because not only are they short of capital, but this capital is tied up in unproductive channels. This leads to a distortion of the economy which the developing countries find it hard to correct. Under conditions of total control it will rarely be the case that excess industrial capacity develops. Even if it develops, the supreme planning

board will quickly be able to take adequate measures to correct the imbalance and restore the health of the economy.

8. Finally, a word may be said about the main topic of this paper, the utilization of excess capacity for the purpose of export promotion. While this problem will be examined in a subsequent chapter, it should be stated here that utilization of idle capacity and an increase in production using existing equipment means, in general, a lower cost per unit of the product. If the article produced is an article of domestic consumption, excess production may be consumed internally, as lower prices will lead to a higher level of domestic demand. Finding an export market for these goods involves the following considerations:

(a) Are the goods produced needed abroad, i.e. is there an external demand for such goods?

(b) Is the quality of the goods produced such as would attract the foreign buyer?

(c) Are the prices of the goods produced competitive on the international market, quality for quality?

I METHODS OF CAPACITY MEASUREMENT

9. Before coming to a discussion of the concept of capacity as it has been adopted in India, it is necessary to discuss the definition of capacity as it is generally adopted in economic literature. In general, capacity refers to the quantity of output produced per unit of time (usually one year) with a given plant and supply of equipment. It is usual to define two types of capacity, i.e. the engineering capacity and the economic capacity.

10. The engineering capacity of a unit denotes the maximum output produced per unit of time with a given fixed stock of capital, other factors being equal. Full capacity output means the output that the existing stock of equipment is intended to produce under normal working conditions with respect to hours of work, number of shifts etc.

11. The economic concept of capacity refers also to the total output produced, but the output produced is at the minimum average total cost per unit of output. As has been aptly pointed out in a UNIDO paper entitled Industrial excess capacity and its utilization for export (UNIDO/IPPD/1), the economic concept of capacity of an enterprise depends not only on its stock of plant and equipment, but also on the market conditions, e.g. wage rates including overtime, price fluctuations etc. This economic concept implies that the rates of output of an enterprise at a given time under given conditions provides the maximum profit for the enterprise. Thus, changing market conditions can lead to a change in economic capacity, which can occur without any change in real fixed assets.

12. The engineer's physical approach is, however, considered practical and realistic, and is preferred to the economist's theoretical approach of optimum production at minimum average cost. The normal capacity basis, referred to above, is the total possible time (that means any kind of work, machine or other), less reasonable allowance for breakdowns, repairs, inefficiency, reasonable lack of operators and all other regular normal delays, excepting lack of orders. Normal capacity is thus based entirely on the ability of a plant to produce. This is potential operating capacity, also sometimes called practical/normal capacity.

13. While measuring capacity it is necessary to take into consideration the following factors that affect the production process:

(a) Number of working days during the year;

(b) Number of shifts worked per day;

(c) The number of days needed for the overhauling of the plant and equipment, during which the production process must remain suspended;

(d) The fact that where work stoppage in a particular industry is a normal feature, e.g. in the case of seasonal industries, the productive process also ceases at the end of the season.

14. Other economic factors, such as strikes and lock-outs, the non-availability of raw materials (for one reason or another), the absenteeism of workers and the consequent loss of production, and the breakdown of equipment, either because of wear and tear or because of machine fatigue or other factors that affect the production process, should not normally enter into the measurement of the physical capacity of the plant and equipment.

15. Economists and statisticians have tried to argue that the capacity of units comprising an industry may not necessarily be uniform. While this is an economic truism, because the production efficiency of each unit differs according to various economic factors, it is important to remember that two identically equipped plants installed in two separate places are capable of producing the same volume of output, provided other factors are more or less the same. It is therefore not proper to say that the capacity of the two plants and their equipment is different just because the results obtained are different. Capacity refers to physical possibilities and not to actual realization in the field of production. If production of a particular item in one unit is less than in the other, the causes may be investigated, but the efficiency of capital is the same in the two units. Indeed, if adequate conditions of management, of labour, of raw materials used, of transport and other factors could be reproduced in both places, there is no doubt that the installed equipment in both the places will produce the same quantity of goods. The problem of capacity must therefore be viewed, not so much in the economic concept, but from the point of view of physical possibilities. In other words, the engineer's concept should be universally adopted in measuring the capacity of installed plant and machinery, not only in one unit of an industry, but all along the line.

16. If this standard definition of capacity is adopted and the number of shifts and working days is standardized for each industry on the basis of production techniques, the measurement of capacity will not present the enormous problems confronting statisticians today. In other words, there should

be a standard definition of capacity which can be universally applied, not only in one particular country of the world, but in all countries uniformly.

17. The variable factors in measurement of capacity then remaining will be the average number of shifts worked and the average number of possible working days in each industry. These too can be standardized, at least on an individual country basis, if not on an international basis. For example, in a particular country if it is known that a given industry is capable of working on a three-shift basis with a certain plant and stock of machinery, then it would be prudent to measure capacity on the basis of three shifts only, even though some of the units may be working on a one- or two-shift basis. This will only show that the stock of capital, if properly utilized on a multi-shift basis, will lead to the increase of production in that particular line. This indeed will be a good measurement of idle capacity in that particular industry. If, however, the engineers connected with that industry hold the view that if the equipment is worked continuously on a three-shift basis (each shift being of eight hours duration), it will be damaged or its life shortened, it would perhaps be prudent to consider that the capacity of that industry is only two shifts per day.

18. There are certain industries that work on a 24-hour continuous basis. These industries do not present any serious problem. Their capacity is equal to the production that can be obtained from the units aggregated over the entire industry for each unit of 24 hours.

19. The other variable factor in evolving a standard definition of capacity is the number of days worked during the year. (This will cover the case of seasonal industries also.) For example, if it is known that the sugar industry works for 150 days in the year, because raw materials are not available on an average for a larger number of days, it would be best to assess the capacity of the sugar plants on the basis of this average. Here also the number of days worked may vary over different parts of the country. The average of such days may be taken as a basis for calculating the installed capacity of the sugar industry in a country.

20. With standardization of the concept of the number of shifts and working days, the only variable factor left in the assessment of capacity is the plant and stock of machinery in use. Actual production will, of course, be affected by the many other variables already mentioned. These are the availability of

raw material in adequate quantity and of good quality, the availability of skilled and unskilled labour; the intensity of production, the availability of adequate transport facilities; the availability of adequate storage space on the factory premises; the availability of spare parts for the repair and maintenance of the plant and equipment, which must sometimes be imported; an adequate power supply etc.

21. An attempt should be made to formulate an internationally acceptable definition of capacity in each industry, specifying in each case the total feasible number of shifts (of eight hours duration) and working days. The only variation with respect to the latter will be in the case of seasonal industries, but, in this connexion, the average number of days during each year when the raw material of that industry is available may be taken into consideration.

22. This paper has so far been concerned with the definition of capacity, and an attempt has been made to formulate a general definition applicable to all countries on a uniform basis. The structure of industry should now be examined in greater detail so that the various aspects of the points at issue are fully brought out. Briefly speaking, industries may be classified into four groups:

(a) Industries using a single plant to produce a single product;

(b) Industries using a single plant to produce a uniform product, or a product where product differentiation can be distinguished; e.g. in the case of textiles, the yarn can be distinguished by counts and the cloth produced measured in terms of square metres;

(c) Industries producing a product using multiple plants which operate in combination;

(d) Industries using plants or a combination of plants to produce multiple products.

23. Industries may also be classified with reference to the number of shifts worked:

(a) Continuous process industries where the productive process is on a 24-hour basis.

(b) Industries worked on the basis of eight-hour shifts, sub-divided into those worked on a single-, double- or triple-shift basis.

24. The statistical unit of the measurement of capacity to be used when a product is uniform or is capable of being standardized should naturally be the end-product which is the result of the productive process. In those cases

where a combination of plants produces a single product, the capacity should be measured in terms of the unit of the single product produced under the most favourable operative conditions.

25. In a case where a plant or a combination of plants produces multiple products it would be best to measure capacity either in terms of a standardized product whose units should be specified and to which base the actual production of all other products may be converted for the sake of facility of comparison, or in terms of a single denominator, e.g. the unit of currency of the country concerned. This will, however, require the use of deflators in order to ensure that capacity, as well as the actual production of the units, is measured in constant prices. The problem involved in this case will naturally be complex, but there seems to be no way out other than to omit such cases of capacity measurement altogether. This also is an alternative which may not be ruled out: the column for capacity in such cases may be left blank and actual production recorded over a number of years; this will give an idea of the level of rise or fall of production of that particular commodity or group of commodities.

