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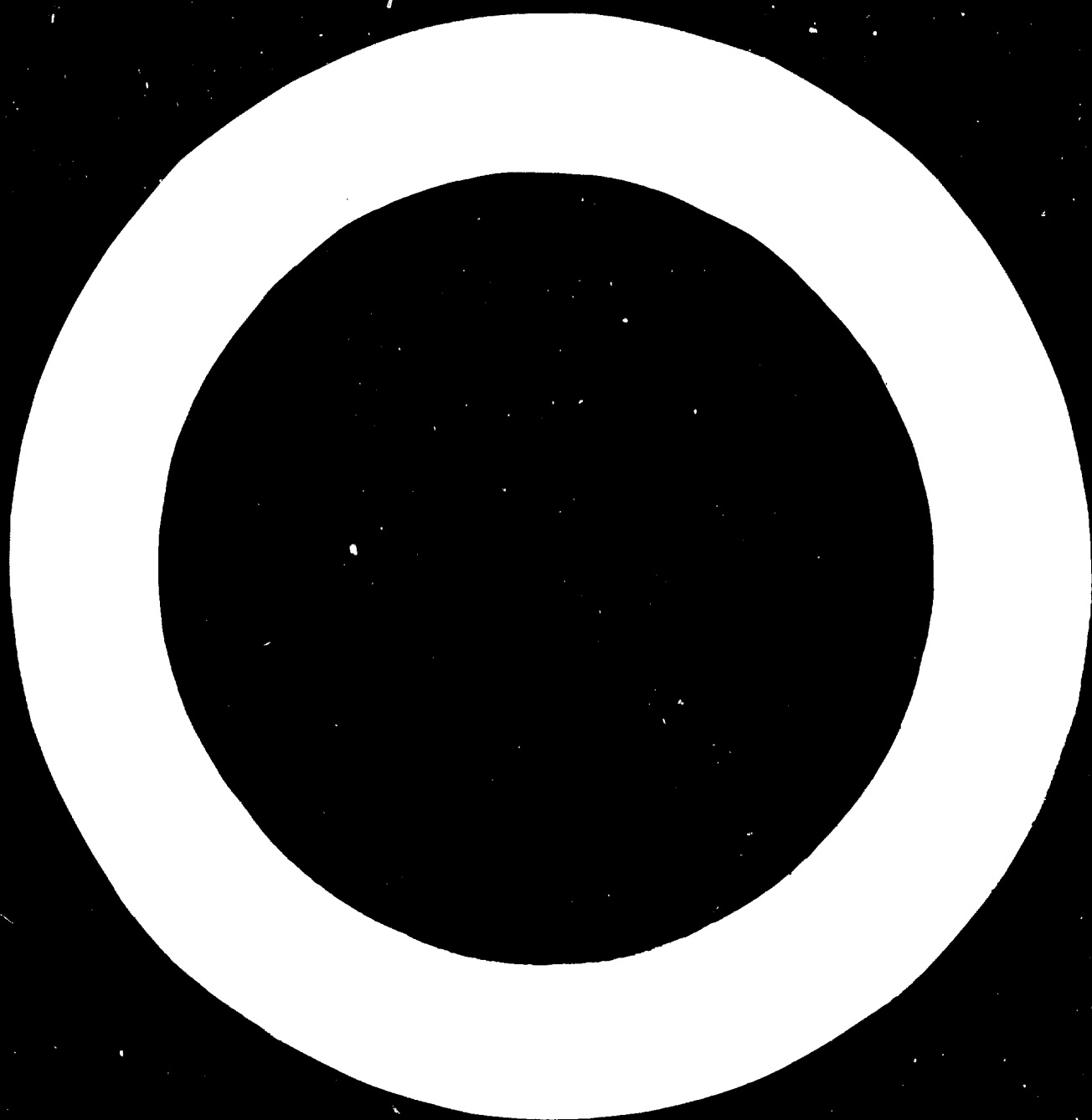
**UTILIZATION OF
EXCESS CAPACITY FOR EXPORT**

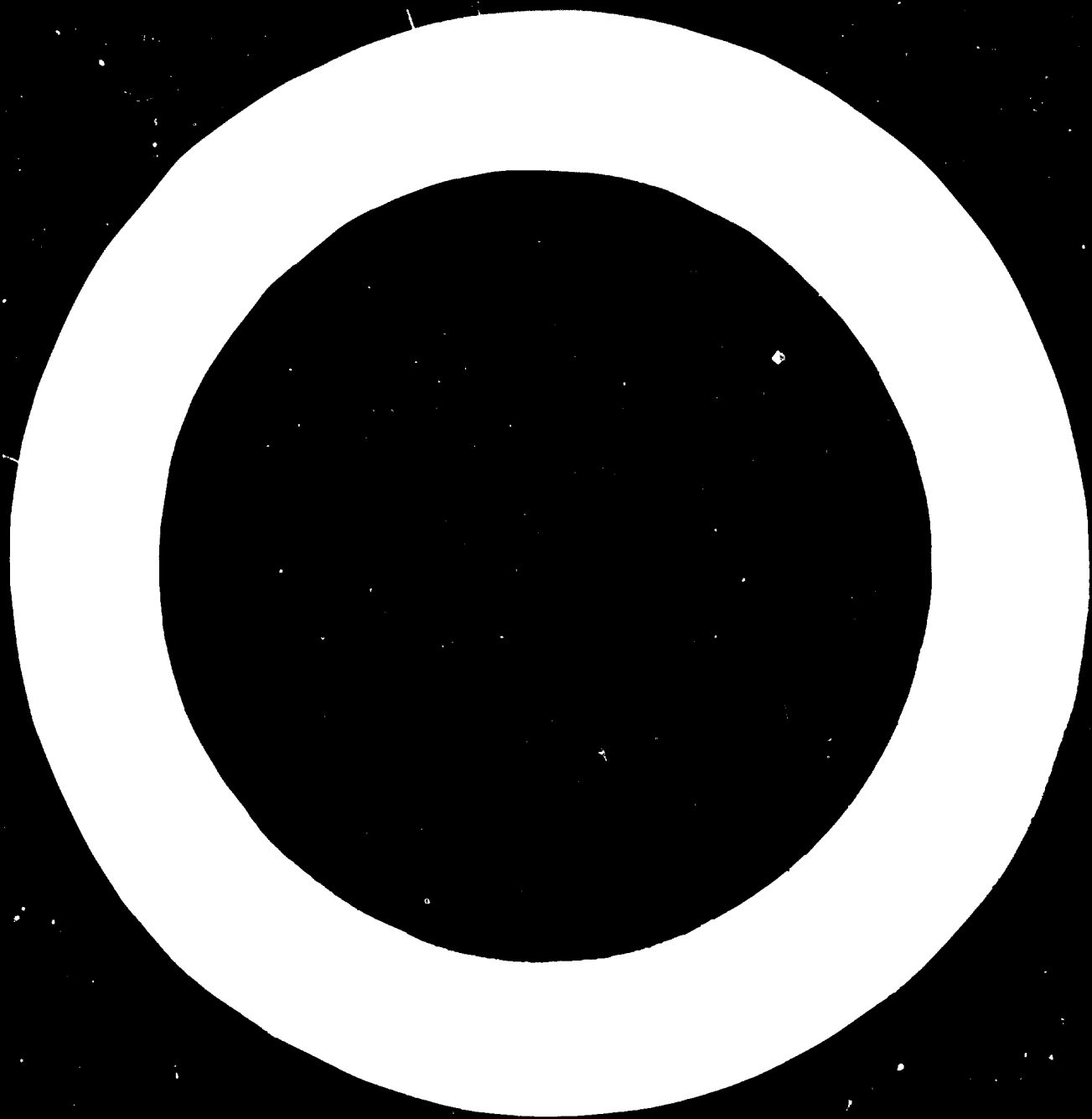
Report of the Expert Group Meeting on Excess Capacity

