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**TOWARDS A DEVELOPMENT POLICY FOR THE MANUFACTURING SECTOR**

NC/MON/94/01D

MONGOLIA

Report

Prepared for the Government of Mongolia  
under UNDP-financed TSS-1 facility

V.95-51455

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## **PREFACE**

Under a UNDP financed TSS-1 facility, a UNIDO study mission was fielded to Mongolia from 19 September to 28 October 1994. The project aimed at reviewing the industrial sector development and facilitating a smooth completion of the industrial sector reform through the identification of specific industrial policy measures.

This report has been prepared by Asia and the Pacific Programme, Country Strategy and Programme Development Division, based on the work of Masayoshi Matsushita, Asia and the Pacific Programme and Paul Hesp, UNIDO consultant.

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## TABLE OF CONTENTS

	<u>Page</u>
INTRODUCTION	1
SUMMARY OF SUGGESTIONS FOR POLICIES AND MEASURES	2
I THE OVERALL ECONOMIC ENVIRONMENT DURING THE TRANSITION PERIOD	4
II THE MANUFACTURING SECTOR - PRESENT STRUCTURE AND RECENT DEVELOPMENTS	7
2.1 General characteristics of the sector	7
2.2 Recent developments	9
2.3 The role of private enterprise	15
2.4 Foreign investment	16
2.5 Trade in manufactured goods	19
III THE OVERALL POLICY FRAMEWORK	22
3.1 Introduction	22
3.2 Major elements of the overall policy framework	23
Monetary policy	
Fiscal policy	
Commercial laws	
The financial infrastructure	
Incentives for foreign investors	
Privatization	
Human resources development	
IV PRIORITY AREAS FOR INDUSTRIAL POLICY	29
4.1 Introduction	29
4.2 Priority industrial subsectors	30
Export oriented industries	
Import substitution industries	
Basic needs industries	
4.3 Other key issues	33
Restructuring enterprises	
SME and informal sector development	
Raw material supply and linkage development	
Foreign direct investment	
Environmental sustainability	

	<u>Page</u>
<b>V INDUSTRY SUPPORT INFRASTRUCTURE ISSUES</b>	<b>38</b>
<b>5.1 Industry support institutions</b>	<b>38</b>
The Mongolian Chamber of Commerce and Industry	
The Mongolian Business Development Centre	
Applied R&D	
Standardization	
<b>5.2 Physical infrastructure</b>	<b>41</b>
Transport	
Telecommunications and postal services	
Energy	
Water	
<b>VI INDUSTRIAL POLICY AND THE ROLE OF GOVERNMENT</b>	<b>44</b>
6.1 Introduction	44
6.2 The Ministry of Trade and Industry	44
<b>VII THE ROLE OF DONOR AGENCIES</b>	<b>48</b>
<b>REFERENCES</b>	<b>50</b>
<b>ANNEX: PROJECT SUGGESTIONS IN SUPPORT OF INDUSTRIAL POLICY IMPLEMENTATION</b>	<b>51</b>

**ACRONYMS**

<b>AsDB</b>	<b>Asian Development Bank</b>
<b>CIS</b>	<b>Commonwealth of Independent States</b>
<b>CMEA</b>	<b>Council for Mutual Economic Assistance</b>
<b>ESID</b>	<b>Environmental Sustainable Industrial Development</b>
<b>EU</b>	<b>European Union</b>
<b>FAO</b>	<b>Food and Agriculture Organization of the United Nations</b>
<b>FDI</b>	<b>Foreign Direct Investment</b>
<b>FTZs</b>	<b>Free Trade Zones</b>
<b>GATT</b>	<b>General Agreement on Tariffs and Trade</b>
<b>GDP</b>	<b>Gross Domestic Product</b>
<b>GNP</b>	<b>Gross National Product</b>
<b>GTZ</b>	<b>German Technical Cooperation</b>
<b>HRD</b>	<b>Human Resources Development</b>
<b>IMF</b>	<b>International Monetary Fund</b>
<b>ISIC</b>	<b>International Standard Industrial Classification</b>
<b>JICA</b>	<b>Japan International Cooperative Agency</b>
<b>MBDC</b>	<b>Management Business Development Centre</b>
<b>MDP</b>	<b>Management Development Programme</b>
<b>MTi</b>	<b>Ministry of Trade and Industry</b>
<b>NDB</b>	<b>National Development Board</b>
<b>NGOs</b>	<b>Non-governmental Organizations</b>
<b>R &amp; D</b>	<b>Research and Development</b>
<b>SIS</b>	<b>Special Industrial Services</b>
<b>SME</b>	<b>Small and Medium Enterprises</b>
<b>SMI</b>	<b>Small and Medium-scale Industries</b>
<b>SPC</b>	<b>State Privatization Commission</b>
<b>T</b>	<b>Togrog</b>
<b>UNDP</b>	<b>United Nations Development Programme</b>
<b>UNIDO</b>	<b>United Nations Industrial Development Organization</b>

## **INTRODUCTION**

This document analyzes the industrial sector in Mongolia, with particular emphasis on the natural resource based industries; and reviews a policy which focuses on elements of a policy for the manufacturing sector.

The document stresses the "work in progress" character of policy-making in Mongolia. The country has never known an industrial market economy, and is only now beginning to establish the conditions for such an economy. There is no coherent overall development policy yet, the supporting legal framework is still incomplete, government agencies are being restructured, and restructuring will also be required on a large scale in manufacturing. The human factor is central in this process: old ways of thinking have to be overcome, new know-how and skills have to be developed.

Policy-making in Mongolia must therefore take the long view; at the same time, the absence of a fully developed policy and legal environment makes it impossible to formulate a long-term strategy for the industrial sector, as there is uncertainty with regard to a number of relevant parameters. However, for the industrial restructuring process to be successful, it should take place within a general set of industrial development priorities for the short and medium term. These can be refined and developed further as the restructuring process - which will also provide essential "bottom up" impulses - proceeds. In the absence of detailed information on all key manufacturing branches, the short and medium-term suggestions for policies and measures presented here do not cover all possible relevant issues, although an effort has been made to be as complete as possible.

The document is structured as follows: first, a summary of the suggestions for policies and measures contained in the text is presented. Chapter I contains an analysis of recent economic developments; Chapter II then analyzes the structure of, as well as, recent developments in the manufacturing sector. The discussion then moves to policy issues. Chapter III gives a brief overview of policy issues which are relevant for the overall environment in which private enterprise operates. Chapter IV discusses specific industrial policy issues. Industries as well as industry-related issues - such as the promotion of linkages and small and medium-scale enterprise - are identified on which support measures could be focused. Chapter V places emphasis on the important role of industry support institutions for industrial development in the market economy, and summarizes the need of physical infrastructure development. Chapter VI discusses the major government agencies involved in industrial policy formulation and execution. Chapter VII summarizes donor support in areas which are relevant to the development of the manufacturing sector. In the ANNEX the document presents some suggestions for international cooperation to policy making and execution or to an aspect of industrial development identified as deserving priority.



## **SUMMARY OF SUGGESTIONS FOR POLICIES AND MEASURES**

### **The overall policy environment**

- Further improvements are needed in the overall policy and institutional framework if a development strategy for the manufacturing sector is to succeed.
- The Foreign Investment Law should be made fully consistent with other relevant laws and regulations and provide equal treatment for investors.
- A further review of public ownership in industrial enterprises would be needed. Enterprises which remain under government control should be run on the basis of efficiency criteria prevailing in a market economy.
- The improvement of management capability through MDP is of crucial importance for the creation of a competitive manufacturing sector. Future training and education should take account of changing industrial human resources priorities.

### **Industrial policy issues**

- The mission recommends the government to formulate priority subsector development strategies and their immediate implementation in industrial policy. The priority subsectors consist of export oriented industries, import substitution industries, and basic needs industries.
- In the context of the present Mongolian industrial sector, the mission recommends the government to strengthen strategies for a functional part of industrial development including: restructuring enterprises, SME and informal sector development, raw material supply and linkage development, foreign direct investment, and environmental sustainability.
- The government should abolish legislation which discriminates against small-scale or informal sector activities; it should encourage informal sector activities by the provision of basic infrastructure.
- An analysis is needed of the potential markets for and competitors of the Mongolian manufacturing sector. Strong efforts must be made to penetrate foreign markets, with a focus on quality products, as the domestic market for manufactured products is limited.
- Priority should be given to foreign industrial investors who help to establish a Mongolian presence in international markets, who transfer know-how and technologies to local industries, and whose activities have strong ties with local suppliers.
- Industrial development priorities should take account of Mongolia's fragile natural environment. Efforts to introduce environmentally sustainable production methods in large-scale enterprises as well as SMEs should be increased.

**Industry support infrastructure**

- The position of the Chamber of Commerce and Industry vis-à-vis the government must be clarified: the Chamber should be a completely independent organization.
- A national R&D policy would be needed to guide research to areas of greatest future relevance for the country.
- To save costs, the various industrial research and technical know-how transfer activities could be carried out by one institute with a centralized administration and management, and separate research units for key products.
- The Mongolian National Institute for Standardization and Metrology should be strengthened and should cooperate closely with international standards organizations.
- Transport infrastructure needs to be improved. A major effort is needed to upgrade telecommunications services. The speed and reliability of international postal services must also be improved.

**Implementing agencies**

- One major role of the government with regard to industrial development is to formulate and implement an industrial policy. Formulation of an industrial policy is less complicated than implementing it. A crucial issue is how the government could implement the formulated policy within the capacity and capability of its organs.
- The country has a small manufacturing sector whose size may shrink even further, and the ministries have a shortage of staff dealing with manufacturing. Overall responsibility for industrial development policy should be given to MTI, although a further reorganization of that ministry may be necessary to allow it to cope successfully with its task under market economy conditions.
- The future tasks of MTI with regard to manufacturing would fall into four main categories: industrial policy formulation and execution; stimulating industries and industrial support activities identified as priorities; dialogue with organizations representing private sector industrialists; and defining priorities for donor assistance in cooperation with NDB and donors.