26. The concept of capacity has so far been discussed in general terms. It is now necessary to discuss the methods that are adopted in India for the measurement of installed capacity. Capacity data are collected through the Annual Survey of Industries (ASI). It is also collected and published in the Monthly Statistics of Production of Selected Industries of India. It is necessary to briefly discuss the differences in the scope and coverage of data collected in India on industrial statistics in these two ways.

27. Whereas the data collected through the ASI adopts the activity approach and refers to industries as classified in the International Standard Industrial Classification (ISIC), as adopted by India, the data published in the Monthly Statistics of Production of Selected Industries of India suggests what is essentially a product approach. Thus, whereas in the Annual Survey of Industries a particular unit will be classified with reference to its major activity, the same unit can appear in the Monthly Statistics of Production of Selected Industries of India if it produces multiple products.

28. In the Monthly Statistics of Production of Selected Industries of India, data on production and stock figures are published for the major industries of the country on a monthly basis. The coverage of this publication is not

identical with the coverage of the Annual Survey of Industries, as already stated above. This data is a by-product of administration of the Industries (Development and Regulation) Act of 1951, as subsequently amended.

29. The control over major industries referred to in the act is vested in the Director-General of Technical Development, and all units are required to send a monthly progress report detailing various particulars relating to each unit every month. Production data relating to the unit and its installed capacity, as well as stock figures are extracted from this monthly production statement. Production figures in aggregate, with respect to each industry group, are published in this monthly publication giving the production figures of selected Indian industries. In certain cases, the statistics cover almost 100 per cent of the units, but in the vast majority of industries, although the coverage in terms of industrial units is small, the bulk of production in that particular line is covered.

30. Installed capacities for the cotton, wool and jute textile industries have been given in terms of spindles and looms. For other industries installed capacities have been given in terms of output. Installed capacities were estimated by the agencies responsible for data collection, except in the case of sugar, whose capacities were estimated by the Development Council for the Sugar Industry.

31. The installed capacity of the sugar industry was previously calculated on the basis of the average working results of recovery and duration of production for the 1957/58 and 1958/59 seasons. As capacity assessed on this basis was found to be on the low side compared with the actual results, the Development Council for the Sugar Industry appointed an expert committee in 1961 to examine the question of reassessment of installed capacity. The Expert Committee made a study on the basis of average duration and recovery. The information for this study was obtained during the five years ending 1960/61. Based on the results of this study, the Council recommended in 1962 that the installed capacity of the sugar industry be reassessed in terms of annual sugar production, taking into account licensed daily cane-crushing capacity reduced

to a 22-hour working day with the following averages for cutting days and recovery for the various regions in India

	[illegible]	[illegible]
[illegible]		
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]
[illegible]		
[illegible]	[illegible]	[illegible]
[illegible]		
[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[redacted]

[redacted]

[redacted]

[redacted]

43. Since the industrial classification at the three-digit level adopted by most countries is broadly identical, the percentages of idle capacity in each industrial group could be combined by calculating the weighted arithmetic mean of the whole group. The weights for this purpose, as already stated above, may be the value-added data for the industry given by the Annual Survey of Industries.

44. This one set of figures for all industries will show the extent to which industrial capacity has been created in particular countries but is not utilised for one reason or another. This, in turn, will show the extent to which plant and equipment are lying idle or are unemployed. Steps could then be taken both by individual nations and by UNIDO to discover ways and means of utilising this idle capacity in industry. Export promotion is one way to utilise this idle capacity in industry. Higher levels of production in particular lines for which there is demand at home is another way of liquidating it. In any case, a wider publicity of this type of data, both nationally and internationally, will focus the attention of individual governments, industrialists and the United Nations on the desirability of avoiding a waste of capital resources in developing as well as developed countries.

II CASE STUDIES OF CAPACITY MEASUREMENT IN SPECIFIC INDUSTRIES

45. In chapter I of this paper the concept of capacity has been discussed with reference to the data published in the Monthly Statistics of Production of Selected Industries of India. In this chapter the measurement of capacity as described by the Annual Survey of Industries will be discussed. The installed capacity of production is recorded in the ASI schedule.

46. The figures of installed capacity for industries referred to in chapter I are collected on a voluntary basis by the development wing of the Ministry of Commerce and Industry, now known as the Department of Technical Development, in the Ministry of Industrial Development and Company Affairs. This data has been published in the publication entitled Monthly Statistics of Production of Selected Industries of India since 1949.

47. The Central Technical Advisory Council on Statistics some time ago discussed the procedure involved in the computation of installed capacity and felt that there was a need for defining the concept and for procedure for fixing installed capacity figures for individual industries and for tabulating aggregate figures for each industry as a whole from the figures of installed capacity for individual factories. In the meantime, the development wing had felt the need for statutory collection of data on installed capacity. Accordingly, the scope of the Annual Survey of Industries (conducted under the Collection of Statistics Act of 1953) and of the rules framed thereunder was extended to include information on the installed capacity of Indian industries. For this purpose a working definition of the term "installed capacity of production" was formulated, and the basis of estimation laid down in consultation with the Department of Technical Development.

48. In the case of the first Annual Survey of Industries in 1959 considerable difficulties in collecting the figures of installed capacity from factories were experienced, particularly from those engaged in the manufacture of multi-products or in servicing activities. As the data collected apparently lacked accuracy, they were not compiled. Attempts were continued, however, to collect this information and arrive at a satisfactory measure of the productive capacity of Indian industries.

49. The object of this chapter is to present the results of the Annual Survey of Industries data in relation to the capacity of twelve industries selected for study. These are different groups of industries, illustrative of the estimation problems involved and yet manageable from the point of view of work-load for the purpose of the present study. The intention is that these results should in the first instance be properly evaluated, from the star - points of both concept and methodology, and their usefulness judged and limitations brought out with a view to effecting improvement in future programmes of data collection.

50. The study of twelve industries is based on ASI data. The collection of data under the Annual Survey of Industries is from each factory. The data are furnished by individual units comprising factories employing 10 or more workers and using power, and those without power employing 20 or more workers. These factories are completely enumerated in the census part of the Annual Survey of Industries, and the remaining factories are surveyed on a probability sample basis. The data in the census part of the survey are for 1964. The results obtained for the twelve industries are described below.

51. Under clause 7 of the Collection of Statistics Act of 1953, information contained in individual returns received from factories cannot be divulged or published. Data concerning the individual units cannot be published therefore.

Manufacture of cigarettes (Industry no. 220.3)[3/]

52. This industry had ten units in the census sector in 1964. All ten units reported capacity figures, but three units gave no reason for the non-utilization of their idle capacity. One unit reported that its idle capacity was caused by a shortage of raw materials. The main raw materials of the cigarette industry are tobacco of the right type and specification, essences and flavour, and cigarette paper. For the purpose of packing cigarettes, raw materials such as cellophane paper, aluminium foil and carton paper or card-board are required. Other raw materials are tissue paper, waterproof paper, paper for labels, tins and wooden cases. An investigation can be made to determine whether the supply of these raw materials would enable the units to produce up to capacity.

3/ Industry numbers correspond to listings in the International Standard Industrial Classification.

11. One unit claimed that underutilization of capacity was caused by accumulation of stock, while four units reported that it was a result of lack of demand for their products, and one unit reported that underutilization resulted from [illegible]. In respect to the structure of this industry, it is found that [illegible] are producing both cigarettes and smoking tobacco. [illegible]

12. [illegible]

[illegible]

13. [illegible]

14. [illegible]

15. [illegible]

worth determining exactly what particular item is holding up production and whether it is indigenously available or must be imported. In the event that it is not locally available it may be the lack of foreign exchange necessary for imports that is holding up production.

[redacted]

62. Of the ten units, one was working to full capacity, but there was idle capacity in the remaining nine units. Two factories did not give reasons for the existence of idle capacity. Five stated that idle capacity resulted from accumulation of stock. One unit claimed that idle capacity was caused by a shortage of raw material and another stated that it was a result of insufficient transport facilities, in addition to accumulation of stock. One unit stated that idle capacity resulted from other unspecified causes.

63. The main inputs for the production of sheet and plate glass are sand, soda ash, sodium sulphate, dolomite, arsenic, cullets, marble powder, felspar, limestone, magnesite, barytes, sodium nitrate, selenium and cobalt. Other raw materials used in this industry are sawdust, coal powder and wire mesh. Some of these raw materials are imported and it is therefore important to determine whether it is the non-availability of indigenous raw materials that is hampering production or whether the difficulty lies in a lack of the foreign exchange necessary to import the required raw materials.

64. Most of the units stated that their idle capacity was a result of accumulation of stock. This means that there is not much demand for their products in the domestic market. Therefore, the sheet and plate glass industry is one of those whose production can be expanded if export outlets are discovered.