Rio de Janeiro, 3 - 12 March 1969



UNITED NATIONS





UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION, VIENNA

UTILIZATION OF EXCESS CAPACITY FOR EXPORT

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Introduction

1. A Working Group of experts was convened by the United Nations Industrial Development Organization in Rio de Janeiro on 3 March 1969 to discuss the problems of excess capacity in manufacturing industries of the developing countries, to analyse its main causes and its effects on the process of industrialization, and to delineate ways and means by which such idle capacity could be used for exports.
2. The meeting was convened in Rio de Janeiro at the invitation of the Government of the Federative Republic of Brazil and was attended by 23 participants and 33 observers. A list of participants and observers is presented in annex 1.
3. The meeting opened on 3 March with a statement of the Minister of Industry and Commerce of Brazil, General Edmundo de Macedo Soares e Silva, attached as annex 2. Professor Ruy Aguiar da Silva Leme was elected chairman, Mr. Ivo Rihman was elected vice-chairman, and Dr. Meir Merhav was elected rapporteur. Mr. May Y. Volkov of UNIDO served as technical secretary.
4. All technical services for the meeting were provided by the Ministry of Industry and Commerce. The technical staff, headed by Mr. Alberto Tangari, contributed to the work of the experts through their most efficient service.
5. The Working Group held twenty sessions. The agenda, which was adopted at the first meeting (see annex 3) was discussed on the basis of the background papers submitted to the meeting. (The list of papers is attached as annex 4.) The discussions provided a valuable opportunity for an exchange of views in the light of experience from various countries and contributed to the clarification of the various aspects of the highly complex problem that was the subject of the meeting.
6. The Working Group also had the opportunity to visit, at the kind invitation of the Brazilian Ministry of Industry and Commerce, a number of industrial

enterprises; during these visits the experts were able to hold valuable informal discussions on the problem of idle capacity with the managers of these enterprises. These visits became a most valuable part of the meeting and contributed to a better understanding of the industrial utilization problem.

7. The main points of the discussions are summarized in chapters 1-5 of the report. Information collected in the course of the preparation for the meeting or presented additionally by the participants, augmented by the visits to industrial enterprises and discussions held during the meeting, made it possible to reach some definite conclusions, which are presented in chapter 6.

GENERAL DISCUSSION AND CAUSES OF IDLE CAPACITY

8. The existence of substantial amounts of unutilised industrial capacity has been increasingly recognized as a serious problem in many developing countries, particularly those which have already passed the initial stages of their industrialization.
9. The existence and, even more, the persistence of idle productive capacity represents a great waste of resources which the developing countries can ill afford. The under-utilization of capacity not only wastes scarce resources of capital goods and foreign exchange, but also reduces the level of employment below that which could otherwise be attained. From the social point of view, such under-utilization deprives the economies concerned of the output of goods of great value.
10. In addition, the under-utilization of installed capacity tends to slow down the rate of industrial growth and is inimical to technical progress. The existence of idle but technically usable capacity is likely to slow down new investment, to cause excessive fragmentation of production and, through the prolongation of the physical life of plant and equipment in consequence of its partial utilization, to maintain a technologically obsolete productive structure.
11. Under-utilization of industrial capacity increases the cost of manufactured products and either decreases profitability of industry or, in the case of rising prices, transfers losses to the whole economy and undermines the competitiveness of these products in the world market.
12. The Working Group was agreed that the developing countries are confronted with a serious problem which has so far been given relatively little attention in the industrial development plans and policies of developing countries as well as in the activities undertaken by the various United Nations agencies concerned with economic growth and by other international institutions.
13. The emphasis given to the possibilities of using idle capacity for the production of export goods, as indicated by the title of the meeting, derived

from the recognition that, since installed capacity was apparently being utilized only partially, and often at significantly lower rates than those normal in the industrialized countries, there must be powerful factors at work which prevent a higher rate of utilization for the internal markets of the developing countries. The most important of these factors were analysed in detail at the meeting and will be discussed below. Given their existence, however, and in view of the fact that they are generally counteracting measures in the short and medium term, the Group stressed the possibilities of finding an outlet for the use of the idle resources in export markets.

14. Although participants emphasized the considerable differences that exist, in this as in other respects, among the various developing countries as well as among industries, the problem as such seems to be common to most developing countries and also seems to have a number of similar causes. Furthermore, the developing countries appear to differ significantly from the developed countries. The degree of capacity utilization in the industries of developing countries tends to be lower, and this means a deterioration of the comparative advantages which these developing countries possess and which could otherwise be used for a more efficient export drive. In addition, the immediate main cause of under-utilization in the industrially advanced countries is a periodic deficiency of aggregate effective demand. Although these deficiencies are not absent in the developing countries, they seem to be of secondary importance in certain cases. Even when the apparent cause of capacity under-utilization would seem to be a lack of effective demand, the usual remedies for this situation would perhaps, in the short run, in the circumstances of most developing countries, generally bring about inflationary pressures and a deterioration of the balance of payments. Money costs would rise and the erosion of the competitiveness of exports would result. There would be increased demand for imports owing to price and income effects. In the long run the development of domestic demand is a most reliable and solid basis for successful export performance, especially for larger developing countries with greater undeveloped domestic market potentials.

15. The Group agreed that the under-utilization of capacity is in many respects a short-run problem. At the same time it was recognized that, in view of the experience of the various developing countries, there is a tendency for under-utilized industrial capacity to be re-created, perpetuating its unfavourable effects on the economy as a whole. The situation is a sort of vicious circle: under-utilization of industrial capacity contributes to

the rise of costs; rise of costs leads to inflation; the rise of prices and further limitations of the domestic market prevent at the same time an effective export drive and thus increase the degree of capacity under-utilization. The Working Group was of the view that the problem of under-utilized capacity must be analysed against the background of the long-term industrial policies of the developing countries. The participants were of the opinion that measures to activate idle resources in the short run can only be effective if they are integrated with long-run policies designed to prevent, as far as possible, the re-creation of new excess capacity. These long-run policies relate mainly to three spheres, namely:

- (a) Industrial investment policies, which, in the promotion of new investment, ought to be designed so as to minimize as much as possible the addition of new productive facilities where unutilized capacity of a similar technological level still exists, and where considerations of regional or other requirements of high priority dispersion of industry do not overwhelmingly dictate otherwise;
- (b) Policies relating to industrial structure, which ought to take greater account of the fact that the industrial development of the developing countries usually involves the adoption of relatively large-scale methods of production, so that the limited domestic market can often sustain only one or a few acceptably efficient enterprises in a given line. The real choice of many developing countries, therefore, often lies not between a competitive market structure and a more concentrated form of industrial organization, but between the latter and a still higher degree of concentration, which, as a rule, is potentially more efficient and more competitive vis-à-vis the foreign market. Encouragement of industrial mergers in certain developing countries is at present an important direction of government policy;
- (c) Internal taxation policies, and particularly tariff policies, which should not, as a result of excessive and indiscriminate protection of domestic industry, encourage the maintenance and re-creation of idle capacity.