## I. THE OVERALL ECONOMIC ENVIRONMENT DURING THE TRANSITION PERIOD

The change from central planning to a market economy has over the past five years resulted in a strong contraction of the Mongolian economy. Between 1989 and 1993, GDP in 1986 prices declined from T 10,546.8 million to T 8,193.6 million (see Table 1). The only major economic activities which escaped the overall downward trend were agriculture, where production remained more or less stable, and "other services" (which would include catering and tourism-related activities) - this sector actually grew by 18 per cent in 1986 prices. Unemployment, virtually unknown before 1990, increased rapidly, with close to 72,000 persons being registered as unemployed at the beginning of 1994. Estimates however indicate that actual unemployment may be as high as 200,000 out of a working force of approximately one million.

In 1994, however, there were clear signs of an economic recovery<sup>1</sup>. According to IMF estimates, GDP is likely to grow by 2.5 per cent. Inflation seems to be under control now, the monthly increase in the consumer price index having slowed down to 3.8 per cent in September 1994 (the average for 1993 was 9.1 per cent, and 4.4 per cent for the first nine months of 1994). Building activity, though only a fraction of its 1988 peak, is increasing for the first time in six years. A relatively good harvest is expected, and agricultural production is likely to exceed last year's levels. Herds have also grown. Exports still exceeded imports during the first six months of the year, but over the whole year exports are expected to equal imports. Unemployment is still growing, but the increase was down to 5 per cent during the first nine months of the year, as compared to 13 per cent in 1993. Generally speaking, the social indicators are now a greater cause of concern than the economic indicators.

An essential condition for future economic growth will be the reform of the remaining inefficient large-scale public sector enterprises, including improvement of management and the cessation of subsidies. The latter will release urgently needed funds for the private sector; this sector is growing rapidly but it is facing serious problems in financing essential investments.

The industrial sector (mining, energy and manufacturing), as Table 1 shows, accounted for 32 per cent of gross domestic product at 1986 prices in 1993, making it the largest single contributor to the national economy. It was followed by agriculture and other services, each with about 23 per cent, and trade with 19 per cent. As indicated above, the other services sector has grown rapidly in recent years. Its share in GDP has increased by 10 per cent since 1989.

Between 1989 and 1993, value added in the industrial sector declined from T 3,887.4 million to T 2,621.1 million. The decline in the industrial sector was considerably stronger (23 per cent) than in the economy as a whole, which is largely explained by the partial loss of former CMEA markets and difficulties in procuring essential inputs, spare parts and machinery, which were also largely provided - and subsidized - by CMEA countries.

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<sup>1</sup> The following text is largely based on UNDP - Mongolia Update, September 1994, p. 1.

During 1993, a stabilization process set in, and by September 1994, the volume of industrial output was slightly (3.5 per cent) above the level for the January-September 1993 period<sup>2</sup>. At the time of writing, no figures were available on the value of this output in constant prices, and total industrial output is still well below the peak levels of the late 1980s.

The figures quoted in the present chapter and in the next should be taken as close approximations rather than exact indications of magnitude, as it appears that the existing statistics, in spite of commendable efforts to adapt data collection to the changing nature of the Mongolian economy, do not yet capture all economic activities. Gaps in statistical information seem to be particularly serious in the case of the smaller enterprises.

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<sup>2</sup> Figures from the database of the Statistical Office of Mongolia; this is also the source of 1994

Table 1: Mongolia - GDP and GNP by sector, at 1986 prices (million togrog)

	<u>1980</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>1991</u>	<u>1992</u>	<u>1993</u>
Total value added	6913.6	9478.1	10158.1	10540.3	11063.9	11897.8	11639.2	10702.1	9447.3	8911.4
Industry	2024.8	3078.9	3144.8	3300.0	3426.7	3809.2	3887.4	3507.1	2856.6	2621.1
Agriculture	1209.7	1612.0	1805.9	1637.6	1681.6	1879.8	1846.9	1709.2	1977.0	1879.1
Transport	399.7	452.3	511.9	596.6	675.0	697.7	561.1	466.5	240.4	199.6
Construction	697.2	1003.5	1126.3	1151.9	1190.0	1166.6	1124.6	499.9	476.0	430.3
Communication	67.5	128.3	146.4	154.7	66.0	180.9	190.8	162.4	113.6	121.7
Trade and Procurement	1407.3	1828.7	1929.0	2104.2	2201.8	2405.1	2363.4	2073.3	1581.0	1589.1
Services	987.7	1249.5	1343.1	1442.6	1580.3	1602.9	1521.6	2131.1	2026.9	1890.5
Other	119.7	133.9	150.7	152.7	142.5	155.6	143.4	153.6	175.9	180.0
Subsidies and other	-795.8	-975.0	-848.1	-908.5	-940.3	-1351.0	-1357.8	-1371.4	-1003.1	-717.8
Gross domestic product	6117.8	8512.1	9310.0	9631.9	10123.6	10546.8	10281.4	9530.7	8444.2	8193.6
Growth rate (%)			(9.4)	(3.5)	(5.1)	(4.2)	(-2.5)	(-9.2)	(-9.5)	(-3.0)
Net factor income from abroad	-1037.4	-1216.6	-1257.9	-1358.9	-1287.9	-1186.0	-1149.4	-486.3	-284.0	-631.2
Gross national products	5080.4	7295.5	8052.1	8273.0	8835.7	9360.8	9132.0	8844.4	8160.2	7562.4

Source: Statistical Office of Mongolia - Mongolian Economy and Society in 1993, Ulaanbaatar 1994

## II. THE MANUFACTURING SECTOR - PRESENT STRUCTURE AND RECENT DEVELOPMENTS

### 2.1 General characteristics of the sector

Manufacturing (excluding the production of concentrates of non-ferrous metals like molybdenum and copper) accounted for about 60 per cent of gross industrial output in 1993. Within manufacturing, the main subsectors were food processing (33 per cent of manufacturing output), textiles (13 per cent, mainly wool-based), leather products (10 per cent) and chemicals (9 per cent, mainly household chemicals)<sup>3</sup>. There is a small engineering branch, which is mainly made up of repair workshops and possibly some assembly operations.

A key characteristic of the sector is the wide range of industries which are related to livestock breeding, and which in many cases have (or should have) close relations with each other:

- Meat products
- Dairying
- Tanneries
- Leather and fur products (shoes, clothing)
- Cashmere processing
- Wool spinning, weaving
- Woollen clothing, blankets, carpets

For climatological reasons, there is only a limited range of agro-industries which are not based on livestock; the country however does have a significant beverage and flour/flour products industry.

In most industries, production is heavily concentrated in a few large companies: in chemicals, for example, 99 per cent of output was concentrated in five enterprises in 1992. In most industries more than half of the output was provided by five enterprises in 1992<sup>4</sup>, the only notable exception being wood processing. Small and medium-scale enterprise is growing very fast, but as yet it is mainly concentrated in trading, not in the manufacturing sector. However, agro-processing, for which small-scale technology is often available (as in the case of cereal milling), has witnessed a rapid growth of small and medium scale enterprise in recent years (see Section 2.3).

Industrial enterprises are mainly found in or near the major population centres: Darkhan, Erdenet, Choibalsan and Ulaanbaatar, especially the latter. In the agro-processing industries, "approximately two-thirds of all enterprises are located in the

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<sup>3</sup> Statistical Office of Mongolia, op. cit.

<sup>4</sup> Boston Consulting Group - Reconstruction and development of the Industrial Sector of

principal cities or the surrounding aimags" (provinces)<sup>5</sup>. This is logical, as the physical infrastructure and markets required for industrial enterprises are very weakly developed in rural areas, much of the population in these areas being nomadic. Firms in Ulaanbaatar account for half of the employment in the agro-industries. Rural industries are mainly involved in basic processing for local consumption or the production of intermediates for the larger-scale industries. In the case of agro-processing, the latter activity accounts for 40 per cent of output<sup>6</sup>.

The registered enterprises in the industrial sector (mining and energy included) employed 124,100 persons in 1993, or 16 per cent of the labour force. Of this number, about 80 per cent were probably employed in manufacturing industries. The main source of manufacturing employment was the food and beverages subsector, with some 23,000 employees in 1992. Other important sources of employment were wood, wool and leather processing, each with over 15,000 employees; and the production of construction materials, with some 12,000 employees<sup>7</sup>. The share of wage costs has remained fairly stable: these accounted for 12 per cent of the cost of total output in 1989 and 13.8 per cent in 1992.

The recession and the economic restructuring now taking place have resulted in increasing unemployment for men and - more especially - women, as well as a loss of career opportunities for women since men have taken over key positions. An important reason for the economic marginalization of many women is the closure of child care facilities. Long-term unemployment and the marginalization of women at the decision-making level are leading to a loss of skills and know-how. Participation in education is also decreasing, as many parents can no longer afford to keep their children in school. Human resource issues will be discussed in more detail in Section 3.2.

Material inputs (excluding fuel and energy) are the main cost item in manufacturing, accounting for 48 per cent of total output cost in 1992. Unfortunately, there is no breakdown by type of input and by manufacturing branch. The 1992 Boston Consulting Group study shows that raw materials account for an even higher share in production cost in most of the agro-based industries: 60 per cent in the footwear industry, over 80 per cent in meat processing, about 90 per cent in flour milling<sup>8</sup>.

High input costs are caused by high collection costs of raw materials (most of the raw materials for agro-industries are supplied, and will continue to be supplied, by

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<sup>5</sup> FAO/AsDB - Mongolia, Agricultural Processing, Storage and Distribution Project, Phase II Preparation - Part I: Project Brief. August 1994, p. 14.

<sup>6</sup> FAO/AsDB, op. cit., p. 15.

<sup>7</sup> Boston Consulting Group, op. cit., p. 14.

nomads), lack of attention to quality and efficient production of inputs, and high dependence on imported fuel, spares and intermediate products (for example cardboard and polyethylene granules for the packaging industry). Problematic supply of domestic inputs is often a consequence of the slow transition from a system of centralized marketing, government purchases and fixed prices to a marketing/wholesale system based on private or (as in rural areas in Western Europe) co-operative initiative. Moreover, higher prices can now be obtained for various raw materials and semi-processed goods in, for example, China. In the case of cashmere - of which Mongolia is the world's second largest supplier - this has resulted in an export ban whose effectiveness has been controversial, particularly among international aid agencies and donors<sup>9</sup>.