65. [illegible]

66. [illegible]

67. [illegible]

Inorganic fertilizers (Industry no. 311-1.1)

68. This group includes superphosphates, ammonium phosphates, sulphuric acid, mixed fertilizers, ammonium sulphate, double salt, urea, ammonium chloride and calcium nitrate. The most important product in this group is superphosphate.

69. Twenty-four units in this industry submitted returns. One unit had not yet begun production at the time of the survey, and another submitted a blank return. Although actual production for mixed fertilizers was reported, particulars of assessed capacity were not given in five cases. The situation was the same in the case of sulphuric acid, where assessment of capacity was not given in four cases. In the case of ammonium sulphate, one unit did not report assessed capacity. Capacity and production for the fertilizer industry are given in the Monthly Statistics of Production of Selected Industries of India in terms of N content for nitrogenous fertilizers and in terms of P_2O_5 content for phosphatic fertilizers. However, in the Annual Survey of Industries the basis for assessment of capacity and production is the actual production, the unit of production being the metric ton in all cases.

70. Idle capacity existed in most units. Fourteen of the twenty-two factories claimed that a shortage of raw materials was partly or indirectly responsible for idle capacity. Accumulation of stock was wholly or partly responsible for idle capacity in four cases. Lack of demand was stated as the reason by two factories. Two other units claimed a shortage of fuel and power, including power cut-off and power breakdown, as the reason for their idle capacity. One factory gave no explanation of its excess capacity; another claimed to be in the initial stages of production and was for that reason not able to utilise its full capacity. One unit stated that its processing unit is a state that did not permit full utilization of installed capacity; in other words, installed capacity could not be fully utilised for technical reasons.

71. The main inputs for the production of inorganic fertilizers are rock phosphate, sulphur, coke, muriate of potash, caustic soda, coke powder, anthracite coke, gypsum, coke ash, sodium sulphate, sulphuric acid, bauxite, sodium silicate, sodium hydrate, hydrated lime, soapstone and calcium compounds. A study should be made to determine which of these particular raw materials can be in short supply in a particular unit and to what extent. If the

lack of imported raw materials is standing in the way of utilization of installed capacity, foreign exchange must be used to procure the necessary supplies.

72. One unit in this industry was working on a single-shift basis. Three units were working on a double-shift basis. One unit gave no information in this respect. The remaining units were working on a three-shift basis. The three-shift basis appears, therefore, to be the most desirable arrangement for units in this industry.

73. The number of working days for the purpose of assessment of capacity and number of days actually worked generally agree. In some cases the number of shifts was greater, apparently because these are continuous process industries. In one case the number of days worked by the unit was only 36, while capacity assessment was based on 365 working days. The unit in question is probably confronted with special problems requiring special consideration. Where the number of actual working days is less than the number of days assumed for capacity assessment, a shortage of raw material usually exists. This is in all probability the reason why many of the factories worked for a smaller number of days during the survey year.

74. Some of the units are producing subsidiary products consisting of sulphuric acid, sulphur dioxide, aluminium sulphate and intermediate products such as anhydrous ammonia, chloro sulphuric acid, nitric acid, green coppras, sodium sulphide, ammonium, alum and B.S.R. spirit acid and [illegible] salt. Heavy water and ferric alum, as well as sanitary ware, are produced in one case.

75. Summing up, it would seem that shortage of raw materials, shortage of power, lack of demand and accumulation of stock are the main causes of idle capacity in this industry. The possibility of exporting these chemical items must be carefully considered in consultation with the export interests concerned. Basic chemical industries in this country are developing at present, and, although sufficient progress has been made in this direction, the export potential of these basic chemicals and products requires further examination by the exporters of chemicals and chemical products, by their associations and by the Government. The industry could be made to work to full capacity if raw materials could be provided and export markets discovered.

Air-conditioners and refrigerators (Industry no. 360.11.3)

76. This industry consisted of 23 units (including 6 servicing units) in the census sector in 1964. Of these, two units manufactured spare parts only, consisting of S.S. Tanks and condensers in one unit, and panels, trays and ducting in the other. Capacity, production, spare capacity and number of shifts were given by both of these units. Several other units also specified capacity and production figures with respect to the same or other spare parts. As the number of spare parts for refrigerators or air-conditioners is quite large, no attempt was made to tabulate the particulars of capacity assessed, production and spare capacity for each spare part.

77. The main products of this industry are refrigerators (domestic); commercial, industrial, packaged air-conditioners; room air-conditioners; cooling towers; air-conditioners; humidifiers; water-coolers; air-compressors; deep freezers; window water-coolers/air-conditioners; and industrial blowers. As stated earlier, spare parts for air-conditioning and refrigerating machinery were also manufactured by certain units manufacturing the above-mentioned main products.

78. The statistical unit of capacity and production in most cases in this industry is "number". Six factories in this industry were engaged in servicing, and for this reason their assessed capacity, actual production and spare capacity figures were not available. All seventeen remaining units reported assessed capacity, actual production and spare capacity. In all cases there was spare capacity in one or more lines of production.

79. Twelve units stated that spare capacity in their case was caused by a shortage of raw materials. Four units claimed lack of demand as a cause. Accumulation of stock was specified in four cases. Shortage of labour was blamed for idle capacity in one case. Shortage of power and lack of transport facilities and working capital was cited as additional causes of idle capacity in certain units in this industry.

80. The main inputs used by this industry are steel sheets, copper sheets and wires, brass, aluminium, structural iron, welding rods, tubes, M.S. block tubes, plastic sheet, glass wool, evaporator coil, electric motors, coal tar, iron tubing, boxes and rods, castings, iron plates, sheets and strips, paints and varnishes, copper tubings, solder alloys and flux, ball and roller bearings, G.I. pipes, super enamel copper wire, zinc-coated sheets, compressors, condensers,

stainless steels, oxygen and acetylene gas, steel strips, fibre glass and perspex sheets and strips. Small amounts of some of these raw materials are imported, and the question of whether the lack of imported materials is holding up production must be settled.

81. The products of this industry are used both in the home and in industrial establishments. Indian prices of these products are, however, rather high. If they are to be successfully exported, these products must not only conform to international quality standards but must also be competitive on the international market.

82. The number of shifts and the number of days worked per year varied considerably within this industry. Some factories worked on a single- or double-shift basis. One unit worked on a three-shift basis. The number of working days also varied, although most of the factories generally worked about 300 days during the year.

83. The end-product of this industry should be made cheaper in the internal as well as in the international market. This would stimulate demand, eliminate accumulation of stock and ensure the utilization of idle capacity.

Pulp, paper and paper board, including newsprint
(Industry no. 271.1, 271.2, 271.3)

84. This industry consisted of 39 units in the census sector in 1964. In addition, there were three other units, two of which stated that their machinery was old and was subject to frequent breakdown, making an assessment of installed capacity, production and idle capacity impossible. The third factory was undertaking job work and therefore did not record assessed capacity, production and spare capacity.

85. This industry manufactures paper of all kinds, including carbon, stencil, filter, tissue and packing paper, and newsprint. There is one factory manufacturing rayon grade pulp.

86. The statistical unit of capacity and production in most cases in this industry is the metric ton. In one case, however, the statistical unit is boxes. Their contents can be determined by converting the figures into metric tons for the purpose of statistical analysis.

87. [illegible]

88. [illegible] Shortage of raw materials was stated as the cause for idle capacity in [illegible] of all cases of demand was cited by four factories. One factory, started after the base year of the survey year was its first year of production, stated that its idle capacity Lack of power supply was considered as a cause by three units and labour troubles in two others. Two factories stated that products [illegible] Three factories claimed that [illegible] of idle capacity was caused by machinery breakdowns.

89. One factory stated that underutilisation of full capacity could be explained by the policy of its board of directors favouring multiplication of units in different places over expansion at one location. This is a cause which requires careful scrutiny since this could become an encouragement of idle capacity that should be prevented by all possible means.

90. Lack of transport facilities and working capital was claimed as the cause of idle capacity in one case; shortage of imported spare parts [illegible] to maintain the efficiency of plant in another. Some units have given no reason for their idle capacity. One of these stated that its machinery is old. Some units reported that capacity exists for ribbons and duplicating ink. One factory also manufactures stamp pads and files; another calcium carbonate and one unit sulphur pulp and kraft pulp. In one case capacity exists for ribbons, stamp pads and paper roll.

91. The important raw materials of this industry are bamboo, wood pulp, pulp wood, rags, waste paper, jute waste and hessian cuttings, straw, [illegible] tissue, cloth etc. Some chemical items are also used as inputs by this industry. They include caustic soda, soda ash, sodium sulphate, bleaching powder and other whitening agents, lime, common salt, china clay, resin, size [illegible], chlorine, dyes and acids. Some of these raw materials are imported and a shortage of them [illegible] idle capacity in this industry. The cause of idle capacity in each unit should be determined and eliminated.