16. The main causes of excess capacity in the developing countries, as discussed at the meeting, are apparently of very diverse nature. Not all of the causes are directly interrelated, although their effects are generally similar.

17. An important cause of excess capacity is the indivisibility of plant in a number of industries which makes it necessary to build ahead of demand. The excess capacity so created is essentially temporary in nature and may be considered a technically unavoidable accompaniment of growth. With appropriate planning and time-phasing of the expansion of such industries over time, such excess capacity can be utilized for exports, and in favourable circumstances a permanent basis can be created for a viable export industry. Examples were cited at the meeting of the gradual development of export industries out of

the initial utilization of such temporary excess capacity, but even when this does not occur, the gradual expansion of the domestic market will generally absorb the initial reserve capacity. Exceptions are likely to occur only where the initial market estimates have been grossly over-optimistic so that by the time the demand reaches the expected level the plans and technology may have become obsolete.

18. Another cause of excess capacity has its origins in the indivisibilities of modern technology. Limited markets, can as a rule sustain only a small number of enterprises. There is in these conditions a strong tendency for quasi-monopolistic or oligopolistic market structures to develop. The competition between a limited number of enterprises sharing the market of a developing country often leads to expansion of their productive capacity far beyond the real market demand and, consequently, to greater or less under-utilization of their capacity.

19. The existence of idle productive facilities, which to each of the competitors appears to be due to a lack of demand, often causes them to search for at least a partial use for the idle equipment and impels them towards diversification. Such diversification in most cases requires additional investment in complementary facilities, which may in turn be only partially utilized and which, at the same time, does not lead to more than a partial utilization of the original idle plant and equipment. Since competitors in an oligopolistic industry tend to have a broadly similar technological base, the directions of their efforts at diversification are also likely to be similar. There will be a tendency therefore to share the available narrow market also for the new production lines. Possible economies of scale will often be foregone, and the prevailing market structure will tend to inhibit a higher degree of specialization. Since individual enterprises in such a market structure find it difficult to enlarge their shares of the market, they may exert pressure for an expansion of aggregate demand. This may have strong inflationary effects without, however, solving the problem of excess capacity: the inflationary expansion of demand is likely to foster expectations that will attract additional investment and thus re-create excess capacity.

20. A cause of persistent excess capacity that was cited by most discussants is the underdevelopment of the raw material base resulting in a shortage of raw materials. It was recognized that this cause, unless the result of an unforeseen fall in the supply of raw materials, was due to inadequate programming of investments - that is, to a lack of balance between the expansion of the output

of raw materials and of the processing facilities. In some cases, investment in processing facilities has been excessive as compared with efforts to develop adequate raw material bases because of errors in investment planning, lack of co-ordination of sectorial growth, or mistakes in pre-investment evaluations of the quality and/or quantity of available raw materials.

21. Some causes of excess capacity are connected with faulty assessment of demand or unexpected changes of the market situation. If a faulty assessment of the level or structure of demand is made while planning investments, for an individual enterprise, excess capacity would be created beyond any real need of the market. There have been cases where the demand was estimated more or less correctly, but after capacity was created and used fully for a certain period the circumstances changed drastically for unforeseen reasons beyond the industry's control so that demand fell and the utilization of capacity dropped to a very low level.

22. Concerning the view, that excess capacity is associated broadly with shortages of raw materials, it was recognized that in the case of industries requiring imported raw materials, these shortages reflect balance-of-payments difficulties and the resulting import restrictions. Such shortages need not apply to export industries, which require foreign exchange only to the extent of their need for working capital in foreign currency. Inadequacies in the infrastructure can be a contributory cause of raw materials shortages, for example: insufficient transport facilities, underdeveloped credit and banking facilities to finance seasonal purchases of raw materials, the absence of storage facilities, lack of communication facilities etc.

23. The cause of excess capacity may lie in the industrialization policies of the developing country, where access to capital is made easy and at the same time the capital is unduly dispersed, while high tariff protection is afforded to domestic industry. Easy access to investment capital (because of favourable terms for long-term investment financing and investment grants, including priorities in the allocation of scarce foreign exchange for the import of capital goods) - often at an exchange rate lower than the real value of the foreign exchange in the domestic market - lightens the burden of maintaining excess capacity for the individual enterprise and thus encourages its perpetuation and re-creation. Excessively high tariff protection, in addition to encouraging the adoption of high-cost technologies and suboptimal scales of production, also makes it possible for the individual enterprise to recoup the high cost of idle capacity through the maintenance of an artificially high price

level. In certain cases we are confronted with a set of policies which in fact induce the excess capacity situation and prevent the intensive use of capital.

24. A number of causes of excess capacity arise from planning errors, mismanagement and operational limitations at plant level.

25. Planning errors at plant level may result in an imbalance of the various departments and production lines of an enterprise, with bottlenecks in some phases of production and idle capacity in others. Mismanagement may bring about insufficient co-ordination among the several departments of an enterprise, interrupting the internal flow of materials and services with resulting underutilization of the over-all productive capacity. Inadequate planning time may lead to the installed equipment remaining idle in the period when one or another of the departments of the enterprise are not yet ready to operate.

26. The Group paid considerable attention to over-all deficiencies in demand which are often the result of restrictive monetary and fiscal policies imposed to curb inflation and to restore equilibrium in the balance of payments. When periods of high inflation and optimistic expectations alternate frequently with periods of recession, there will in the long run be a considerable margin of excess capacity. Greater stability in the rate of growth could reduce this considerably, but where it has occurred, or where fluctuations in the level of economic activity are due to external factors, the use of existing idle capacity for export production in periods of slack home demand could be an important stabilizing factor.

27. In many cases the prevailing industrial policies, often operating in an environment of persistent inflationary pressures, also produce a lack of working capital, which prevents the full utilization of the available fixed capital resources. There appears to be a tendency to promote investment in fixed capital, while current operations are often undercapitalized or become so as a result of inflation.

CHAPTER 2 ASSESSMENT OF THE PRESENT SITUATION WITH REGARD TO
CAPACITY UTILIZATION IN DEVELOPING COUNTRIES

28. Information on the extent of actual under-utilization of capacity is extremely restricted and even where information is available, it is often unreliable and not comparable as between countries. There is no comprehensive study of the problem of capacity under-utilization in developing countries, although there are several publications relating to certain aspects of the problem in India. Few countries have compiled comprehensive statistics on rates of utilization, although various scattered reports on specific industries or groups of industries have been published in some countries.