## 2.2 Recent developments

A recent breakdown of developments by individual subsectors or branches is not available, with the exception of agro-processing (see below). Therefore, a branch-level analysis of the restructuring process in the sector is not possible. In a comparison with 1989, however, it is clear that the major subsectors have suffered severely: in constant 1986 prices, output in the food processing subsector had decreased by 67 per cent in 1993, in textiles by 75 per cent, and in leather products by 81 per cent.

Some signs of a recovery in the manufacturing sector are reflected in output figures for the period January-September 1994 (see Table 2). Output in the engineering and metal working subsector was 19.7 per cent above the level in the same period in 1993. The decline had slowed down considerably in the food processing, wood processing and clothing industries. Important industries like leather products and textiles however do not appear to be approaching the end of their decline. The modest overall upswing in the industrial sector is mainly due to continuous increases in the production of non-ferrous ore concentrates; in fact, output of these has more than doubled in value (in 1986 prices) since the late 1980s.

The growth of the output volume of a number of products during January-September 1994 reflects the modest recovery in some of the branches: conspicuous increases, relative to 1993, are to be found in the production of traditional Mongolian clothing, leather coats and sausages. Output of household soap also increased. However, all production figures were still below those for 1991.

According to a recent study by the FAO and the Asian Development Bank (AsDB), 1993 had already witnessed a recovery to levels above those of 1991 in the production of a number of products (most of which were intended for domestic consumption) in selected industrial establishments<sup>10</sup>. These will be discussed briefly in the following paragraphs. In general, however, the impression is confirmed that the recovery of manufacturing production is lagging behind that of the rest of the economy.

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<sup>9</sup> For further analysis on this issue, see 4.3 Raw Material Supply and Linkage Development.

<sup>10</sup> FAO/AsDB, *op. cit.*



Table 2: The volume and price increase of industrial production, 1991-1994  
(January - September)  
(per cent)

	1992 — 1991		1993 — 1992		1994 — 1993	
	real growth	price increase	real growth	price increase	real growth	price increase
<b>INDUSTRY - TOTAL</b>	<b>82.1</b>	<b>247.9</b>	<b>78.6</b>	<b>579.2</b>	<b>103.5</b>	<b>169.4</b>
of which:						
electricity and thermal energy	93.3	192.6	86.7	653.0	104.1	171.3
fuel	88.9	245.1	87.0	674.2	82.6	197.1
non-ferrous metal	105.4	873.1	112.1	873.4	102.3	184.7
engineering and metal working	103.8	97.9	37.2	366.1	119.7	214.6
chemical	109.2	100.6	77.5	1555.5	69.0	218.3
building material	57.6	201.5	61.1	457.8	69.5	230.3
wood processing	46.0	237.6	59.7	508.5	89.5	125.5
glass and faience	68.3	246.8	69.0	189.7	44.8	208.1
textile	88.1	234.3	72.9	321.1	56.8	383.5
sewing	24.3	243.4	15.3	983.1	86.7	322.7
leather, fur and shoes	65.5	312.2	55.2	300.0	42.0	206.7
printing	40.2	334.3	102.8	212.4	61.4	248.6
food	76.9	215.4	69.7	481.7	71.5	230.8
others	74.0	639.1	60.3	171.6	69.1	228.0
Self employment, partnerships, companies			109.8	101.2	241.2	114.9

Source: Statistical Office of Mongolia Database

The data contained in the FAO/AsDB study, though based on a limited sample of enterprises, are the most detailed of their kind available at present, and allow the identification of trends at the branch/individual industry level during the early 1990s (see Table 3). They show that, among the industries producing for the domestic market, those producing staples such as bread and flour have maintained more or less satisfactory production levels since 1991. Capacity utilization remained above 85 per cent in the flour mills and above 70 per cent in the bakeries which were surveyed. Output in the canned vegetable industry improved noticeably.

On the other hand, a serious decline took place in meat and dairy processing. In meat processing, capacity utilization had decreased to 55 per cent in 1993; in sausage production, capacity utilization was only 22 per cent in that year, in spite of a strong recovery of production. In milk processing, capacity utilization had even decreased to 12 per cent. While the products of these industries may also be considered essential food items, consumers could evidently not afford them, and there has been a noticeable worsening of dietary standards.

A strong recovery was made by the beverages industry. By 1993, vodka distilling was using over 75 per cent of available capacity, and the figure for soft drinks was almost 72 per cent; production far exceeded the figures for 1991. In the textile-related industries, production trends have been mixed. The output of cashmere shawls was maintained at a high level (above 90 per cent); on the other hand, the output of felt boots - an important consumer good in the cold Mongolian winters - was down to 911 pairs in 1993, representing 31 per cent of the production capacity of the firms surveyed.

In the industries producing intermediate products, output declined dramatically during the early 1990s, less than 7 per cent of the sheepskin processing capacity and only 20 per cent of the processing capacity for hides of large animals being used. The situation was relatively good in cashmere processing, reflecting the export ban and the relatively high domestic demand.

In the export-oriented industries, the situation on the whole has worsened considerably. There was some growth in the production of flour and fodder for export, and a decline in the beverages branch, which in the past had to lay on extra shifts to fulfil demand, was relatively modest. The production of meat for export, however, declined by almost two-thirds, and by 1993 capacity utilization in the industry was only 31 per cent.

Table 3: Production Capacity and Volume for Selected Agro-Processing

Items	Number of enterprises per product	Approximate value produced			Capacity in 1993
		1991	1993	(%)	
1	2	3	4	5	6

**Primary Handling of Inedible Products**

Enterprises					
10					
1. Sheepskin (thous. p.s.c.)	6	3170.8	321.0	10.1	4893.5
2. Hides of large animals (thous. p.s.c.)	3	506.6	303.1	59.8	1501.8
3. Wool, cashmere (tons)	4	172.1	323.3	193.1	621.7
4. Leather goods (thous. p.s.c.)	3	-	2.7	-	3.0
5. Man, tail, hair (tons)	1	2.5	1.5	60.0	2.0
6. "Khrom" material (thous. m <sup>2</sup> )	1	501.9	63.2	12.6	375.0
7. "Bulgar" material (thous. m <sup>2</sup> )	1	143.0	28.5	19.9	
<b>Total Production Operations</b>	<b>19</b>				

**Non-food Export Production**

Enterprises					
8					
1. Leather overcoat (thous. p.s.c.)	1	0.6	0.44	73.3	1.0
2. Leather jacket (thous. p.s.c.)	1	2.5	-	-	3.4
3. Carpet (thous. m <sup>2</sup> )	2	850.0	1019.0	119.9	1890.0
4. Cashmere goods (thous. p.s.c.)	1	256.0	214.4	83.8	300.0
5. Sheepskin overcoat (thous. p.s.c.)	1	155.0	103.3	66.6	185.0
6. Scoured wool (tons)	2	3410.6	3148.2	92.3	4000.0
<b>Total Production Operations</b>	<b>8</b>				

**Food Products for Export**

Enterprises					
5					
1. Meat (tons)	2	31088.6	11268.6	36.2	36180.0
2. Intestine (thous. rolls)	1	290.0	38.0	13.1	450.0
3. Bone meat (tons)	1	110.0	32.0	29.1	300.0
4. Sausage (tons)	2	5069.2	4469.0	88.2	5100.0
5. Canned products (tons)	1	1054.9	358.3	33.9	1500.0
6. Flour and fodder (thous. tons)	1	42.8	47.4	110.7	59.0
7. Spirits (thous. litres)	1	2986.5	2092.7	70.1	3000.0
8. Vodka (thous. litres)	1	3328.6	3025.1	90.9	2700.0
9. Beer (thous. litres)	1	2842.3	2287.2	80.5	8800.0
10. Soft drinks (thous. litres)	1	7302.5	5467.0	74.9	6000.0
11. Dried proteins (tons)	1	378.8	65.8	17.4	400.0
12. Carbonic gas (tons)	1	384.3	230.3	59.9	400.0
13. Syrup (tons)	1	3046.3	398.7	13.1	3500.0
<b>Total Production Operations</b>	<b>15</b>				

Table 3 (continued)

Items	Number of enterprises per product	Approximate value produced			Capacity in 1993
		1991	1993	(%)	
1	2	3	4	5	6

**Production of Leather-Based Products for Domestic Markets**

	Enterprises	10			
1. Leather overcoat jackets ( p.s.c.)	6	-	485	-	674
2. Leather material (thous. m <sup>2</sup> )	3	-	41.5	-	472
3. Prepared parts of footwear	2	-	540	-	2500
4. Shoes (pair)	2	-	110	-	200
5. Sheepskin coat (p.s.c.)	1	107	51	47.7	1055
6. Others	2	-	90	-	100
<b>Total Production Operations</b>	<b>16</b>				

**Production of Fibre-Based Products for Domestic Markets**

	Enterprises	10			
1. Spinned wool (tons)	2	1529.3	729.3	47.7	1564.0
2. Cashmere (tons)	1	26.8	9.2	34.3	69.0
3. Cashmere shawl (p.s.c.)	2	4461.0	4054	90.9	4500.0
4. Yarn fabrics (thous. m)	1	900.0	160.0	17.8	760.0
5. Carpet (m <sup>2</sup> )	1	3292	1550	47.1	3000.0
6. Felt (m <sup>2</sup> )	4	-	26	-	12100
7. Felt ..... (pair)	4	1100	911	82.8	2950
8. Woolen garment (p.s.c.)	1	-	106	-	180
<b>Total Production Operations</b>	<b>16</b>				

**Alcohol & Beverage Production for Domestic Markets**

	Enterprises	8			
1. Vodka (thous. litres)	3	51.0	125.5	246.1	165.5
2. Beer (thous. litres)	2	-	21.5	-	30.0
3. Soft drinks (thous. litres)	7	50.0	374.2	748.4	520.0
<b>Total Production Operations</b>	<b>12</b>				