92. The products of this industry can be exported. Indian-made paper is of good quality, and, if it were also competitive in price, it could be exported

[illegible] [illegible] of spare capacity were not given. [illegible] capacity to export. The industry is [illegible] although there were a few units [illegible]

[illegible] over a period of more [illegible] of production was such [illegible] of days, but a good explana- [illegible]

[illegible] responsible for idle capacity in [illegible] cited as the cause in [illegible] as the cause of idle capacity [illegible] given as a reason by two [illegible] their idle capa- [illegible]

[illegible] industry. The total annual produc- [illegible] Kg and 4,651.5 million [illegible] the export of cotton textiles [illegible] exchange for India.

[illegible] industry. India was at [illegible] textiles in the world, Japan [illegible] position in the international [illegible] the countries of Africa and [illegible] and restrictions on [illegible] exports. The [illegible] adopted [illegible] textile exports has been [illegible] capacity of cotton textiles is [illegible] measures have to [illegible] admitting Indian textiles [illegible] by other [illegible] of the Indian Cotton [illegible] India and other [illegible] the general [illegible] conference on [illegible] were also [illegible] exports of cotton [illegible]

101. Cotton textiles produced in India are among the finest in the world and their prices are competitive. The hand-loom products of India are of good quality and are exported to the United States, the United Kingdom and other Western European markets. The tapestry goods manufactured by the Indian textile industry and Indian hand-loom products such as bleeding madras are well known products which are sold abroad. There is still considerable scope for exports in this field, and both trade and industry, as well as the Government of India, are making great efforts to promote exports of these products to foreign countries.

Jute textiles (Industry no. 231.2)

102. The total number of schedules pertaining to this industry in the census sector of the Annual Survey of Industries of 1964 was 90, but only a sample of 20 per cent was to be selected for examination in connexion with this study. However, the total sample was spread over the states in proportion to employment in this industry, selecting at least one unit from each state, and this led to the selection of 22 units for study. The bulk of the sample (seventeen units) came from West Bengal alone, which means that 93 per cent of this state's labour force is employed in this industry. One unit was selected from each of the remaining five states. The percentage of employment in each state has been multiplied by eighteen to determine the number of units in the individual states.

103. The main items produced by the jute textile industry are hessian cloth and bags and sacking cloth and bags. There are also subsidiary products such as carpet backing cloth, jute mattresses, twines, ropes, canvas, wool packs, D.W. tarpaulins, cotton backing cloth and jute carpets.

104. The installed capacity of the major products was reported in the following three ways:

(a) Number of looms/spindles;

(b) Number of looms/spindles.shifts;

(c) Number of looms/spindles.days.

Production was reported in metric tons and thousands of metres for the main products. The metric ton is the statistical unit for other products. The conversion factor to judge whether capacity is fully utilized was not available and judgement was therefore based on the statement of the units themselves.

105. The industry is capable of working on a three-shift basis, although there are units that worked on a one- or two-shift basis during the survey year. The number of working days varied from [illegible] to [illegible]. Most of the factories however worked for 300 or slightly more days in the year.

106. In 11 cases out of 22 spare capacity was blamed on a shortage of raw materials. Shortage of fuel and power was stated as the cause in seven cases. Labour trouble was held responsible for idle capacity in five cases and accumulation of stock was mentioned by six units. Lack of working capital was cited in five cases. Five units stated that owing to economic reasons their capacity was not fully utilised. Lack of transport facilities was mentioned by three units, lack of demand by two units, and shortage of labour by three units. Four units have not indicated any reason for non-utilization of idle capacity.

107. Jute textiles is a major Indian industry, and the export of jute goods is India's largest source of foreign exchange. The total production of jute goods in this country was 1,[illegible],000 tons in 1964.

108. There are certain problems confronting this industry. These problems concern the growing of jute as well as its import from abroad, quite apart from the actual manufacture of jute goods. Since jute is a crop competing with rice, it was grown on only [illegible],000 acres of land during 1965-66. This was necessary to maintain the level of essential food [illegible] cereal production.

109. Another problem of this industry is that India's jute mill machinery is old and requires modernization. Special loans are being granted by the Government of India to the jute mills to enable them to modernise their machinery in order to improve their position in the international market. Owing to a shortage of raw material, the bulk of which is imported from Pakistan, jute mill production must be drastically controlled. The Government frequently orders sealing and unsealing of looms/spindles by jute mills so that production does not come to a standstill owing to lack of raw materials.

110. In the field of exports Indian jute goods face fierce competition from Pakistan. The production of substitutes such as paper and plastic bags is also a factor to be taken into account.

111. The industry implements most of the directives of the Government in order to maintain its position in internal and external markets. In order to [illegible]

[illegible]

[illegible] manufacturing [illegible] of very [illegible] [illegible], [illegible] and [illegible]. [illegible]

[illegible] passenger cars, [illegible]

[illegible]

[illegible] The [illegible] of this industry are pig iron, steel of all types, castings and forgings, non-ferrous metals, piston assembly, chassis and parts, [illegible] [illegible], [illegible] hardware, [illegible] [illegible], [illegible] caustic soda, [illegible]

[illegible] Certain parts of motor vehicles are imported, in completely to semi-knocked down condition, but their number is fast declining. The reason for this is that, under the manufacturing programme, the automobile industry is under an obligation to the Government of India to produce a completely indigenous car by a certain date. It is in this context that the spare parts and ancillary industries in the automobile sector have made rapid strides during the last few years. Much remains to be desired with respect to the quality of automobile products made in India, but ancillaries are improving and it will not be long before they will be able to produce good-quality parts at competitive prices.

136. In the manufacture of complete motor vehicles, four units out of six reported idle capacity. All four units stated that idle capacity was caused by a shortage of raw materials. Two also mentioned a shortage of working capital. Because of the restrictions imposed by this industry are imported, and many of the raw materials required by the units are obtainable can full capacity be utilized and more complete motor vehicles produced.

137. The industry is capable of working on a three-shift basis, but only three units worked on this basis, while the others worked on a double-shift basis. Apparently, these units could also work on a three-shift basis.

138. There was also spare capacity in the body-building section of the industry. The reasons given here were shortages of raw materials and lack of demand. Labour trouble was also mentioned as a cause. One unit stated that it was doing job work, and apparently could not utilize its full capacity because there were no orders. The shortage of labour was also mentioned in one case as the cause of idle capacity.

139. The third section of the industry is the manufacture of spare parts and accessories. The reasons for non-utilization of capacity here was shortage of raw materials in seven cases. In one case there was no spare capacity. In another, accumulation of stock was blamed for idle capacity.

140. Most of the units working on the building of bodies or on producing accessories and parts worked on a single-shift basis, although there were one or two units working on a double-shift basis and one working on a three-shift basis. All the units could be made to work on a three-shift basis if sufficient raw materials were available and other bottlenecks in production were removed. The number of working days varies from the minimum of 250 to as high as 312 in one case.

141. With respect to the export potential of the industry, it might be stated that complete automobiles produced in India are high-priced compared to similar cars manufactured in other countries. Indian cars cannot, therefore, be exported unless their prices are drastically reduced by increasing the scale of operations of all the assemblers. Spare parts and accessories produced in India do not conform to the quality standards attained by the developed countries. These parts are easily worn out, although they are competitive in price. For technical reasons the spare parts produced in India must conform to international specifications as the car population in India consists of a mixed variety.

130. A large number of imported cars are still on the roads in India, and they have to be serviced by garages from domestically produced spare parts, because imported spare parts are quite expensive and are sometimes not available. If automotive were produced cheaply and spare part quality could be improved, much these products could be exported and earn valuable foreign exchange for India.

[illegible] (Industry no. [illegible])

131. The main product of this industry is sugar and the main by-product is molasses. [illegible]

132. [illegible]

133. [illegible]

134. [illegible]

135. Sugar production can be increased by the production of more sugar-cane. Also important is an adequate supply of the other raw materials required, even if this necessitates making available a little more foreign exchange. Similarly, facilities for the importation of spare parts for occasional machinery repairs must also be provided, although the industry did not complain about this matter in the survey. One unit reported that the inferior quality of raw material led to idle capacity. Two units blamed the shortage of working capital. One unit stated that the cause of idle capacity was machinery breakdown, while three referred to transport difficulties. One unit complained of labour [illegible]

136. The total production of sugar depends on the amount of juice recovered from sugar-cane and that figure varies widely from state to state. The percentage of recovery accordingly determines the level of sugar production by the [illegible] in this industry.