29. Despite the lack of comprehensive and reliable data, there can be little doubt that there is substantial under-utilization of capacity in the developing countries, and that it is generally higher than in the developed countries. This conclusion is supported by the papers submitted to the meeting and by information collected by UNIDO. Thus, for example, in India only a limited number of industries reported a utilization rate of more than 75 per cent, and the range was usually from 65 to 75 per cent. In certain industries, the rate of utilization was as low as 35 per cent. Similar figures are reported for the Central American countries: in the early 1960s Guatemala utilized approximately 74 per cent of its industrial capacity; El Salvador 73 per cent; Honduras 63 per cent; Costa Rica 72 per cent; and Nicaragua 82 per cent. In South America, Ecuador showed a utilization rate of about 41 per cent. According to papers presented at the meeting on the situation in Brazil, Argentina, Israel, and some African countries, these rates of utilization seem to be typical of many industries, including continuous-process industries such as chemicals.

30. In most cases these estimates understate the extent of the problem. The definition of capacity is often based on the number of shifts considered normal by the owners and managers of the enterprises surveyed. In many industries and enterprises in the developing countries, the number of shifts is lower than the prevailing practice in the developed countries. From the point of view

which would base its definition of capacity in each industry on current best practice, the average rate of utilization in the developing countries may in fact be much lower than that indicated by the available estimates.

31. In fact, the situation is more serious than would appear from these general figures alone. Being averages, they conceal the wide differences in the situation of certain enterprises - the differences between enterprises that operate at full capacity, employing three shifts, but sometimes producing goods in excess of their normal capacity, resulting in the premature working-out of equipment. On the other hand, other enterprises are completely non-operative, with equipment going to waste. This is the case with numerous meat plants recently installed in various African countries. The papers presented at the meeting contained many examples of a similar nature.

32. In developing countries where industrialization is under way, a variety of instances can be observed of industrial capital equipment not being fully utilized. Some enterprises often produce much less than their installed equipment would allow, although their products are in demand and are being constantly imported. Other enterprises, previously efficient, have ceased to expand and have often cut back production despite adequate equipment. There are also new factories which have not achieved the level of production for which they are technically capable.

33. From isolated data collected for different periods, it appears that as industry moves ahead in developing countries, there is a tendency in a number of developing countries for under-utilized industrial capacity to increase and the unfavourable effects on the economy as a whole to increase correspondingly. The concerns in which excess capacity exists become a financial burden to the economy rather than contributing to economic growth. Thus, industrialization may actually create new obstacles to social and economic progress if newly installed capacity is not profitably utilized. Therefore, every measure should be taken to eliminate excess capacity and to increase the rate of utilization of existing capacity.

34. Available statistics do not make it possible to distinguish between idle capacity that is real and that which is false. Real idle capacity occurs when production could be effectively increased if demand or input supply were adequate, or any other cause of non-utilization were eliminated. The equipment may be unused at an optimum rate owing to poor management. Real idle capacity is usually in the form of partial operation of equipment.

35. False excess capacity is associated with technological inefficiency, e.g.: the leasing of worn-out pieces of equipment; obsolete equipment; equipment unsuitable for a changed production line which has not yet been demolished; and equipment of the wrong specification for the particular productive process. False excess capacity should not be considered when examining export potential. The equipment should be disposed of by sale or by demolition. And only a fraction of real excess capacity may be able to produce exportable goods.

36. The Group felt that in the absence of more reliable data no more precise assessment of the actual extent of the problem before it could be made, and in particular, inter-country and inter-industry comparisons could not be made. Nevertheless, even the crude data available indicated that, taking into account those factors of under-utilization which could not on a realistic view be eliminated, the developing countries could increase their output and employment very substantially with little or no additional investment.

37. As stated before, the Group assumed that the very fact that the potential output that could be produced by fuller utilization of equipment was not being produced in countries which are by definition short of goods indicated that the factors preventing the use of the idle resources for the domestic market were apparently very powerful. A possible solution might, therefore, lie in the diversion of such resources to production for the foreign market.

38. Utilization of excess installed capacity for production of goods for export, being a short-term problem, can in certain cases become a turning point in the general market orientation of industrial production. If success is achieved in exporting goods primarily produced through utilization of excess capacity, this export production can later be continued on a permanent basis making the whole industry export-oriented. Exportation of goods produced through utilization of excess capacity in this case helps to break into the world market, to establish trade contacts, to test the foreign market, to accumulate experience etc., which could otherwise be too costly and risky if done especially for the creation of a new export-oriented industry.

39. In developing countries which produce goods mainly for their domestic market, occasional export of the domestic goods (which is done in the periods when the internal demand shrinks and is then discontinued when the internal demand revives again, being a short-term solution) will in the long run undermine the export performance of the country which should be based on a firm and continuous basis. Every success in exporting goods produced mainly for the

domestic market should therefore be consolidated by continuing to export even if the domestic market resumes its demand for this product.

40. Both developed and developing countries have the experience of industries established originally as domestic-market industries, which in the course of time grew into export-oriented industries.

CHAPTER 3 PROBLEMS OF DEFINITION AND MEASUREMENT

41. In its discussion of the problems of definition and measurement of capacity utilization, the Working Group was very much aware of the complexities encountered in this area and of the absence of a generally accepted set of definitions and of agreed methods of measurement.

42. The Group was of the view that action should be initiated, possibly by the United Nations Statistical Office, to provide: general guidelines for the systematic collection of internationally comparable statistics which could not only facilitate analysis, inter-country and inter-industry comparisons of performance in this respect and the study of changes over time, and would also arouse a greater awareness of this serious problem among policy-makers. The availability of reliable and internationally comparable statistics would permit the correlation of the rate of capacity utilization with other economic variables, and thus lead to a better understanding of its causes and of the ways to remedy it.

43. The Group was agreed that in view of the apparently great extent of capacity under-utilization and the critical need to establish remedial policies, an important role should be given to statistical approaches. These statistical approaches should be aimed not at methodological refinements or at evaluation of the rates of capacity utilization with a great precision, but at providing essential information needed to delineate the causes of excess capacity and to indicate policies to eliminate these causes.

44. It was felt that a more systematic collection of data, even if relatively crude, would at the present time represent a significant contribution to the greater clarification of the problem, and that the main efforts should be directed at the analysis of the causes of excess capacity.

45. The importance of finding methods of measurement of capacity utilization that do not depend too much on the information given by the enterprise is

especially great for the long-run approach to the problem. Correct policy measures can be applied only if statistical answers are given on the actual situation, and if they are free from the particular interests of individual enterprises. In order to base these methods of measurement on standardized and comparable norms, a clarification and better understanding are needed concerning the causes of excess capacity, the nature and object of statistical measurement, and the purposes for which the measurement is taken.

46. The experts expressed the opinion that, if the United Nations Statistical Office could over a number of years build a body of statistics which is really comparable internationally and which will permit correlation of capacity utilization with other variables, it would have taken a very great step towards policy guidance and the drawing up of practical conclusions from the statistics.

CHAPTER 4 CAPACITY UTILIZATION AND INDUSTRIAL POLICY IN GENERAL

47. The Working Group repeatedly emphasized in its discussions that although, as stated before in this report, the problem of excess capacity at any given point of time is, in itself, of a short-run character, it is nevertheless intimately linked with the long-run industrial policies followed by the developing countries, and is indeed often in a large measure the result of these policies. Without support from appropriate changes in industrial development policy - to the extent that the policy itself may be responsible in one or the other measure for the widespread existence of excess capacity - short-run measures to activate the idle resources are likely to be self-defeating, since new excess capacity is likely to emerge.