**Fruit and Vegetables Production for Domestic Markets**

	Enterprises	11			
1. Canned vegetables (tons)	5	770.0	1114.5	144.7	1670.0
2. Fruit juice (tons)	2	-	4.1	-	450.0
3. Sea - ..... (l)	1	-	300	-	17200
4. Potatoes, vegetables	6	178.9	275.8	154.2	444
<b>Total Production Operations</b>	<b>14</b>				

Table 3 (continued)

Items	Number of enterprises per product	Approximate value produced			Capacity in 1993
		1991	1993	(%)	
1	2	3	4	5	6
<b>Dairy Production for Domestic Markets</b>					
	<b>Enterprises</b>	<b>10</b>			
1. Butter (tons)	3	173.2	86.4	49.9	215.5
2. Traditional dairy products (tons)	4	547.3	517.3	94.5	7712.4
3. Milk (thous. litres)	6	21360.0	4174.9	19.5	34408.0
4. Ice-cream (tons)	2	600.0	502.0	83.7	1800.0
<b>Total Production Operations</b>	<b>15</b>				
<b>Meat Products for Domestic Markets</b>					
	<b>Enterprises</b>	<b>8</b>			
1. Sausage (tons)	7	37.0	61.7	166.7	280.0
2. Meat (tons)	3	1600.0	1121.8	70.1	2040.0
3. Fish (tons)	1	-	1.0	-	-
<b>Total Production Operations</b>	<b>11</b>				
<b>Bakery Products for Domestic Markets</b>					
	<b>Enterprises</b>	<b>15</b>			
1. Bread (tons)	13	17175.0	13857.6	70.7	19446.0
2. Biscuit (tons)	5	1262.0	574.5	45.5	1735.0
3. Bread yeast (tons)	1	-	0.05	-	-
<b>Total Production Operations</b>	<b>19</b>				
<b>Flour and Fodder Production for Domestic Markets</b>					
	<b>Enterprises</b>	<b>8</b>			
1. Flour (tons)	7	58501.5	53569.3	91.6	62290.0
2. Barley flour (tons)	1	-	14.1	-	13.5
3. Animal fodder (tons)	3	11500.0	8007.4	69.6	12026.0
<b>Total Production Operations</b>	<b>19</b>				
<b>Packaging</b>					
	<b>Enterprises</b>	<b>3</b>			
1. Bottles (million p.s.c.)	-	5.8	3.6	62.1	5.6
2. Plastic bags (thous. p.s.c.)	-	1181.5	474.6	40.7	1200.0
3. Cardboard boxes (million p.s.c.)	-	4.0	1.2	30.0	7.0
4. Labels (million p.s.c.)	-	16.6	20.8	125.3	60.0
5. Plastic film (tons)	-	112.0	168.7	149.7	200.0
6. Plastic jars (thous. p.s.c.)	-	457.3	-	-	1200.0

Source: FAO/ADB - Mongolia: Agricultural Processing, Storage and Distribution Project  
Working Paper 5: Sector Survey and Analysis

The comparatively high value-added export industries based on leather and skins all show a strong decrease. Exports of leather jackets had ceased completely by 1993; capacity utilization was down to 44 per cent in the enterprise making leather overcoats and down to 56 per cent in the sheepskin overcoat enterprise. Textile-based exports were doing somewhat better, and carpet production was actually almost 20 per cent above 1991 levels according to these figures; even so, capacity utilization in the latter was only 54 per cent. In scoured wool and cashmere goods, the capacity utilization rates were 71 and 79 per cent, respectively.

The reasons for the strong contraction and the slow recovery of the manufacturing sector have already been mentioned briefly in Chapter I: the domestic market is very small as a consequence of the recession, the former CMEA markets were partially lost, and Mongolia has great difficulties in procuring essential inputs, spare parts and machinery which were also largely provided (and subsidized by) CMEA countries. Many tanneries, for example, no longer have access to cheap East European chemicals, and the consequent decrease in output of tanned leather is having repercussions throughout the leather goods industry. Most factories have obsolete equipment.

There is little understanding of quality, design and marketing, and management in privatized enterprises has in many cases continued along the old lines. Apart from the existing technical and material supply problems, the lack of skills and know how which are essential in a market economy makes it very difficult for Mongolian industrial enterprises to compete, either in the domestic or in export markets. In some industries, moreover, production capacity is well in excess of the size of the market, as suggested by some of the capacity utilization figures in Table 2 - even if one assumes a flourishing economy:

"The resources allocated to the industrial sector in recent years, driven by the former command economy, and at least partially financed by Soviet concessional loans and grants, have been greater than is typical of an economy at Mongolia's stage of development...It is possible and even likely that some past economic activities will not be supportable in a market economy."<sup>11</sup>

### 2.3 The role of private enterprise

In 1993, the private sector only accounted for 8.6 per cent of industrial output (including energy and mining), according to official statistics. This figure probably does not reflect present reality, as not all establishments, especially the smaller ones, are represented in statistics. For the economy as a whole, the contribution of private enterprise to GDP was estimated at about 50 per cent in early 1994; in the industrial sector, at more than 20 per cent<sup>12</sup>. If former public enterprises which have recently

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<sup>11</sup> Boston Consulting Group, *op. cit.*, p. 40.

<sup>12</sup> UNDP, *Mongolia Update*, May 1994; Mongolian Management Development Programme, paper on Mid-term Policy to Develop the Private Sector in Mongolia, 1994.

been privatized would be included, then the figure would be much higher. Privatization is proceeding rapidly, and the great majority of enterprises in manufacturing is now privately owned. Mid-1994 figures for the textile, wool and leather industry, for example, show that of 74 companies listed on the Mongolian Stock Exchange, 50 were wholly or predominantly owned by private entrepreneurs<sup>13</sup>.

The rapid growth of private enterprise is reflected in recent official statistics: there was an increase in the volume of output by private enterprises of 241 per cent during January-September 1994, as compared with the same period in 1993. Price increases in privately-owned industries (14.9 per cent) were well below those in the sector as a whole (69.4 per cent); in the absence of a breakdown by industrial activity, however, it is difficult to draw definite conclusions from this figure, or to make pronouncements on the contribution of private enterprise to individual branches. An analysis of the industrial sector, made in 1992 indicates that Mongolia's smaller enterprises (which would be privately owned) are more efficient than the large (former) public enterprises<sup>14</sup>. Problems related to the privatization of public enterprises are discussed in Section 3.2.

In agro-processing, the rapid increase in small and medium-scale enterprises indicates the growing importance of private enterprise. At the end of 1989, there were 130 enterprises which processed, stored or distributed agricultural products. This number had increased to over 1,000 in early 1994; this figure would include privatized enterprises which have been broken up. While at the end of 1989, 68 of the enterprises had more than 121 employees, there were only 45 enterprises in that size category by early 1994, and 90 per cent of the enterprises employed 25 persons or less. Enterprises that were still owned by the government would mainly be found in the large-scale category<sup>15</sup>.

#### 2.4 Foreign investment

In April 1994, foreign investors were involved in 143 firms, of which 10 were fully foreign-owned. The foreign share in registered capital of these firms was US\$ 20.7 million; the share of local investment in these enterprises was not known. The largest of these enterprises were to be found in the construction sector: four wholly Russian-owned firms with a total capital of US\$ 5.6 million. A different source gives a total of 311 entities in which foreigners had invested US\$ 44.1 million by the end of 1993. As the figures in this source are less detailed, and as the reasons for the discrepancy could not be established, the text of this section basically relies on the source quoting the lower figures.

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<sup>13</sup> Mongolian Stock Exchange database printout, n.d.

<sup>14</sup> Boston Consulting Group - op. cit., p. 44

<sup>15</sup> FAO/AsDB, op. cit., Table 2.

Foreign investment in industrial enterprises accounted for US\$ 9.3 million, distributed over 81 firms (see Table 4). Three Russian firms in the metal and stone processing industries accounted for almost one-third of this investment. It seems likely that this investment is related to basic processing of non-ferrous ores, which is dominated by Russian capital, and that the enterprises in question are not involved in the actual metal-based manufacturing.

If these enterprises are excluded, then the textile and garment sector becomes the main focus of foreign investment, with a total of US\$ 2.3 million in 17 firms. The larger part of this investment is from Hong Kong. The United States' preferential treatment in imports of clothing and garment goods from Mongolia encourages foreign investors to establish a manufacturing plant. The other industries which attracted a significant share of foreign investment in manufacturing were food processing, with a total of US\$ 953,000 in 11 firms, and wood processing, with a total of US\$ 814,000 in 10 firms. As the amount of local capital invested in these firms is not known, it is hard to assess the size of the individual enterprises, but it seems safe to say that most of the enterprises are medium or small scale, by international standards. There was also a considerable foreign presence in industry-related services (mainly Russian), including US\$ 1.1 million of investment in machinery repair.

According to recent information from the Ministry of Trade and Industry (MTI), the number of firms with foreign investment rose rapidly during the summer of 1994, reaching a total of 393 by late June. This may include a number of investments which are still at the project or approval stage. The list contains, for example, six firms in shoe manufacturing; in autumn 1994 however shoe production was still wholly dominated by a few public sector entities. Most of the firms with foreign investment (242) were in manufacturing. The textile, food and wood processing industries retained a strong position with 51, 46 and 27 firms, respectively. But the investment is diversifying, the number of projects in skin processing and electronics assembly having increased to 22 and 9, respectively; the miscellaneous category had increased to 26 projects. There was also a strong growth in the number of machinery repair shops, which reached a total of 34. The foreign presence also became stronger in other activities which are potentially important for industry, such as research, training and information services, and consultancy.