[illegible]

140. The peculiarity of this industry is that it is a multi-product industry. The various types of dyes that are manufactured are known as vat dyes, solubilized vat dyes, whitening agents (e.g. Tinopal), napthol, azodyes, sulphur black, fast colour bases, stabilized azoics, B.O.N. acids, ultra-marine blue, solubilized azoics, myrobalan extract, meta nitro para toluidine, colours of dyes, sulphur nitric acid, direct dyes other than congo red, basic dyes other than azo dyes, lake pigments, fast developing salts, oil solubic dyes, binders, dye stuffs, textile auxiliaries and products, ink blue, methylene blue, methyl violet, rhodomine, magenta, aura zine, nigrocine, prussian blue, rapid fast, rapidogen bases, direct dyes, fast colour bases, sulphur dyes, other acid dyes, acid azodyes, spirit soluble dyes and pigments, mixing aniline dry dyes etc. Some of these items could be grouped together on the basis of their chemical classification although this was not done by the units. In the Annual Survey of Industries as many as 64 inputs for this industry have been distinguished, but it is unnecessary to enumerate them here. Several of these basic material inputs, including chemicals and intermediates, are imported.

141. In a case of this kind there is an interesting problem involved in the assessment of capacity and in the reporting of production. The plant and equipment installed for the production of various dye-stuffs is not specific to the production of a particular product; it has alternative uses. Therefore, the capacity stated by the units does not refer to the theoretical capacity on the basis of which capacity should really be assessed. Instead, assessment has been based on the production pattern of the particular unit. Indeed, it might be stated that production of different products and different combinations of products will result in different total capacity in each of these units. The best way to assess capacity in such cases would naturally be to define capacity in terms of one or more basic products and to reduce both production and capacity to that basis. This seems to be the most accurate way to assess capacity in this kind of industry, but this is a technical matter to be handled by those who are concerned with the technique of dye production.

142. The industry is capable of working on a three-shift basis, although five units worked on a single shift basis and one unit worked on the basis of two shifts. Analysing the reasons for under capacity given by the units, it was found that a shortage of raw materials was responsible for idle capacity in eighteen units. Shortage of working capital was mentioned by five units and shortage of skilled labour by two units. Accumulation of stock was blamed for idle

capacity by two units. Lack of demand was cited by three units, and a shortage of fuel and power was the cause in two other cases. Two units complained of a shortage of labour. Some units stated that their idle capacity was the result of miscellaneous causes. One unit had no idle capacity to report.

143. Only a short time ago India was an importer of dye-stuffs on a large scale. The domestic dye-stuff industry has developed only recently. Spare capacity can be utilized for the purpose of exports only if the dye-stuffs made in India conform to international quality standards and are competitive in price on the international market. Indian dye-stuffs are at present quite good in quality and are being constantly improved. Sales on the international market could be promoted by an increase in the scale of production and by promotion of sales and market research in foreign countries in this field.

151. There are 262 industrial groups/sub-groups, and if an attempt were made to analyse all the schedules of the census sector giving this data, the task would be very great indeed. However, the study of the sample of twelve industries has led to some interesting conclusions. An examination of the monthly production report sent by the major industrial units to the Director-General of Technical Development, the Textile Commissioner and other administrative authorities corroborates these findings.

152. The single factor responsible for the bulk of idle capacity in this country is the shortage of industrial raw materials, both indigenous and imported. Chapter II gives the various reasons recorded in the schedules, and from these it can be seen that the main reasons advanced for non-utilization of capacity are import restrictions on raw materials; uncertain delivery, high cost and poor quality of these materials; non-availability of the materials from indigenous sources; and the high cost of transport. In some cases the quality of indigenous raw materials, compared with imports, is so poor that the cost of the finished product is increased if domestic raw materials are used.

153. Inputs of industrial groups cannot be discussed individually in this paper, but in summary it may be stated that the supply of raw materials such as iron and steel, special steel, alloy steels and non-ferrous metals including copper, aluminium, zinc and lead is particularly unsatisfactory. The non-availability or restricted availability of basic chemicals and other materials is also one of the causes of partial non-utilization of industrial capacity.

154. The above paragraphs analyse the causes of under-utilization of capacity as they are reported in schedules which are received from industrial units in connection with the <u>Annual Survey of Industries</u>. The <u>Monthly Statistics of Industrial Production</u>, a statistical series, is also based on monthly production returns received from large industrial units. The reasons for the under-utilization of capacity in these units are summarized as follows [illegible]

155. The amount of [illegible] allocated to industry has increased during the last eight years. In addition, with the increasing number of industrial units, the foreign exchange [illegible] for imported raw materials of direct interest to engineering and chemical industry has been reduced. This is not only partially the result of a greater indigenous availability of raw materials, but is also a

large measure also the result of India's unfavourable foreign exchange [illegible]. However, whereas the number of import licenses issued to actual users has increased in number over time, the value of each licence has [illegible]. [illegible] conclusions emerge from this analysis:

(a) Indigenous [illegible] raw materials [illegible] The [illegible] industries [illegible] general [illegible] have [illegible] formerly [illegible].

(b) The import of components, spares [illegible] by industry is restricted. [illegible] already installed and capacity already [illegible] utilised.

156. This [illegible] is a point brought out by many [illegible] of the meetings of the Import and Export Advisory [illegible] and Industry. It has also been emphasised by the [illegible] of the Government of India, and has been [illegible] large and [illegible] scale industrialists, including the [illegible]. The [illegible] of India has recognised that [illegible] mitted, and that [illegible] capacity should be [illegible] before further capacity is [illegible] the Planning Commission to study [illegible].

157. The study of the Perspective [illegible] Council of Applied Economic Research [illegible] of industrial capacity [illegible] regional planning [illegible] capacity for additional [illegible] already exists. Perhaps [illegible] foreign exchange [illegible] should work [illegible] independent future.

158. [illegible] capacity [illegible] of [illegible] Industrial [illegible] of Production of [illegible] [illegible]

[illegible] for [illegible] capacity utilization

[illegible]. The [illegible] should be [illegible] to increase utilization of idle industrial capacity [illegible]:

(a) The [illegible] should [illegible] definition [illegible] described.

(b) The [illegible] industrial [illegible] United [illegible]

(c) [illegible] imported raw [illegible] and availability of [illegible]

(d) [illegible] first, [illegible] by the [illegible] industry [illegible] of imports.

(e) [illegible] export-earning [illegible]

(f) [illegible] should be provided to the export [illegible]

(g) The [illegible] should be standardized and international [illegible] that the commodity can be marketed [illegible]

(h) [illegible] the cost per unit of [illegible] the efficiency of labour should be increased to [illegible]

(i) [illegible] should not be created in those areas where idle capacity already exists.

IV EXPORT PROMOTION AND THE UTILIZATION OF IDLE CAPACITY

163. In the beginning the export policy of the Government of India was to export all produce in excess of that required to satisfy the internal requirements of the country. The emphasis was on export promotion, which was necessitated by the requirements of the five year plans for foreign exchange. Expenditures were necessary to promote the development of new industries and to maintain imports to supply existing industries. The measures taken to promote exports are summarized briefly below.

Institutional arrangements

164. A Directorate of Export Promotion was established in the Ministry of Commerce and Industry. A number of export promotion councils were established to supervise the export of various commodities and several commodity boards were set up. The latter include the Tea Board, Coffee Board, Silk Board etc.

165. The State Trading Corporation was established in 1956 and was later subdivided into two parts - the State Trading Corporation and the Minerals and Metals Trading Corporation. An Institute of Foreign Trade was established to provide training in the techniques of export promotion for managers of business firms, industrialists and government officers. A Board of Trade was established in the Ministry of Commerce and Industry. This was a high-level advisory body particularly concerned with the promotion of exports.

Incentives for exports

166. A number of measures which may be described as incentives for the purpose of export promotion were also adopted. These are as follows:

(a) Export duties were either abolished or reduced in order to encourage the export of a number of commodities.

(b) Customs duties on raw materials required for the manufacture of the exported products were wholly refunded to exporters furnishing proof of export of goods. This is known as the "drawback of export duty".

(c) Traders were in some cases permitted to export goods at lower prices, while raising the internal prices of those commodities correspondingly in order to avoid any loss in over-all sales.

Other measures

167. In order to protect exporters from losses, an organization known as the Export Credit and Guarantee Corporation was established at Bombay. This organization was to insure the risk to which an exporter is exposed either by default by foreign buyers or otherwise. India began to participate in a large number of international exhibitions and fairs where Indian products could be displayed and sold to foreign buyers. In addition, a large number of show-rooms were established in many parts of the world to popularize Indian products. These establishments or trade centres not only exhibit the Indian products, but also encourage export promotion by booking orders and by bringing together foreign importers and Indian exporters. India herself organized a number of industrial exhibitions in order to popularise the products of Indian agriculture and industry.