48. In the absence of appropriate changes in long-run policies, certain attempts at short-run remedial action might even be harmful. For example, if institutions were set up and incentives provided to promote exports out of existing unutilized industrial capacity, at a price level below full average cost, while no steps were taken to prevent the establishment of new excess capacity in the same industry, a developing country might in time build up an export sector which was subsidising the foreign consumer through prices lower than full cost.

49. The meeting had before it a number of proposals for policies designed to curb the re-emergence of excess capacity, primarily:

Policies for promotion of the rationalization and reorganization of industry through mergers when this is the only way to reduce excessive fragmentation of the industrial structure;

Policies to facilitate the attainment of economies of scale and specialization, at the same time eliminating harmful tendencies often associated with the growth of monopolies in the industry;

Policies intended to reduce excessive tariff protection and the distortions engendered by it so as to foster the specialization of each country in those industries in which long-run comparative advantages were likely to emerge;

Tax policies presenting incentives for a better utilization of installed capacity and discouraging the creation of additional capacities in the situation of serious capacity under-utilization;

Credit policies limiting too easy access to capital for entrepreneurs seeking speculative investments and thus resulting in the creation of new excess capacity;

Policies devised to establish export marketing organizations and a variety of services to promote exports and provide external economies, as well as proposals for better long- and medium-term programming as a framework for investment decisions.

50. The Working Group was agreed that while these obvious links with general industrial policy were probably relevant in many developing countries, the importance of specific measures would vary with the circumstances of each country, and other aspects, relating to a particular situation, might become paramount.

51. The Group also considered that in the absence of an over-all orientation of industrial policy towards the promotion of exports, isolated efforts to export goods produced from idle capacity were unlikely to be successful, if only because the necessary system of export promotion incentives could hardly be established on that basis alone. With the growing awareness of the need to orient a greater part of their industrialization effort towards exports, not only as a means for improving their balance of payments, but often as the very market-base for further industrialization, the developing countries - particularly those which have reached the limit of feasible import substitution - should not have much difficulty in integrating their efforts to activate idle capacity with their over-all export promotion policy. Furthermore, the use of idle capacity of existing plant and equipment for exports, in which less than full-cost pricing might be economically justified, could provide a base from which exports of manufactured goods would establish themselves on the foreign market.

**MEASURES FOR UTILIZATION OF IDLE CAPACITY FOR THE PRODUCTION
OF MANUFACTURED GOODS FOR EXPORT AND MEASURES
REQUIRED TO THIS END**

30. The discussion of the various causes of excess capacity indicated that, in view of the initial orientation of the industrial structure towards the home market, only part of the products commonly produced by existing enterprises could be exported without changes in design, improvements of quality standards, or reductions in costs.

31. The Group considered that nearly all the measures commonly recommended to enable manufactures from developing countries to enter the foreign market successfully apply also to goods which could be produced from idle capacity. Chief among such measures are adaptation of design, quality improvements, uniformity of standards, reliability of supply, appropriate packaging, sales promotion campaigns etc. The main difference between export promotion in general and the promotion of exports from idle capacity is the possibility, or even the necessity in certain cases, of less than full-cost pricing for exports from idle capacity, at least for the period of breaking into foreign markets.

34. The Group took into account that in many cases a serious effort to use idle capacity for exports might require additional investment so as to carry out the necessary adaptations and improvements of the products. Industrial policy ought to encourage such investments, which are likely to have a beneficial effect on quality standards or costs.

35. Although it was recognized that even in the best of circumstances only part of the existing excess capacity could be used for exports, a partial utilization could nevertheless bring about a substantial increase in the exports of manufactured goods from the developing countries. In the case of many of the continuous-process industries, particularly in organic and inorganic chemicals and in the metallurgical industries - which are particularly sensitive to low rates of utilization - there should be considerable possibilities of exporting the surplus capacity if appropriate pricing and marketing policies are

introduced. In particular, the possibilities of interregional and intraregional trade could probably be exploited to a greater degree.

56. In the case of other manufacturing industries, the possibilities would vary with the nature of the industries and the measures taken should be devised in accordance with the requirements of the case. In certain industries, for example the engineering industries, idle facilities could be put to use to produce standard or specially designed parts and components, on a subcontracting basis, for industrial firms in the developed countries and also in other developing countries. The supply of certain non-standard sizes or grades of goods, which are not in sufficient demand to warrant regular production by many of the large-scale manufacturers of the advanced countries, offer a promising field of specialization for the smaller-scale, more versatile industries of the developing countries. It is necessary to explore the possibility of including in agreements for foreign investment some provisions on the use of capacity of the enterprise erected in a developing country to manufacture components for products produced by the mother firm. The mother firm should think about taking a certain responsibility for utilization of the excess capacity of its subsidiary in a developing country through the introduction of co-ordination of production and subcontracting in order to facilitate the access of the overseas subsidiary to the market of the country of the mother firm.

57. The exploitation of such opportunities would require detailed market studies for each industry, and long-run supply contracts could be obtained in many cases. Market studies, and in certain cases the assurance of supply of a range of goods or components that might not be produced by any single producer, might require co-operative efforts by several firms in an industry.

58. In certain industries - notably those producing non-durable or semi-durable consumer goods - the use of idle capacity might require the setting up of joint export marketing organizations, which could fulfill the marketing function, overcoming the difficulties of the small-scale, domestically oriented producer in this respect, and could at the same time become a catalytic agent for greater uniformity and higher levels of quality. Such organizations could also assume the function of purchasing agent of raw materials, particularly those which have to be imported from abroad.

59. In some cases, such marketing organizations would have to have the character of a general exporter, specializing in certain markets rather than in a range of products; in other cases the specialization would be in terms of goods

rather than markets. In countries which have experience with such organizations, the Governments as a rule provide support, but generally the organizations operate autonomously on a commercial basis.

60. The Group was of the view that in most cases the utilization of excess capacity would require close co-operation among the leading enterprises in the industries concerned. The reason for this (aside from the case where the volume of demand can only be supplied jointly, or the marketing effort is beyond the capability of an individual firm) is that enterprises in an oligopolistic structure will be hesitant to tie up their reserve capacity in exports for fear that their rivals may enlarge their market share with an increase in home demand. To overcome this difficulty it is necessary to establish agreement among the leading enterprises, and some countries have done so successfully, often with government support.

CHAPTER 6 CONCLUSIONS AND RECOMMENDATIONS

61. The following suggestions and recommendations, based on the discussions held by the Working Group and the papers presented to it, are addressed to:

- (A) Policy-making authorities (at the government level) of developing countries;
- (B) Industries (at the enterprise level); and
- (C) United Nations Industrial Development Organization (UNIDO).

A. Government policy-making authorities

1. Special arrangements in the field of industrial policy:

(a) Regular reappraisal of industrial policies

62. A regular reappraisal of investment policies and other economic policies affecting the industrial structure is required to minimize the further expansion of capacity when existing productive resources are not utilized to an acceptable degree.

63. Governments desiring to reduce the waste of resources implicit in the existence and creation of excess capacity would be well advised to review their systems of industrial production, in particular the terms on which investment loans and grants are provided; the conditions on which foreign exchange is allocated for imports of capital goods; and other measures designed to promote industrial investment. Such reappraisals should extend to the impact of the prevailing taxation and tariff policies.