Table 4: Foreign Participation in Manufacturing, 1 April 1994

Sectors	Number of entities	FDI country of origin	Number of entities	Foreign investor's share in registered capital (US\$ 1,000)
Skin processing and production of products finished	9	Russia	9	354.8
Wool and cashmere processing	2	USA	2	126.5
Textile and garment	17	Hong Kong	8	1444.8
		UK	1	480.0
		PR China	4	304.0
		Japan	2	35.7
		Russia	2	9.4
Metal and stone processing	7	Russia	3	3313.0
		PR China	3	90.7
		Kazakhstan	1	7.5
Production and assembling of electronics	2	Russia	1	3.7
		Singapore	1	40.0
Food industry	11	PR China	8	576.1
		Russia	2	113.5
		Germany	1	263.1
Animal bones	1	PR China	1	77.2
Wood processing	10	Romania	1	410.0
		PR China	6	384.4
		Russia	3	19.6
Production of mining explosive	2	Russia	2	23.8
Cosmetic products, soap and pigments	1	Czech	1	5.0
Medical service and production of drugs	2	Viet Nam	1	50.0
Printing	1	Russia	1	220.0
Other industries	16	Japan	1	100.0
		Russia	10	583.5
		Hong Kong	1	67.2
		Uruguay	1	200.0
		PR China	3	88.0

## 2.5 Trade in manufactured goods

The available statistics do not give a clear picture of manufactured exports. The main category of exports has long been non-ferrous ore concentrate, which account for about 60 per cent of export earnings. These are followed by other semi-processed goods like skins and camel hair. The role of exports with a higher degree of processing would seem to be quite limited. No recent breakdown of manufactured export products by value, trading partner or their share in total export earnings, was available. Although it was estimated in 1992 that exports account for 55 per cent of total industrial output<sup>16</sup>, export earnings are much lower than the import requirements of the industrial sector (inputs, spare parts and equipment). This has made the industrial sector a net consumer of foreign exchange.

The most important trading partners are the Russian Federation and the People's Republic of China; these accounted for 37 per cent and 17 per cent of total trade, respectively, in the period January-September 1994 (see Table 5). There is a clear tendency towards trade diversification: in 1989, one trading partner (the Soviet Union) accounted for 79 per cent of all trade, and there was virtually no trade with countries outside the CMEA. Japan is rapidly becoming an important trading partner, accounting for less than two per cent of total trade in 1989, five per cent in 1993, and eleven per cent by October 1994. The 1994 trends showed a further decrease in trade dependency on the Russian Federation, and increasing shares in trade with countries such as the Republic of Korea, Hong Kong and Switzerland. Diversification is particularly noticeable in the case c<sup>f</sup> exports.

Barter trade plays a relatively important though decreasing role, accounting for 22 per cent of export trade and 13 per cent of import trade in the third quarter of 1994. The landlocked position of the country and transport/transit problems (see Section 5.2) are an obstacle to foreign trade.

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<sup>16</sup> Boston Consulting Group, *op. cit.*, p. 13.

Table 5:

Value of exports and imports by trading partner,  
first three quarters of 1993 and 1994 (US\$ 1,000)

## Exports

	1993			1994		
	1st quarter	2nd quarter	3rd quarter	1st quarter	2nd quarter	3rd quarter
Austria	.0	385.4	.0	17.5	.0	.0
Australia		.7	.0	.0	.0	.0
USA	656.1	118.2	1223.3	188.2	7872.1	1480.2
U.K.	210.6	354.9	129.1	103.2	374.2	2455.3
Armenia	.0	7.9	.0	.0	.0	.0
Afghanistan	1.0	.0	.0	.0	5.2	30.2
Belorussia	.0	36.0	.0	45.5	.0	.0
Belgium	40.3	1122.6	1002.7	55.8	13.4	1307.6
Russian Federation	48249.0	19702.0	26946.9	21479.2	20417.6	17363.1
Italy	4138.2	698.1	3159.2	3855.6	1296.2	1630.5
South Korea	339.4	226.8	281.2	265.1	5364.2	8477.9
Kazakhstan	38.4	38503.2	12722.2	15429.5	2482.0	15318.8
Canada	164.2	113.8	.0	2.7	.0	43.2
Kyrgyzstan		26.4	.0	.0	.0	.0
North Korea	26.0	84.6	30.0	105.5	.0	72.5
Netherlands	.0	.0	583.6	800.1	572.1	872.9
Poland	.4	2.5	2.5	.0	1.0	5.8
Portugal	.0	.0	.0	.0	1.4	.0
Romania	32.9	.4	.0	.0	.0	.0
Singapore	2.0	.6	97.2	37.4	.0	.0
Hong Kong	35.2	210.4	76.4	419.5	365.1	628.1
Tajikistan		3.9	.0	.0	.0	.0
Taiwan	22.9	51.7	76.3	.0	.0	14.9
Uzbekistan	.0	1424.2	.0	504.8	.0	15.2
Ukraine	.0	.0	2.1	1.3	42.5	.0
Hungary		39.6	14.1	.0	.0	21.2
Finland	.0	1.4	.0	1394.2	205.2	350.8
China	8267.5	36050.4	15929.3	10083.5	17189.7	21373.2
Germany	269.6	911.0	349.0	29.3	852.3	924.4
Czechoslovakia	58.1	96.5	66.3	6.2	402.3	502.9
Switzerland	.3	2050.1	3931.1	4820.9	4647.7	5021.2
India	.0	.0	.0	164.9	.0	.0
Yugoslavia	.0	.0	111.3	234.3	.0	102.6
Japan	2193.3	4824.6	5311.9	2134.1	6363.4	16530.9
Total	64990.6	107469.0	71206.5	62178.3	68516.2	94674.6

Table 5 (cont.)

## Imports

	1993			1994		
	1st quarter	2nd quarter	3rd quarter	1st quarter	2nd quarter	3rd quarter
Austria	18.5	448.9	101.7	-	61.3	34.6
Australia	-	-	-	-	.1	.0
USA	2549.2	8836.9	1280.8	277.7	3272.4	1181.3
England	1462.4	1122.6	2.1	.2	157.6	246.0
Belorussia	-	36.6	-	-	124.8	172.4
Belgium	426.0	-	379.7	103.8	846.8	-114.5
Bulgaria	-	76.9	165.8	-	.8	136.2
Russian Federation	23634.5	28707.4	103034.1	13330.8	25961.6	40539.6
Italy	-	147.0	.0	88.6	11.6	110.2
Denmark	333.3	256.2	284.6	11.6	54.7	9.4
South Korea	1453.0	214.0	52.0	1721.4	1502.2	4351.1
Kazakhstan	-	190.2	29.3	9.6	55.1	53.5
Canada	-	60.7	34.4	.0	.0	26.2
Kyrgyzstan	-	-	2.7	-	18.2	37.4
Latvia	-	5.9	.0	.0	.0	.0
Malaysia	-	-	-	-	35.0	66.3
North Korea	79.8	77.7	26.5	.0	13.0	14.6
Nepal	-	-	-	-	.9	.0
Holland	-	47.2	.0	19.3	30.8	48.9
Poland	-	25.0	.0	292.1	123.4	515.6
Romania	-	-	-	26.9	.0	.0
Saudi Arabia	-	-	-	-	13.0	.0
Singapore	247.2	411.3	482.4	432.6	1165.6	946.1
Hong Kong	850.7	2410.4	1595.5	1279.8	1995.0	4098.9
Tajikistan	192.9	-	.0	-	.0	.0
Taiwan	-	1322.5	21.5	-	29.9	116.2
Thailand	-	13.8	.0	52.1	41.2	75.8
Turkey	-	-	-	1.1	.0	.0
Uzbekistan	-	13.5	9.0	305.9	35.3	13.2
Ukraine	-	-	529.4	70.4	.0	2.0
Hungary	9.5	.1	37.2	53.9	68.0	111.8
Philippines	6.4	6.1	.0	.0	5.9	.0
Finland	-	-	21.7	.0	50.4	9.6
China	11050.6	15476.9	16827.1	2639.0	5412.7	5882.1
Germany	798.2	3351.4	155.8	1357.6	1716.3	3074.2
Czechoslovakia	202.5	70.2	80.2	236.7	313.0	1827.3
Switzerland	356.7	83.3	144.3	11.0	660.6	1145.7
India	-	71.1	.0	6.7	10.2	.0
Yugoslavia	22.5	-	134.7	.0	53.6	1.1
Japan	1661.6	5364.9	5626.4	2102.1	4390.2	1385.7
Viet Nam	-	-	-	.0	.0	16.3
Total	45365.7	69115.3	131167.4	2433.3	48852.8	66279.9

Source: Database, Statistical Office of Mongolia

### III. THE OVERALL POLICY FRAMEWORK

#### 3.1 Introduction

In a centrally planned economy, the government controls the economy. In a market economy, however, the basic responsibility for development lies with the private sector. The role of the government in a market economy is subject to controversy. Should the government play an active role and direct industrial development towards priority objectives, or should it minimize its involvement in the economy? During the present transitional period to a modern market economy, market failure is likely - Mongolia has never known a market economy in the classical sense of the word. There are, therefore, arguments for an active role of the government in restructuring the economy.

There are a number of reasons for an active role of the government in economic development. In practice, "natural selection" among firms often leads to market control by oligopolies or monopolies, to the detriment of consumers. Governments therefore formulate and enforce legislation which ensures competition. Actions of individual entrepreneurs may moreover result in social or environmental costs which have a negative influence on overall development; it is in the interest of society as a whole to minimize these costs.

Without a policy framework to guide economic activities, "...politicians will inevitably make ad-hoc decisions as they respond to pressure to 'do something'. In turn these individual actions are liable to accumulate as unplanned and incoherent precedents with unpredictable knock-on effects across the economy"<sup>17</sup>. The resulting lack of stability and transparency in the policy environment will deter foreign and domestic investors, jeopardizing the transition process to a fully developed market economy. A market economy also requires a complex system of corporate law, guarantees for intellectual property rights, a highly developed transport and telecommunications infrastructure, and an all-round educational system. In most cases, there is no private gain in realizing these essential conditions for long-term development. Government involvement is therefore essential.

Generally speaking, government action which has had positive effects has been characterized by:

- Integration of industrial and macro-economic policies;
- Clear and realistic objectives;
- Well-established monitoring procedures;

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<sup>17</sup> John S. Henley - "Industrial policies in the economies in transition: emerging themes and policy dilemmas, Paper presented at the Workshop on Industrial Policies in the Economies in Transition, Budapest, 12-13 October 1993, p.1.