168. The Indian Missions abroad also participated in export promotion by increasing the activities of their trade sections and by undertaking market research and studies of foreign markets with reference to the particular commodities produced in their own areas.

169. Delegations of officials and businessmen are sponsored to enable them to tell foreign buyers about various Indian products. The delegations of business men have invariably succeeded in booking orders for large quantities, but official delegations have also been very successful in booking orders for particular commodities.

170. In those areas where India lacks technical know-how or capital resources, foreign collaboration has not only been permitted, but encouraged as well. A well-defined policy of foreign collaboration has been developed by the Government of India, under which the foreign investor is not only assured of the safety of his capital, but is also given the right remit profits and royalties from the collaboration.

171. Incentives have been provided to the foreign investor, and the inflow of foreign private capital is encouraged in several ways.

172. The services of foreign experts have been freely utilized when indigenous [illegible] and help is necessary because of lack of technical skills locally.

173. Trade agreements and barter deals have been entered into with several countries under the aegis of GATT and at various international conferences arranged by the United Nations. Quotas of various commodities have been suitably secured.

17. In June 1966 the Indian rupee was devalued in an attempt to encourage Indian exports. Without going into the details of the results, it can be stated that Indian exports have not risen to the expected level. [illegible] for this reason they [illegible]. Furthermore, as a result of the [illegible] advantages that might have accrued [illegible] have been [illegible].

18. It has been stated in an earlier chapter that the utilisation of excess capacity for the purpose of exports requires that the prices of goods to be exported be competitive in the international market and that the goods be of [illegible] quality. This means that [illegible] that enter [illegible] standards. They must also conform to international [illegible] standards. Foreign buyers [illegible] after purchase that the exported goods are defective in quality and do not conform to the samples. This naturally leads to trade [illegible]. In order to meet this situation, an international arbitration [illegible] has been set up in India. This commission [illegible] and settles the claims of foreign buyers with respect to the quality of goods in export shipments.

19. As private businessmen produce goods in order to maximise their profits, [illegible] has reached the optimum level any [illegible] increase profits. Additional production [illegible] that the private traders will have to be [illegible] from production in excess [illegible] exchange rates are [illegible] also used [illegible] category of [illegible] trading [illegible] encouraged.

[illegible] prices of indigenous goods are [illegible] can only be exported [illegible] agreement among the [illegible] by the government [illegible] developing country.

178. Industrial policy in India includes the following main principles:

(a) Industries that are export-earning are allowed to set up facilities and increase production.

(b) Industries that are export earning are also encouraged to establish new units or to increase the production of existing units.

(c) Industries that do not require any imported raw materials, and those on the basis of [illegible] are encouraged to increase their production [illegible].

179. A great deal may be said about the encouragement given to small-scale and cottage industries in this country. Since these industries are labour-intensive and provide employment to many, every assistance is given to those interested in setting up such units. [illegible] emphasis has been put on the development of small-scale and cottage industries. Substantial sums of money were allocated to small-scale industries during the period of the first three plans. The Fourth Plan also provides for the continuation of this policy of encouragement to the small-scale sector.

180. For a long time planning in India has been carried on by fixing physical targets of production and by including plans of the state governments in the structure of planning. An evaluation of the utilization of capacity created has not been attempted on a large scale. Indeed, in the early stages of planning any project included in the plan was sanctioned after its technical details had been scrutinised.

181. This type of physical planning under specified targets has resulted in an imbalance in the economy. Capacity has been created in certain sectors that is not required to satisfy the current needs of effective demand. In certain other sectors, however, additional capacity is needed. Those responsible for policy are trying to rectify these imbalances in the economy through the Fourth Five-Year Plan, as well as through subsequent plans. The Government of India has recognised that it is more economical to utilise capacity that has already been created than it is to create more capacity in the same sectors. Indeed, emphasis on additional shifts for the utilisation of idle capacity is necessary, and several studies have already been undertaken in this connection.

182. In order to utilise idle capital capacity for the production of goods for export the following measures are absolutely necessary:

(c) [illegible]

(d) [illegible]

(e) [illegible]

(f) [illegible]

(g) [illegible]

(h) [illegible]

V [redacted]

183. The analysis of industrial excess capacity and its utilization for purposes of export discussed in the foregoing paragraphs shows that the utilization of idle capacity can be facilitated if the following steps are taken by all member countries of the United Nations:

(a) It is essential to arrive at a standard definition of the term "capacity" and to collect comprehensive statistics of idle industrial capacity.

(b) The measurement of idle capacity may be expressed in the form of percentage [illegible] capacity as discussed in chapter [illegible] where different [illegible]

(c) For [illegible] the [illegible] may be [illegible] with the [illegible] member [illegible]

(d) [illegible] United Nations [illegible] and for the [illegible]

184. It is necessary that the reasons underlying non-utilization of idle capacity in each industrial group be carefully studied by member countries. Such studies have been undertaken in India, but detailed studies of each industrial group [illegible] as adopted by individual countries, should also be undertaken.

185. Excess capacity will frequently be traced to economic causes. In [illegible] Western Europe. [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] [illegible]

[illegible]

Flour milling and grinding

[illegible]

[illegible]

Labour trouble.

[illegible]

Most of the items required for manufacture were [illegible] from indigenous sources and [illegible] led to better utilisation of capacity.

[illegible]

[illegible]

[illegible]

High cost of [illegible] affected both production and utilisation of capacity.

[redacted]

Specific cases

Stable bleaching powder	Lack of demand, owing to arrival of large quantity of imported bleaching powder, ... [illegible] utilization of capacity
Caustic potash/soda	[illegible]
Sodium hydrosulphite	Import [illegible]
Caustic potash	Import [illegible]
Calcium carbide	Import [illegible] sheets, [illegible] parts affected [illegible] capacity

(Note: If steel sheets of [illegible] ... [illegible])

Potassium chlorate	[illegible]
Hydrogen peroxide	[illegible]
Boric and [illegible] acid	Import [illegible]
Synthetic fibre	[illegible]
Rayon tyre cord	[illegible]

[illegible] Manufacture of fertilizer	[illegible]
[illegible] Vegetable and animal oils and fats (except edible oils and fats)	[illegible]