64. In addition to reviewing their industrial policies with the purpose of curbing unproductive investments, Governments might introduce a system of incentives, within the framework of an over-all strategy of industrial development and a co-ordinated long-term programme, which would directly encourage a higher rate of utilization of existing productive capacity. Such incentives could be provided through the instruments of monetary and fiscal policy, including tariff policies, credit policies and pricing policies. Different elements of industrial

policy introducing a system of incentives can be effective when the necessary steps are taken to ensure that they are consistent within the adopted general strategy of industrial development, which can bring co-ordination and order into the spontaneous process of industrial growth using a diversity of economic instruments, improved planning and programming.

65. Policies with regard to foreign investment could be reviewed in order to include among the criteria applied to such investments the requirement that the productive facilities be utilized as fully as possible, possibly through arrangements for subcontracting by the parent companies.

66. The consistency of the instruments of the industrial policy is especially important when they are applied to the utilization of installed capacity for export production.

(b) Review of systems of indirect taxation and tariffs

67. Existing systems of indirect taxation could be usefully reviewed and modified, where necessary, to prevent price distortions which may arise from them, and particularly the raising of price levels to the point where price competition among enterprises becomes negligible.

68. The possibilities of introducing a value-added system of taxation might usefully be considered.

69. Tariff rates should be designed so that they do not lead to an excessively high price level in the domestic market as this tends to provide a shelter for inefficiency, technological backwardness, inefficient scale of the enterprise, and the continuance of idle capacity. Tariffs should preferably be designed so as to provide, subject only to certain fiscal requirements, an equal degree of protection to the domestically added value of the products concerned.

(c) Policies designed to encourage industrial rationalization

70. In those cases where a limited domestic market is shared by a relatively small number of enterprises operating at a low level of capacity utilization, the advisability of encouraging industrial rationalization through consolidation, pooling arrangements and co-operation among enterprises in the same industry, resulting in the elimination of high cost units, should be considered by the policy-making authorities, where applicable. Such rationalization should be designed to facilitate the use of resources for the production of exportable goods, through the attainment of economies of scale and specialization in the

field of production and marketing. At the same time, co-ordinated production and marketing should prevent the creation of new excess capacity.

71. The encouragement of industrial rationalization could be affected through appropriate incentives, particularly in the fiscal field, such as the proper use of income taxes, capital gains taxes and inheritance taxes, as well as through the granting of preferential treatment in other areas in which the Government provides support to industry.

(d) Elimination of imbalances on a national level

72. The respective government authorities dealing with economic planning, programming, issuance of investment licences, or licensing the import of industrial equipment, should ensure that manufacturers have adequate planning time, so that new capacity will come into balance with other sectors and elements of the national economy including market demand, export prospects, raw materials base, transport facilities, power and water supply, availability of skilled manpower etc., and will be effectively utilized to a certain marginal degree.

73. When deciding in favour of domestic or imported supplies, it is suggested that domestic terms should be compared with c.i.f. landed costs of imported goods plus a certain marginal equalization charge.

2. Establishment of national institutions for improving the performance of the industry

(a) Establishment of national systems of standardization and quality control

74. Export success cannot be achieved without ensuring that the product meets international standards or standards prevailing in the importing countries. This is particularly important for goods produced from capacity originally intended for the domestic market, since the latter is generally less discriminating than the foreign market. The establishment of institutions for the control of standards and quality may help to overcome the lack of tradition or self-discipline and contribute to a successful utilization of existing capacity for exports.

(b) Establishment of joint marketing organizations

75. A major obstacle to export expansion in general, but in particular that which may arise from excess capacity in relatively small-scale enterprises, is a lack of international marketing abilities and facilities. The organization

of joint marketing organizations, whether through government initiative or that of industrial enterprises, with appropriate government support, could help considerably in overcoming this difficulty.

(c) Arrangements for extension of credit to foreign customers

76. In certain industries the commonly accepted conditions of commerce require the granting of medium- and long-term credits to customers. This is particularly the case in the capital goods industries. Where idle capacity exists and the products are competitive in price and quality standards, it is often the absence of adequate medium- and long-term credit facilities, as well as the lack of facilities to insure producers against non-commercial risks, which hamper the expansion of exports from such existing capacity.

77. Governments might consider the establishment of the appropriate credit facilities and the setting up of insurance systems that would encourage exports from such industries. In certain areas where regional integration schemes are in operation, such credit institutions might possibly be set up on a regional basis. In some cases, additional international supply of credits or finance may be needed to solve the problems of financing the export of products made in developing countries through better utilization of their manufacturing capacity.

3. Better utilization of installed capacity through promotion of multi-shift work

78. In many cases, the introduction of multi-shift work should considerably increase the rate of utilization of installed capacity, particularly for the production of export goods. But there are many conditions which bring the problem of multi-shift work to the level of national policy-making authorities. If all enterprises work one shift, one enterprise cannot introduce the second shift even if technical and economic considerations justify it and there are real prospects of exporting the goods produced by the second shift. Governments might provide incentives for the encouragement of multi-shift work, and might consider the review of existing labour laws and regulations and the introduction of new ones which would facilitate multi-shift work and would, together with appropriate incentives, make it attractive to workers. In certain cases, the introduction of multi-shift work may depend upon the appropriate development of infrastructure.

B. Industries (at the enterprise level)

1. Close co-operation with national policy-making and planning authorities

79. Individual enterprises and their co-operative organizations will be well advised to establish close co-operation with the national planning authorities so as to prevent mistakes in investment decisions which may turn out to be costly to the economy as a whole as well as to themselves.

80. The form of co-operation between the individual enterprises and the Government will vary with the extent of government planning and intervention, but a certain degree of co-operation and co-ordination is essential if wasteful duplication of productive facilities and harmful competition are to be avoided, and if scattered resources are to be combined successfully in a co-ordinated export drive.

2. Improvement of inplant co-ordination of planning and production

81. It is advisable to the management of individual enterprises to check periodically the productive capacity of different departments and production lines of the enterprise in order to reveal bottlenecks, to eliminate excess capacity due to inplant imbalance in installed equipment, and to increase production provided it can be sold on the domestic market or exported.

82. The special attention of the management is called to the importance of pre-production planning for each department and the co-ordination of time functioning between the various departments and production lines in order to prevent non-utilization of capacity resulting from interruptions of the interplant flow of materials and intermediate products.

3. Diversification

83. Companies suffering from excess capacity due to insufficient demand for their major product could diversify their output to include products which are in demand abroad.

84. Some industries are, of course, more suitable for diversification than others, and the adaptability of an enterprise to diversify output needs to be carefully analysed by engineering experts before installing any new equipment. In some cases it is possible to completely switch production to a more sophisticated product with a larger value-added component.

4. Marketing agreements

85. In addition to joint marketing organizations referred to above, smaller and medium-sized enterprises in developing countries could also attempt to negotiate with larger companies in the same industry in order to use their marketing facilities. The larger international concerns, in particular, have established over time effective marketing networks, and the possibility exists for smaller producers in developing countries to utilize these distribution outlets. Agreements of this kind are likely to be feasible wherever some form of production liaison exists between the large and small enterprises, for example, subcontracting agreements.

5. Introduction of quantitative control techniques

86. Many enterprises in developing countries are unacquainted with modern cost accounting methods and other accounting and quantitative control methods. They are therefore often unaware of the fact that exports priced at their real economic cost to the enterprise could be profitable, or of other ways in which enterprise performance may be improved.