- Involvement of the business community and the labour unions;
- Removing barriers to competition;
- A phasing-out of declining industries and stimuli for the diffusion of new technologies;
- Complementary measures to improve infrastructure and training, and to promote small and medium-scale enterprise.

Policies which enable the manufacturing sector to adapt to its new role are particularly important, because of the inevitably long process of privatization and restructuring, and because the future development of manufacturing will depend on long-term investment. Long-term processes require political stability; well-defined responsibilities of ministries; and an overall policy and regulatory framework which is stable, transparent, and attractive to investors by offering special incentives.

The overall impression is that the formulation of a good overall framework has come a long way in Mongolia. The efforts of the government to put such a framework in place in a country which has no previous experience with a market economy must be commended. The country is trying to complete, in a couple of years, a process which has taken industrialized countries just as many decades. There is inevitably a time lag as know-how is being built up and psychological attitudes change. One important factor, a stable and realistic exchange rate, would seem to have been achieved in the course of 1994.

A more time-consuming issue is the (re-)training of human resources, which is needed on a massive scale (in the economy as well as in government agencies), and the restructuring and redefinition of tasks of policy-making and implementation agencies. The more diversified and dynamic structure of society in a market economy demands flexibility and decentralization of authority. This again increases the need for good coordination of the activities of government agencies.

**It should be stressed that the overall framework must be in place; in other words if there is to be an attractive business climate, if a development strategy for the manufacturing sector is to succeed and if foreign investors - who will be a crucial source of capital, new technologies and know-how - are to be attracted to the sector.**

### 3.2 Major elements of the overall policy framework

Major elements of the overall framework are: monetary and fiscal policy; laws relating to commercial activities; financial infrastructure; measures to attract foreign investment; privatization; and human resources development (HRD). These issues have received much attention from the government and donor agencies in recent years. They are therefore discussed only briefly, with the exception of HRD which in the opinion of UNDP is the most pressing long-term issue.

### **Monetary policy**

The exchange rate was adjusted from T 40/US\$ to T 150/US\$ early in 1993, and a unified exchange rate was established. Further devaluations followed in the course of 1993, as further adjustments of the exchange rate for the togrog to its market rate took place. After another 10 per cent devaluation early in 1994 the foreign exchange rate was quite stable (T 410/US\$ in April, T 414/US\$ in July).

Temporarily, a partial foreign exchange surrender scheme, whereby public enterprises are required to surrender up to 60 per cent of hard currency earnings, remains in force to allow the government to build up reserves and to pay public debts (government borrowing is now strictly controlled). Restrictions on access to foreign exchange and on international transfers are to be abolished as the structural adjustment programme now being executed is completed.

### **Fiscal policy**

The government has introduced a number of new taxes and customs duties - sales tax in the catering sector, duties on imported products such as petrol and private cars. These would not have a negative impact on industry; the government has moreover simplified corporate taxes and made wages and depreciation tax deductible.

In certain areas of the tax system, progress has thus been made. But the complexity and inconsistency of existing taxes are said to have resulted in large-scale tax evasion by the business community. This problem is recognized. Further simplification of the tax system is envisaged and the tax administration system is to be reformed and made more effective with donor assistance. At the same time, the tax base is to be broadened.

The state budget condition remains weak in 1994. Total expenditure was projected at T94.8 billion while the total revenue was projected at T82.1 billion. Under the austerity budgetary policy, the government aims at changing the old central budget financing system.<sup>18</sup>

### **Commercial laws**

A large number of laws and regulations have been adopted since 1990 to provide the legal framework for a market economy. These include laws pertaining to property, business entities, monopolies, banking, bankruptcy and investment (see below). As there was previously no private business, no laws which reflected Mongolian business practice could be formulated; instead, foreign laws were more or less copied. The fine-tuning of such laws in accordance with the local situation will take some time.

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<sup>18</sup> UNDP Mongolia Update, April 1994, p. 5.

Among the serious shortcomings of the legal framework are the absence of contract and land laws, although both are expected to be introduced soon. In the absence of a contract law, it is impossible to enforce business agreements, and the lack of clarity over land ownership implies that real estate cannot be used as collateral for bank loans. It is possible to lease land, but at present it is not clear whether a lease can be transferred or sold.

**It is evident that much remains to be done to establish a legal framework which is both transparent, internally consistent and effective, and which does not inhibit the growth of business. The effective application of laws would also require a reform of the relevant government agencies/institutions, such as courts, and (re-) training of staff. With regard to the institutional issues, the public sector reform programme outlined in the summing up of the 25-26 October 1994 MDP Global Workshop<sup>19</sup> is of great importance.**

### **The financial infrastructure**

At present, a major problem in financing industrial projects is the lack of confidence in the commercial banking sector. The level of deposits is low, there are no incentives for long-term deposits and interest rates on loans are high<sup>20</sup>. The latter is partly caused by shortcomings in commercial legislation - loans are risky for banks because there is no contract law, and partly by the limited availability of funds. Government subsidies to factories which are basically unviable contribute to the scarcity of financial resources. Banking procedures are slow, especially for foreign transfers. The level of services is generally low, and bank staff is not trained in modern banking operations. Both the World Bank and the IMF are providing assistance to the banking system to improve its performance and reliability. In the longer term, capital may also be mobilized through the Stock Exchange as the secondary market for shares takes off.

There are indications that a National Development Bank or a similar institution is to be set up; details, such as its relationship to the government, were not available at the time of writing. Staffing such a bank would be a problem, given the shortage of qualified personnel in the financial sector. For rural and export-oriented small and medium enterprises (SMEs), revolving funds have been established which are supported by donors. The interest rate is 4.6 per monthly, according to information received from the MTI. The Bank of Investment and Innovation is to supervise this fund; actual disbursement will take place through branches of the existing banking system. Most of the borrowing is to industrial SMEs, according to MTI.

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<sup>19</sup> Mongolian Government Management Development Programme, Strategic Management Unit - Syntheses of Policy, Programme, and Action Plan Proposals (mimeo).

<sup>20</sup> Real interest rates on loans may be as high as 15 per cent per month (UNDP Mongolia Update, September 1994, p. 2)



### **Incentives for foreign investors**

The Foreign Investment Law which was passed in 1993 provides incentives in the area of profit and capital repatriation, duty free imports of inputs and machinery, tax concessions, etc. A 10-year tax holiday followed by a five-year tax exemption on half the income of a company is, for example, available to investors in physical infrastructure. Export-oriented investment also enjoys a number of tax privileges. However, as indicated above, contract and property rights are not sufficiently defined yet, which will also deter foreign investors. The law also has a number of shortcomings:

- The rights and responsibilities of foreign investors and the agencies with which they must interact have not been clearly defined yet;
- The provisions of the law have not been fully harmonized with those of other laws which may affect the activities of the investor;
- Not all investors are treated equally;
- While it is legitimate for the government to use the law to guide investment towards priorities, some of the existing priorities must be questioned<sup>21</sup>;
- The law is administered in a complicated way, and decisions on licensing sometimes seem arbitrary;
- No effective policy is pursued to attract foreign investors.

**In order to enhance the effectiveness of the Foreign Investment Law, it should be made fully consistent with other relevant laws and regulations and provide equal treatment for investors in areas where they can contribute most to the economy; institutional bottlenecks should be removed and efforts to attract foreign investors should be stepped up. With regard to the latter, the Mongolian Business Development Centre (see Section 5.1) could play a major role. Local investment in industry should be treated on an equal footing with foreign investment.**

### **Privatization**

The privatization process has made much progress, but has not resulted in much change at the enterprise level because:

- (i) the absence of a property law affects investment decisions;

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<sup>21</sup> Tax exemptions are, for example, available for the chemicals, machinery and electronic equipment industries, whose impact on future industrial development will probably be limited; there seem to be no tax exemptions for investment in agro-processing, in spite of its key role in manufacturing.

- (ii) the government often holds a controlling share in an enterprise, and continues to dominate decision-making; according to one analysis, the government presence is particularly strong in enterprises which are vulnerable to competition in an open market<sup>22</sup>;
- (iii) many shares have been sold to managers, workers or relatives of those in enterprises which will have to be restructured. Such shareholders may be reluctant to initiate this unavoidable but painful process;
- (iv) most of the other shareholders have little idea of the meaning of shares.

This implies that the painful process of adapting the former public industrial sector to the realities of a market economy has not yet taken place. Having lost their traditional markets and support from CMEA countries, many of the former state owned enterprises are unlikely to be viable as they are not prepared for new export markets and radical changes in demand for goods and services by consumers both at home and abroad. In the domestic market, they will have to compete with newly established industrial SMEs and imports from abroad. The restructuring process which will now have to take place is discussed in Section 4.3.

**The government should review its criteria for retaining shares in industrial enterprises. Except for some industries where strategic arguments for government control exist, firms should be privately owned. Viable enterprises in which the government retains a controlling share should be run on the basis of efficiency criteria which prevail in a market economy. To ensure efficiency, management should be separated from ownership, and profitable public enterprises should not be used as sources of government income - this is the task of the tax system.**

#### **Human resources development**

Mongolia has a good standard of general education, for a developing country. Until the recession of the 1990s, primary education was almost universal. Close to 30 per cent of the population took part in vocational or secondary education, and around 10 per cent in adult education. While this provides a good human resource basis for a modern economy, the educational infrastructure for higher-level technical and especially managerial skills is deficient. Human capital is crucial for future development: the country needs professional services and a better qualified industrial labour force, and the development potential of industries requiring large amounts of financial capital (metallurgy, chemicals, etc.) is limited.

Statistics on professional training institutions are not broken down by the subjects which are taught. But the data indicate that training at the foreman and middle management levels - functions which are crucial for day-to-day operations in

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<sup>22</sup> Georges Korsun and Peter Murrell - Ownership and governance on the morning after: the initial results of privatization in Mongolia, Working Paper No. 95, Center for Institutional Reform and the Informal Sector, College Park 1994, p. 8-9.

a factory - is insufficiently developed. Vocational training centres are inadequately equipped to deal with changing skill requirements in industry; many vocational schools at aimag level have been closed down. Professional education is theoretical and not closely linked to the changing needs of the economy. There is a diploma course in engineering after which specialization for a BA-type degree is possible. Under the present economic conditions, however, even people with a tertiary-level degree have difficulties finding a job.