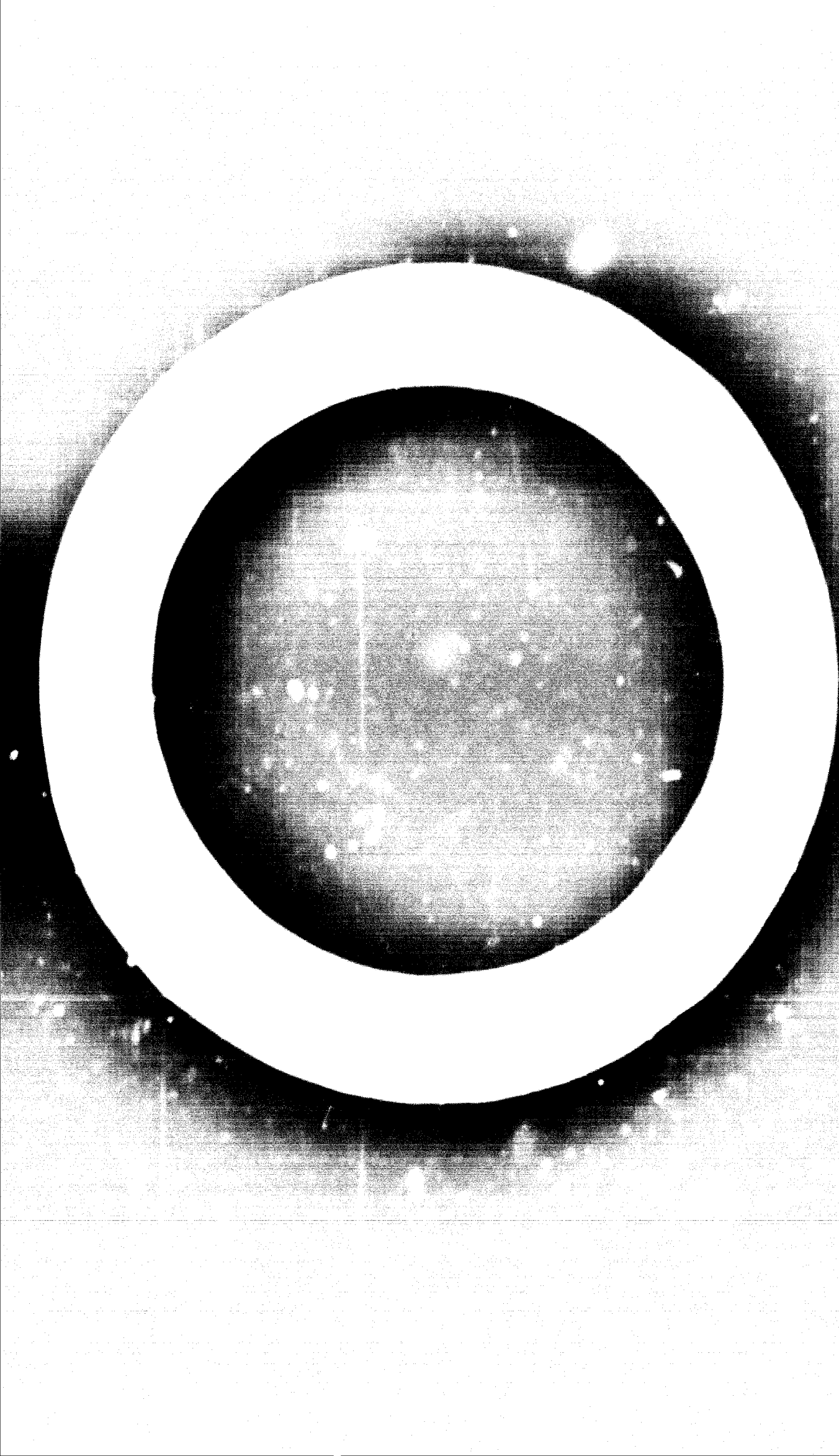
115 Fine and pharmaceutical chemicals

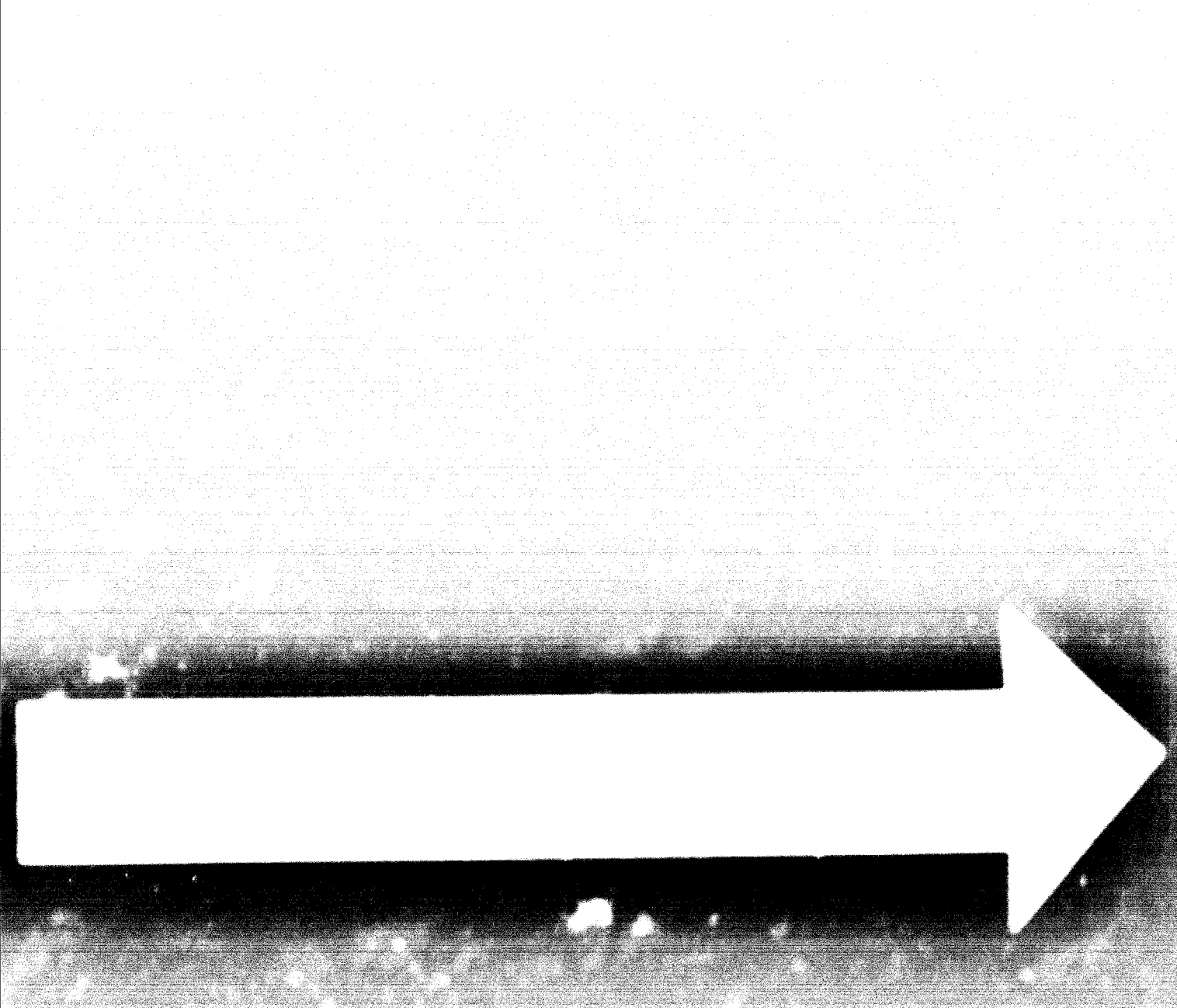
Drugs and pharmaceuticals

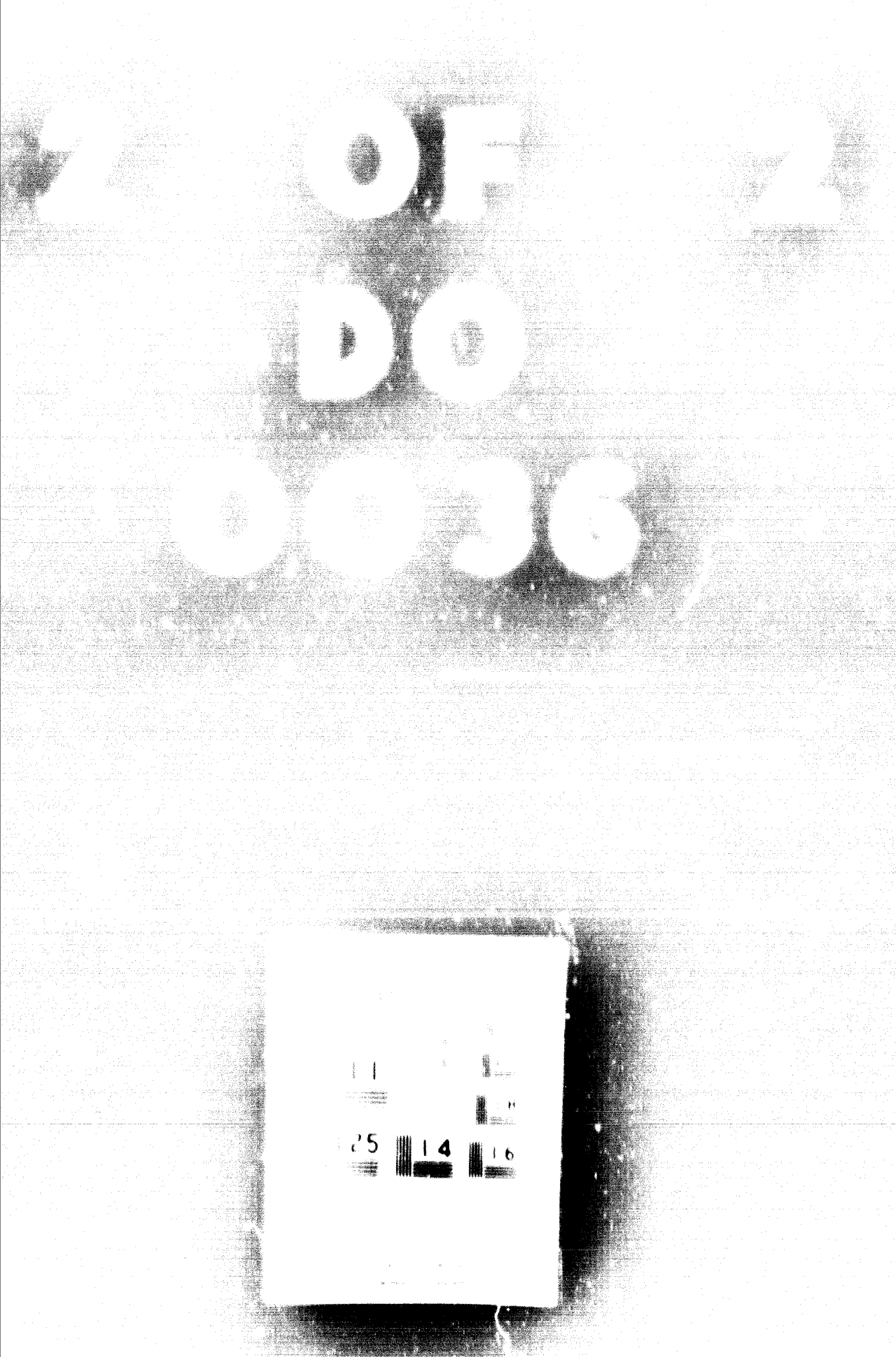
(a) Chloramphenicol and its ester	Accumulation of stocks.
(b) Anti-diabetic drugs: Tolbutamide	Accumulation of stocks.
(c) Anti-pyretic [illegible] Sodium salicylate	Accumulation of stocks.
(d) Anti-tubercular drugs	
INH	Less off-take due to heavy import.
PAS and its salts	Import is prohibited.
(e) Synthetic hormones	Reorganisation of a plant and less off-take from the major producers.
(f) Sulpha drugs	[illegible] imported intermediates.
(g) Vitamins:	
Vitamins of B_{12} group	Non-availability of [illegible], some quantity of which is further converted into [illegible].
Vitamin B_6	Non-availability of imported intermediates at economic prices.
Vitamin [illegible]	Less off-take due to heavy import (now prohibited).
(h) Other drugs:	
Ferrous [illegible]	Production adjusted according to demand
[illegible]	
[illegible]	
[illegible]	Less availability of alcohol.
Synthetic anti-malarials (Chloroquine and amodiaquine)	Production adjusted according to demand.
(i) Fine chemicals [illegible]	[illegible] demand [illegible] of better [illegible]