6. Specialization in non-standard sizes and grades of products

87. The market for certain non-standard sizes and grades of products is often too limited to make it profitable for large-scale producers in the industrialized countries to supply them, except at relatively high prices. Enterprises in developing countries having excess capacity are often smaller in scale and more versatile in their production capabilities, and would be well advised to study the substantial opportunities for exports afforded by such specialized products.

88. Market studies for individual industries should be carried out, possibly on a joint basis for a number of enterprises in the same branch of industry.

C. United Nations Industrial Development Organization (UNIDO)

89. The operational activities undertaken upon request by Governments of the developing countries for technical assistance should be given first priority, and supporting activities should be action-oriented to give a better understanding of the ways and means of utilizing excess capacity for the production of export goods.

1. Operational activities

(a) Assistance in improving methods of production

90. UNIDO should be in a position to offer technical assistance to developing countries for the improvement of methods of production along the lines of the recommendations contained in the two previous chapters in order that idle capacity could be used to produce competitive goods. This includes inter alia assistance in the introduction of modern methods of production control in quantitative and qualitative terms, the improvement of labour productivity including actual demonstrations by experienced workers from other countries and the transfer of modern technology.

(b) Case studies

91. UNIDO could, upon request of the developing countries, carry out case studies in depth in order to throw more light on the causes of excess capacity in a particular industry and its effects on the process of industrial growth. These studies could be conducted at the level of an industrial sector, with the object of identifying those manufacturing enterprises which are running well below their full capacity or have failed completely after a short trial period, but could produce goods for export.

92. Such studies would assist in utilising excess capacity for exports in several ways. Studies at the sector level could provide the basis for further technical assistance in the field of industrial policies. Studies at the enterprise level could provide the basis for direct assistance to the enterprises concerned with a view to raising their rates of utilisation and diverting the additional output to exports. Second, case studies beginning with the investment decision process would pinpoint planning and operational errors which could be avoided in the future. Third, a comparative analysis of the case studies of enterprises will supplement the industry studies, throw light on the working of the existing economic institutions - governmental and private - and permit a reappraisal of existing policies.

(c) Expert assistance in the field of industrial policy

93. UNIDO, jointly with other United Nations agencies, should be able to render expert assistance to the developing countries upon their request, to work out special arrangements in the field of industrial policy in the light of the recommendations contained in paras. 62-64 and 70-73 of this report.

(d) Assistance in the field of identifying excess capacity and exportable potentials

94. Upon requests of developing countries, UNIDO should undertake technical assistance projects aiming at the identification of exportable potentials of existing excess capacity, including the analysis of foreign demand (jointly with UNCTAD) for the goods which can be produced using excess capacity.

(e) Multi-shift work

95. If requested, UNIDO jointly with ILO should provide technical assistance enabling developing countries to produce goods for export introducing multi-shift work for better utilization of industrial capacity at their disposal.

96. Experience gained by UNIDO while accomplishing technical assistance projects should be analysed and used to work out recommendations to other industries and countries.

97. UNIDO's findings could be disseminated, with due discretion, to interested bodies in developing countries, and the availability of such information, on an internationally comparable basis, would be of great help to the developing countries themselves in their efforts to cope with the problem of excess capacity, and provide a firmer empirical background for UNIDO's technical assistance activities.

2. Supporting activities

(a) Analysis of industrial failures

98. In view of the great diversity of forms in which excess capacity exists in developing countries, a systematic collection of information on industrial failures is needed, as well as an analysis of the reasons for the complete inability to utilize production capacity. This analysis should start with a critical appraisal of pre-investment studies, conducted for failed enterprises, and end with the study of recent changes in the economic and market situation if it caused these enterprises to close down.

99. Such case studies would have to be carried out with the close co-operation of UNIDO experts in the field and the local organisations, governmental as well as private, of the countries concerned.

(b) Co-operation on a regional and subregional level

100. Industrial co-operation between neighbouring countries is generally supposed to bring about fuller use of existing capacity and to prevent the emergence of unwanted capacities. Where such regional or subregional co-operation exists or where the atmosphere is favourable in the sense that there is room for practical negotiations on future co-operative arrangements, equipment inventories could be prepared in selected industries, such as fertilizers, chemicals, cement and certain metal industries. Work of this type is already under way in some regional economic commissions, and UNIDO could develop its co-operation with these organizations in this field.

(c) Reducing costs and simplifying procedures of export

101. UNIDO, jointly with UNCTAD, could undertake a study on measures which could help the developing countries to reduce all additional costs connected with the marketing of their goods abroad, including packaging and transport costs, insurance costs, credit costs, brokerage etc., and also to suggest simplifying of export/import procedures.

(d) Wider dissemination of information and provision of statistical data

102. A close relationship should be established with national institutions, research and information centres and private industrial associations, which would permit UNIDO to collect and analyse information on a national and international level on the problem of excess capacity.

103. UNIDO should initiate the systematic collection of statistical and other information on excess capacity in the developing countries and on the experience of its utilization for export production, and should establish a system for disseminating this information among the developing countries.

(e) Seminar

104. A seminar for government officials dealing with the problems of industrial policy, economic planning and programming, with lectures and discussions by experts is desirable for a group of countries with an especially high level of capacity under-utilization. The seminar would provide lectures and discussions on how to measure capacity and its utilization; how to use idle capacity for export production; how to reduce imbalances in the economy and in an individual enterprise etc.

(f) International industrial co-operation

105. Using the contacts and experiences UNIDO has accumulated while studying the possibilities of promoting international co-operation between the industries of different countries, special measures should be taken inter alia to achieve a better utilization of installed capacity through international co-ordination of production, subcontracting systems, and the production of simpler parts and components in developing countries for more sophisticated goods produced in developed countries.

(g) UNIDO's co-operation with other United Nations agencies

106. Utilization of excess capacity for export is a complex problem which should be simultaneously approached from many different angles. It has a production aspect, a statistical measurement aspect, a trade aspect, a social aspect etc. Therefore, UNIDO should co-operate with other United Nations agencies and the specialized agencies which specialize in the corresponding matters (UNCTAD, Statistical Office of the United Nations Regional Economic Commissions, ILO and so on) for a successful solution to this problem. This co-operation should be in the form of joint projects of technical assistance undertaken upon request of developing countries as well as in the form of joint projects of a supporting character, as for example the organization of the seminar proposed above. (C, 2 (e)).

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Annex 2

Statement of Gen. Edmundo de Macedo Soares e Silva,
Minister of Industry and Commerce

The realization in Brazil of this high level meeting, sponsored by UNIDO, is a cause of pride for the people and the Government of this country. At the same time, we will be offered an opportunity to absorb the knowledge of highly qualified experts coming from several parts of the developed and developing nations.

Although your stay among us will be a short one, you will be able to feel the effort that this country is exerting in order to change its production structure through industrialization. Allow me, therefore, to offer you some data about the nature and intensity of this effort.

From 1957 to 1966, industrial production more than doubled in Brazil, and the secondary sector of the Brazilian economy began to represent one third of the nation's wealth. This rapid growth was observed when we started to produce within the country goods which were formerly imported. We proceeded from the production of consumer goods, durable and non-durable, of small technological value and low capital density, to the production of equipment and heavy machinery, which now supplies a large part of our needs.