Overall, a decline in the number of students can be noted: in 1993, there were 8,317 students in primary vocational training (-28 per cent compared to 1992); 5,566 students in specialized secondary education (-46 per cent); 21,255 at college-level (+21 per cent); and 383 in post-graduate institutions (-33 per cent). Technical scholarships for East European countries moreover are no longer available. The negative trend has existed since the late 1980s (except higher-level education, which was stable in recent years)<sup>23</sup>. The decreasing participation in primary education (-24 per cent since 1989) is also worrying.

Such plant-level information as was available to the mission indicates that in-house training is in many cases deficient - not only from the point of view of equipment operation, but also with regard to such issues as quality consciousness, preventive maintenance, etc. Donor agencies are providing assistance in the field of, among others, product technology and industrial know-how exchange, but there is as yet no systematic overall approach to this problem.

Managerial aspects of industrial production also received little attention in the past. Most high-level staff has a background in engineering rather than business administration. Lack of management capability is generally considered a more pressing problem than obsolete equipment. The more dynamic qualified staff members often leave (former) public sector enterprises to set up their own SME.

The government is aware of these problems. It has drawn up a masterplan for HRD (including technical training) with the assistance of the AsDB, and it is intended to link tertiary education to donor-supported professional training activities such as the five-year Management Development Programme (MDP). The MDP, a major step forward to improving the quality of management in enterprises (and in government agencies), was launched in late 1993. A number of donors are contributing to this programme.

**The improvement of management capability through MDP is of crucial importance for a competitive manufacturing sector. The HRD master plan should take account of changing HRD priorities in industrial development and include measures encouraging in-house training and follow-up training. Future HRD priorities in industry, however, also depend on the envisaged role of the sector in the economy. This underlines the urgent need to formulate general priorities for economic development.**

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<sup>23</sup> Statistical Office of Mongolia, op. cit., Table 10.6.

#### **IV. PRIORITY AREAS FOR INDUSTRIAL POLICY**

##### **4.1 Introduction**

In the absence of a clearly formulated overall development policy, only elements of an industrial development strategy can be sketched in this document. Nevertheless, a policy which guides future development in the industrial sector in a former centrally planned economy is particularly important because of the previously very high level of public ownership in the sector. Adapting the sector to its role in an open economy requires a complex, long-term process of privatization and restructuring.

In the past, industrial policy could be formulated on the basis of plans which were coordinated among the centrally planned economies. But for the transition there is no "model" or previous experience on which entrepreneurs and policy makers can rely. Therefore the demands on their professional skills are higher than ever before, underlining the crucial role of human resources development.

Apart from some general priorities for the subsector, there is as yet no policy which specifically focuses on the manufacturing sector and its role in a market economy. Old-style centrally-planned economy thinking with regard to a predominant role for manufacturing may still prevail. Typical examples of industrial priorities of a centrally planned economy are the steel and cement factories established in the north of Mongolia. These were to provide intermediary products for the metal working and building materials industries. From a market economy point of view it is unclear whether these projects are economical, as the per unit cost of the products of these industries is higher than of imported materials. Moreover, the steel mill does not have - and cannot afford - mechanical equipment to break up scrap (the main raw material) or a production line for sheet metal, which limits downstream production. Apart from economic arguments, there are also environmental arguments against such industries (see Section 4.3). UNIDO is currently investigating the restructuring possibilities and viability of these industries.

As in East European countries, "industry's share of total employment is virtually certain to decline significantly<sup>24</sup>". The share of the industrial sector in GDP is comparable to that in Korea and Singapore; in Laos, a country with an economy which is more or less comparable in size to Mongolia, industry only accounts for 17.8 per cent of GDP<sup>25</sup>. Enhancement of knowledge and technology-intensive products is evidently needed, but this does not necessarily mean an increased share of manufacturing. Among these activities, support services for the industrial sector and tourism may be mentioned. The former will be discussed in Section 5.1.

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<sup>24</sup> Paul G. Hare and Gordon Hughes - "Industrial Policy and Restructuring in Eastern Europe", Oxford Review of Economic Policy, vol.8, no.1, p.99.

<sup>25</sup> Boston Consulting Group, op. cit., p. 40.

The difficult economic conditions, the limited financial resources and the need for rapid improvement in the sector require properly focused development priorities. Limited resources should be used for activities which are likely to contribute most to GDP. Thus, **the mission recommends the government to formulate priority subsector development strategies and their immediate implementation in industrial policy. The priority subsectors consist of: (i) export oriented industries, (ii) import substitution industries and, (iii) basic needs industries.**

In addition to the priority subsector development, industrial policy should address several other issues which are a functional part of industrial development and which tended to be neglected in a centrally planned economy. In a market economy, however, these issues are the core of industrial policy. **In the context of the present Mongolian industry sector, the mission recommends the government to strengthen strategies in the following issues: i) restructuring enterprises, ii) SME and informal sector development, iii) raw material supply and linkage development, iv) foreign direct investment, and v) environmental sustainability.**

#### 4.2 Priority industrial subsectors

##### **Export oriented industries**

The internal market in Mongolia is limited, on account of the small population; even with a much higher per capita income, many manufacturing activities would therefore have to be basically outward oriented. There is an important export potential in the rapidly growing markets of the Pacific Rim countries, and the trend towards a diversification of trading partners is likely to continue. But the role of the People's Republic of China and of the Russian Federation as markets and competitors of the Mongolian manufacturing sector is likely to remain strong. **MTI should use its external market monitoring capability to make a thorough study - possibly with donor assistance - of the potential markets for and competitors of the Mongolian manufacturing sector.**

Mass production for export is probably not an option, because of Mongolia's isolated location, limited resources, and likely Chinese/Russian competition in this area. The focus should primarily be on high quality/low volume special products over which Mongolia has competitiveness in the international markets. In this context, issues like design and quick reaction to changing consumer tastes are also essential. Attention to these issues, which in the past have received little, will also help enterprises to compete with imported consumer goods in the home market.

In the long run special food products (such as cured meat) could be exported. These industries do not necessarily require complicated technologies and high investments. Products would have to satisfy the very strict international standards. Introducing international standards in production would generally be crucial for exports. **The Mongolian National Institute for Standardization and Metrology could play an important role in disseminating information about standards.** Joint ventures could then help to introduce such standards as well as better design, packaging, marketing methods, etc., in the production process.

Mongolia's major industries have traditionally been natural resource-based. The government has also identified natural resource-based industries (including mining, processing of metals and wood, and agro-processing) as future priorities, as well as - judging by the provisions of the Investment Law - chemicals, electronic equipment and machinery. It is not the object of the present document to discuss the role of mining; a study of the mining sector is being made with World Bank assistance. With regard to basic metals and industrial chemicals it should be pointed out that these industries require large amounts of investment and make great demands on physical infrastructure; the local market would be very small; and Mongolia's remoteness from major markets as well as strong competition from the neighbouring countries also argue against such industries. With the exception of modest assembly and repair activities, the potential for the machinery and electronics industries, which are very knowledge intensive, seems very limited as well.

**Thus, most of the immediate industrial development potential as well as manufactured exports potential would be in the agro-based industries, such as cashmere and wool products, leather and fur products; and wood processing, such as wood products and furniture. They make modest demands on financial resources; have strong employment effects (also in rural areas) without making excessive demands on HRD development, and relatively well-established markets; and offer great scope for the development of SMEs. Many of these industries are interrelated, with a potential for spin-offs.** These same industries were identified in the pioneering study by the Boston Consulting Group in 1992 as deserving priority. The analysis of recent subsectoral developments in Chapter II also points to the agro-based industries as the crucial sector in Mongolian manufacturing.

In the present transitional period towards a market economy it makes sense to rely in the first place on these industries, which need limited financial resources and know-how and can become major foreign exchange earners - if design, quality and marketing of products are improved. Emphasizing these industries does not mean that other, new industries should be discouraged; but their contribution is likely to be limited in the short-to-medium term.

While outside the manufacturing sector, it should be mentioned that tourism can be an important source of income for the country. Mass tourism is unlikely, if only for climatological reasons. The tourist sector will have to rely heavily on travellers interested in traditional rural culture and nature, as there is relatively little in urban culture and architecture which would appeal to tourists from developed countries. This implies improving the tourist infrastructure outside the major population centres. Taking the example of Nepal, the sort of people who will be attracted to Mongolia will take simple infrastructure in rural areas for granted - but in its simplicity it has to be of good quality. Pony trekking, which is very popular in some European countries, could have great potential.

#### **Import substitution industries**

Under central planning, large enterprises are often relatively self-contained in terms of producing intermediates, spare parts, etc. In Mongolia, such products were imported from CMEA countries if no in-house supplies were available. These inputs

imported from CMEA countries if no in-house supplies were available. These inputs are now only available against hard currency, if at all; and their in-house production is often uneconomical from a market economy point of view. There is, therefore, a particular need to stimulate support industries - import substitution industries. These could include:

- **Production of simple spare parts for machines (to be developed from existing repair shops);**
- **Subcontracting for larger industries (in many cases, this would involve an upgrading of existing local processing facilities of, for example skins, which are already linked to downstream processing).**

Other potential activities in this area whose economic viability should be ascertained are:

- **Packaging (at present heavily dependent on imports);**
- **Simple metal products (depending on industry - for example, the wood products industry would need hinges, screws, etc.).**

#### **Basic needs industries**

Despite a small domestic market, a number of industries deserve to be stimulated to produce consumer goods (many of them already exist) which improve the basic quality of life, apart from saving foreign exchange. Recently, a paper manufacturing plant in Ulaanbaatar started to manufacture the first Mongolian toilet paper from recycled waste paper. The psychological favourable impact of **domestically produced** goods for the Mongolian consumers seems to be greater than generally expected. National pride might be an additional motivation for new entrepreneurs to initiate a business.