116 Perfumes, cosmetics and other toilet preparations (except soap)

Cosmetics and toilet items	Less demand and [illegible].
Tooth powder	Preference for tooth paste.



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317 Soap and other washing and cleaning compounds	
Soap and allied products	Shortage of imported raw materials such as tallow, palm oil etc.
Synthetic detergent	Requires some additional imported equipment.
318 Manufacture of matches	Labour trouble in organized sector (mechanized).
319 Manufacture of miscellaneous chemical products	
Myrobalan extract	Lack of demand from overseas market.
Group 33 Manufacture of non-metallic mineral products (except products of petroleum and coal)	
Cement	Repairs, power restriction, lack of workable orders, labour troubles etc.
Refractories) Insulators)	Lack of diversification of product.
Sanitary ware	Slackening of construction programmes.
Asbestos cement products	Better position of competitive materials arising from double excise duty for asbestos product as against no excise duty on competitive materials. Shortage of raw materials.
Group 34 Basic metal industries	
341 Basic iron and steel industries	Recession affected utilization of capacity.
Steel casting	Suffering from serious effect of recession.
Steel forgings	Recession.
Cast iron pressure pipe/ cast iron spun pipe	Abrupt change in government policy caused serious difficulties to the industry.
Cast iron castings	Required in considerable quantity in railways. Curtailment of orders from railways owing to austere economy measures and various other engineering industries.

(Note: Power shortage and labour trouble also affected some of the abcve industries).

Malleable iron castings	Old units are not equipped with latest foundry equipment, and the new units on the latest lines are in gestation period. Bottleneck owing to restricted availability of basic raw materials such as low phosphorus pig iron, low ash BF hard coke, graded quality steel scrap. Recession in off-take of automobile industry and reduction in railway orders.
342 Copper smelting and rolling mills	
Pipes and tubes, sheets and circles	Production depends upon import of virgin metal. Allocation of foreign exchange inadequate to fully utilize installed capacity.
343 Aluminium manufacture	
Aluminium ingot and semis such as sheets and circles etc.	Shortage of imported raw materials such as cryolite, aluminium fluoride, fluorspars, calcined anthracite coal, sodium fluoride, and short supply of caustic soda affects utilization of capacity of aluminium ingots and this ultimately affects the other products.
Wire rods for ACSR	Depends upon supply of imported electrolytic aluminium ingot/bars/rods and steel wire.
344 Brass manufacture	Allocation of foreign exchange for non-ferrous virgin metal on the basis of past performance rather than on the basis of actual requirement retards the utilization of capacity.
349 Basic metal industries NEC	
Lead	Shortage of lead conc.
Lead pipes and tubes Lead sheets	Paucity of raw materials.
Brass/copper and similar alloy sections (extruded), arsenical copper rods, bearing metal, ball metal and bronze.	Industry depends primarily on the import of various non-ferrous virgin metals. Shortage of foreign exchange prevents import to the extent required by the industry. Hence utilization of installed capacity is very small.

Group 35	**Manufacture of metal products** (except machinery and transport equipment)	
	353 Manufacture of fittings, fixtures and fasteners	Recession and difficult investment situation affected the industry, though liberalized licenses for raw materials etc. granted. Shortage of materials also affected production.
	359 Manufacture of metal products NEC	
	Hurricane lantern	Shortage of raw material.
	Expanded metal	Short supply of indigenous sheets; accumulation of stocks.
	Building hardware	Recession.
Group 36	**Manufacture of machinery** (except electrical machinery)	Most of the items produced by this industry are made to order, but light mechanical engineering industries, which produce consumer durable goods, domestic and industrial appliances, office equipment, etc. have adequate installed capacity. Some of the industries of this class have priority in importing raw materials. Recession and difficult investment situation are responsible for a set-back in utilizing capacity. Foreign exchange difficulties hindered proper utilization of capacity in case of non-priority group. Transport bottleneck, labour unrest and conservative tendency in factories, recession, high price of American raw materials issued under USAID and rupee licence, and difficult credit position were found to affect production and utilization of capacity.
	Tractors	Shortage of tires and tubes.
	Sewing machines	Labour trouble and accumulation of stock.
	Phonograph needles	Shortage of imported raw material and damage from fire.
	Road rollers	Lack of demand owing to recession.
	Auto leaf springs	Recession in automobile industry.
	Earth-moving equipment	Recession and lack of demand.
	Fuel Injection equipment, Clutch assembly	Recession and less demand for replacements.
	Machine tools	Lack of demand and recession.

Group 11	**Manufacture of air brake machines, compressors, equipment and spares**	
	[illegible] and other heavy miniature lamps	Labour trouble.
	Dry batteries	Labour strike and damage from earthquakes.
	House service meters	Lack of demand.
	Electrical measuring instruments	Lack of demand
	Electrical wiring accessories	
	Brass lamp holders	Lack of demand and change over to aluminium and bakelite holders.
	Electrical steel sheets	Shortage of steel.
	VIR and PVC cable and wire	Lack of demand.
	Paper-insulated power cables	Less demand and change over to plastic cables.
	Bare copper conductors	Shortage of raw material and less demand.
Group 12	**Manufacture of transport equipment**	
	Automobiles	Economic recession in the country which affected engineering industries in particular.
	Motorcycles, scooters, three wheelers, mopeds	Short supply of tires and tubes and labour trouble.
	Automobile ancillaries	Recession.

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[redacted] [1/]

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1. List of economic literature and Government publications on capacity measurement and rate of capacity utilisation in industry in India.

2.1 Industrywise annual percentage under utilisation of capacity at the end of each plan and in 1967.

2.2 Index of unutilised capacity at the end of each plan and in 1967.

3. Statement showing the basis on which installed capacity of different industries has been assessed by the sources concerned.

4. Statement showing the number and value of import licenses issued by categories during [illegible] to 1967-68.

5. Statement showing the number of industrial disputes, workers involved, man days lost, wages and production lost due to industrial labour unrest in India during 1959-66.

6. Principal Articles of export from India.

7. Statement showing the unit prices of selected export articles in India and in other foreign countries.

8. Table showing the allocations made in India to large-scale and small-scale industries over the Planning period.

9. List of authorities submitting data to the Directorate of Industrial Statistics at Calcutta for the compilation of the Monthly Production of Selected Industries of India.

1/ The appendices, tables and annexes listed here are not being reproduced at this stage. The originals are, however, available to participants upon request.

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[redacted]

1. Form of return under Rules 3 and 4 of the Collection of Statistics (Central Rules, 1959) required to be submitted to the Statistics Authority by registered factories

2. Memorandum on Definitions, Concepts and Procedure - Annual Survey of Industries (ASI)

3. Statement showing the statewise allocation of factories in the Indian Cotton Textiles Industry based on a 10% sample

4. Statement showing the statewise allocation of factories in Jute Textile Industry based on a 20% sample

5. Statement showing the statewise allocation of factories in Woollen Textile Industry based on a sample of 25%

6. Statement showing the statewise allocation of factories of Motor Vehicles Industry based on a sample of 10%

7. Statement showing the statewise allocation of factories of Sugar Industry based on a sample of 20%

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