In short, exchange difficulties created the conditions whereby Brazilian entrepreneurs and foreign investors took the opportunity to fill the void left by lack of imports.

The real utilization of the Brazilian market by domestic production enabled a considerable mass of labourers, who would otherwise be doomed to rural under-employment, to enter the work market, raising consequently the internal consumption of goods.

In honesty I should tell you that the way followed by Brazil in its development is far from being an ideal pattern for those countries that undergo similar phases of economic transition.

We failed to understand at the proper time the real meaning of the problem in order to avoid certain structural distortions. We might point out the lack of interest for the agricultural sector, which was unable to

follow the real growth of income and the population increase; the delayed expansion of basic structure, specially that related to power, transportation and communications; the progressive compression of imports, and the insufficient professional training of manpower.

The Government itself was also hindered in starting its promotional policy, since it was confronted with an obsolete and inadequate administrative set-up. The revamping of the system of taxation and customs and monetary regulations was slow and difficult because of adverse factors in the legislative area and even in the executive area.

Moreover, and above all, we let ourselves be led by the inflationary illusion. Many people took the industrial upsurge for unlimited inflation and only when the process reached its climax, with an inflationary rate of 100 per cent per year was the illusion broken. The inevitable results were social disorders, stagnation of investments, decapitalization and a setback in industrial production.

We had to choose a powerful medicine with painful effects on private and governmental sectors. It is not easy, as you know, to compress public expenses, raise taxes, institute austerity in wages and credit, and in doing so disregard the claims of industries which did not adjust themselves to the new situation.

On the other hand, the entrepreneurs had to give up the usual price increases, speculative stockpiling and abusive use of other people's capital instead of their own.

Fortunately, the hardest problems of this period had been successfully overcome along with the neutralization of the larger inflationary spots. The present Government is interested in giving to the country an updated institutional set-up which will support and promote the creative impetus of Brazilian men of industry. For this purpose, several important improvements were made in the system of taxation, money and administration.

Now we reap the first results. If the initial measures caused a decrease in demand, including the closing of low productivity enterprises, on the other hand, they induced the industrialists to examine their structures with greater care, aiming at better use of labour and equipment, which were in several enterprises obsolete and of low-rentability. The process of

readjustment to the new economic policy, in spite of all precautions taken, caused in 1965 a decrease of production of about 4.7 per cent which was recovered in 1966. In 1968, we attained an industrial growth of 15.4 per cent over that of the previous year.

This is the great challenge that faces the Brazilian industrial sector: In order to maintain a cumulative growth process, the country's production must become accessible to the great mass of population and in this process the labour power be liberated from the agricultural and livestock raising sectors. According to studies made by ECLA^{1/}, only 10 per cent of our population shares in full our industrial products market. The remaining 90 per cent are unable to absorb manufactured articles other than those of general use, such as textiles, shoes etc.

The main factors that will keep the Brazilian industry in constant expansion are its capacity to modernize, to incorporate new technology and to acquire new administrative and managerial methods - in other words to strive to attain constant improvement of productivity coupled with real cost reduction and, from there on, reach production scales in accordance with international standards.

From this picture, you may well imagine the high degree of interest we have in the present meeting on the subject of excess capacity in industry.

You are well aware that the problem of excess capacity in the Brazilian industry cannot be detached from the typical aspects of an under-developed economy where, in certain sectors, industries of widely different degrees of productivity coexist. Imperfect competition permits that, in these sectors, prices be fixed in consideration of the enterprises of lowest capacity; thus their survival is assured and high profits are yielded to those who have modernized.

The adoption of technologically accurate production methods is rather recent in the Brazilian industrial system. Indeed, they only began to be adopted when the large-scale steel, mechanical and automobile industries were installed. Old workshops and small enterprises ventured into industrial production without having had time, capital or competitors' pressure to reach high rentability standards.

^{1/} UN Economic Commission for Latin America.

Recent studies have shown the consequences of this policy, which resulted in low utilization of installed capacity, in an under-developed country, and in multiplication of low productivity small industries. Even in industrial fields where modern factories were organized along with technical administration and mass production capacity, the favourable effects of scale economy were impaired owing to the maintenance of obsolete production systems. We maintained what was defined by ECLA as a technological duality, which permitted the existence of enterprises of very dissimilar sizes, organizations and technical foundations.

The integration of the internal domestic market, the leading purpose of the Brazilian Government, and the correction of the above distortions, are already opening the way to a phase of capitalist production far more advanced, that is, one which keeps the goal of profit but by means of competition linked with technology. Another alternative, which is already becoming feasible for more dynamic sectors of the Brazilian industry, is that of exportation. The new governmental policy in this area has already created attractive conditions, through tax exemptions and financing for the entrepreneurs who launched themselves into the struggle for the manufactured goods markets. As a result, Brazilian industrial exportation rose from US\$39 million in 1963 to US\$150 million in 1968. We will strive for much more and, also in this field, your help may prove invaluable.

Allow me now to wish you much success in your work and a very happy stay in our country.

UNU

AGENDA

- 1. Organisation of the meeting and adoption of the agenda.**
- 2. General discussion aimed at:**
 - a) Assessing the actual situation in capacity utilization with regard to its importance for the economy of different countries and within different branches of industry;
 - b) Identification of the issues relating to the utilization of excess capacity for the production of goods for export;
 - c) Establishment of the priorities in dealing with these issues;
 - d) Clarification of the scope of problems to be dealt with by the meeting in order to draw up a programme of action for the utilization of excess capacity for export.
- 3. Main issues of capacity utilization for export:**
 - a) Methodological and statistical problems connected with the definition of capacity and the measurement and estimation of capacity utilisation;
 - b) Main causes of capacity under-utilization; the ways and means of diagnosis;
 - c) Measures to convert idle capacities into production of export goods.
- 4. Concluding items:**
 - a) Recommendations to developing countries;
 - b) Recommendations for UNIDO's actions;
 - c) Adoption of the report;

ANNEX I

List of documents prepared for the Working Group

- | | |
|-----------------------------------|---|
| ID/WG.29/1 | Provisional Agenda |
| ID/WG.29/2 | Provisional list of participants |
| ID/WG.29/3/Rev.1 | Provisional list of documents |
| ID/WG.29/4
and Corr.1 | Ways and means for fuller utilization of excess capacity
in engineering industries |
| ID/WG.29/5 | Excess industrial capacity in India and the possibility
of its utilization for export purposes |
| ID/WG.29/6 | Capacity utilization in some African countries |
| ID/WG.29/7 | Excess capacity - measurement, causes and uses: A case
study of selected industries in Israel |
| ID/WG.29/8
and Corr.1 | Industrial excess capacity and its utilization for export |
| ID/WG.29/9 | The utilization of production capacity in Argentine
industry |
| ID/WG.29/10 | The causes of excess capacity in the manufacturing
industry |
| ID/WG.29/11 | The special nature of the fertilizer industry in devel-
oping countries |
| ID/WG.29/12 | Excess capacity in Brazilian industry |
| ID/WG.29/13
and Corr.1 | Utilization of productive capacity in the Latin American
iron and steel industry |
| ID/WG.29/14 | Case studies on the problem of industrial excess capacity
and its utilization |





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