Food safety and health oriented consumer products are important basic needs industries to improve the quality of life. Again, the Mongolian National Institute for Standardization and Metrology must play a significant role to enhance the quality of these industrial products.

Basic needs industries would include:

- **Processing of food for local consumption (better hygiene, prevention of waste - this is an area with great potential for SMI development);**
- **Pharmaceuticals based on domestic plants, including veterinary pharmaceuticals (to improve stock quality and thus increase rural incomes);**

- **Solar heaters for urban areas, to reduce the reliance on inefficient coal-based heating plants (potential for SMI development)<sup>26</sup>.**

Other industries in this area whose viability could be ascertained are:

- **Formulation (i.e. production on the basis of imported intermediates) of household chemicals - detergents, soaps, etc.**
- **Plastic household products (also based on imported intermediates).**

As in the other cases, these industries require relatively little investment and know-how; barriers to entry, in other words, are few.

In order to develop these industries, temporary protection (infant industry protection) may be required in some cases. The World Trade Organization, transformed from GATT as of 1 January 1995 (of which Mongolia is soon expected to become a member), would probably allow such protection. It should be emphasized, however, that trade barriers must not be used to protect industries which are not viable.

#### 4.3 Other key issues

##### **Restructuring enterprises**

Given the current recession in the domestic market, the slow expansion of exports and the presence of competitors, it is obvious that Mongolia suffers from excess industrial production capacity. Restructuring of the manufacturing sector is an urgent task. Redundant industries will have to be closed down, in other cases mergers may be possible.

The government has announced a phased withdrawal of support to public industrial enterprises and closure of unviable enterprises. Management contracts are to be used to ensure improved performance of public enterprises<sup>27</sup>; it is not clear that these measures are being implemented on a significant scale. Restructuring of (former) public enterprises will need to look very closely at management, as only about 10 per cent of the managers who served during the central planning era have been replaced; this makes a proper market-orientation of the firm rather unlikely. Support would be justified for firms with a possible long-term growth potential; the cost of closing an enterprise (in terms of unemployment benefits) should also be weighed against the cost of support. Finally, it may be possible to identify individual viable activities within non-viable firms which could be continued independently.

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<sup>26</sup> The principle of solar heating could also be applied in the form of glasshouses - while there is no immediate prospect for processing on this basis, glasshouses near cities would help to expand vegetable production and improve diet.

<sup>27</sup> World Bank - Mongolia Policy Framework Paper, n.p. 1993, p. 16.



The actual restructuring at the enterprise level is the key to future growth. But where scarce support resources are used, the restructuring process should focus on branches and individual industries which are likely to play an important role in the future. Given the recession and consequent low demand, most agro-processing enterprises in the AsDB example discussed above do not appear to suffer from serious problems of overcapacity - on this basis, it may be concluded that **the overall structure of the agro-processing subsector reflects present demand for its output. This could be an additional argument in favour of an industrial development policy which initially relies on agro-processing.**

In the context of enterprise restructuring, a UNIDO SIS team is currently undertaking a diagnostic survey of 16 selected manufacturing enterprises. Assistance projects for viable firms identified in the survey (in areas such as technology, marketing and management) are to be followed up by UNIDO and other international aid agencies. This project could serve as a model for enterprise restructuring in Mongolia in the future.

**Under the Management Development Programme, an Enterprise Restructuring Centre has been established. This Centre was described to the UNIDO mission as being a coordinating agency between the State Privatization Commission and MTI. Its role in the restructuring process should be clarified.**

#### **SME and informal sector development**

The rapid growth of SME has been discussed in Chapter II, and the MTI has a special division for support activities to this sector. **One crucial factor in the further development of small manufacturing firms is the clarification of land and property rights, as this will encourage new private owners to invest in long-term expansion.** At present, new entrepreneurs are mainly involved in trade. The growth of SME would also help to reduce unemployment. An expansion of small-scale local processing could help to reduce rural unemployment during the off-season, and small-scale processing has an important role to play in the cattle "filière", as will be explained below. The SME sector is the object of several large donor assistance programmes (see Chapter VII).

The informal sector is another important source of employment, mainly in trading. The sector is very dynamic, and an important breeding ground for entrepreneurs. This is not fully appreciated by the authorities yet, and the sector tends to be subject to control measures which are probably not even cost effective. While its activities do not (and often cannot) contribute to taxes now, they are essential for many people's survival. In the longer run moreover, if given a chance to grow, the contribution of micro-enterprises to development will rise, and some could develop into manufacturing or industrial services (repair, maintenance) firms.

**The government should abolish legislation which discriminates against small-scale and/or informal sector activities; it should encourage informal sector activities by the provision of basic infrastructure (e.g. easily accessible market areas, simple shelter in market areas).**

## **Raw material supply and linkage development**

Economic reform destroyed the former system of cattle-based raw material collection at aimag level. As a result, it has become much more complicated to collect raw materials such as hides and skins, wool and cashmere, and to transport them to factories. One result is that a considerable amount of raw materials is now exported to China.

For the recovery and further development of the cattle-based industries, the re-establishment of the raw material collection system is essential (along with stimuli for higher-quality raw materials). There are signs that wholesale trading on a private or cooperative basis is beginning to replace the old public buying system. **The MTI's Division for Small and Medium-Scale Enterprises has suggested providing basic infrastructure - such as unused state-owned buildings - to emerging rural wholesale companies. This type of infrastructural support could play a crucial role in the re-emergence of rural trading networks.**

It has already been pointed out that export bans such as the one on raw cashmere are unlikely to be effective in the long run; the ban has also caused friction with several donors because it is perceived as a return to methods which prevailed under central planning. On the other hand, since raw cashmere export was banned in March 1994, many foreign investors have already established or are planning washing and dehairing plants in Mongolia so that processed cashmere can be legally exported to final goods manufacturing enterprises abroad. In other words, this intervention has had a positive effect.

The UNIDO mission hesitates to form a judgement on this issue. It may be suggested, however, that the export ban may be retained temporarily while progress in the cashmere industry is monitored. In the meantime, cashmere manufacturing enterprises must endeavour to enhance their overall performance (cost reduction, technology development and human resources development) so that they will be able to purchase raw cashmere from herdsmen at prices which can compete with those offered by Chinese buyers over the border. The raw cashmere export ban would then automatically lose its rationale.

A major source of strength of a market economy lies in the complexity of linkages among manufacturing and non-manufacturing enterprises. In Mongolia it is evident that the cattle-related industries are linked: slaughterhouses, for example, supply the tanneries with hides and the food processing industries with meat. Industrial linkages also take the form of subcontracting, which typically takes the form of a large-scale enterprise buying intermediate inputs from SME. As yet, these linkages are very weak, and the absence of a contract law would inhibit subcontracting. The type and intensity of industrial linkages would have to be investigated, as well as the potential for improving and expanding them.

**In this context, a "Tilière" approach to future development of the "cattle complex" is to be recommended. Such an approach focuses on a group of related manufacturing industries and the links between them. The next step is to assess the**

**potential for improvement of individual activities (e.g. raising the quality and lowering the cost of intermediate products to make end products more profitable) as well as the potential for further synergies between them. Such an approach would also take account of issues connected to the supply of inputs (raw materials, packaging, energy supply, and the like), human resources requirements (training), and markets for manufactured goods. On this basis a development programme for the industry group based on cattle could be formulated. If successful, the programme could be repeated elsewhere.**

### **Foreign direct investment**

If the obstacles to foreign investment which have been discussed in Chapter II are removed, then the industrial sector could attract more foreign investment. Suggestions with regard to Free Trade Zones (FTZs), for which legal provisions are being made, should be treated with caution. In an FTZ, firms can import all materials duty free, are usually not subject to taxation and partly exempt from labour legislation, and are provided with essential infrastructure.

Low wage costs in Mongolia theoretically make such operations attractive, and an FTZ would also solve a number of problems with regard to physical infrastructure for investors. But in other developing countries FTZs often contribute little to local know-how and technology development, and use few local subcontractors, inputs and services. As enterprises working in FTZs are usually assembly operations, they would not make optimal use of Mongolia's fairly well-educated labour force.

**Mongolia should not try to attract foreign investors who help to establish a Mongolian presence in international markets only. Transfer know-how and technologies to industries which have a maximum impact on the development of the economy, and strong ties with local suppliers are also important.**

### **Environmental sustainability**

Environmental sustainability has so far received little attention in the Mongolian manufacturing industry, although logging is strictly regulated and there are effluent treatment systems in most large public enterprises. But it seems questionable whether the logging regulations can actually be enforced, and the effluent treatment systems have fallen in disrepair in the last years.

Environmentally sustainable industrial development (ESID) takes account of input requirements, production processes and end product disposal. With regard to input requirements: for environmental reasons alone, heavy industries are not an option, among others, because of their large water and energy requirements. The resource base for forestry, agriculture and stockbreeding moreover is very fragile, and desertification is already progressing. The fragility of the natural environment puts a limit on production in agro- and forest-based industries and underlines the need for an industrial development strategy which focuses on quality instead of quantity.

Production processes which are environmentally friendly will not only lead to a reduction of effluent, but also to savings on raw materials, energy and water costs, and on medical treatment - there is a direct link between workers' health and environmentally friendly production methods. Most factories have inefficient and ageing machinery, and "good housekeeping" techniques are unknown in many enterprises, which contributes to environmental damage. While low living standards force people to recycle waste or worn-out consumer goods, the concept of recycling does not seem to be known in the majority of firms yet.

**The introduction of environmentally friendly production methods should be an integral part of the restructuring and rehabilitation process in viable large-scale enterprises. The SME sector is only beginning to develop, which offers a good opportunity to integrate ESID concepts and production methods in new investment projects. Donor agencies can play a decisive role, given their involvement in support projects for the sector. The AsDB is setting a good example by proposing a project for an SME estate in Ulaanbaatar which would have a centralized waste treatment system.**

## V. INDUSTRY SUPPORT INFRASTRUCTURE ISSUES

### 5.1 Industry Support institutions

Modern industry has a great demand for industry-related services - market information, maintenance, consultancy, R&D, etc. With the growing specialization of support activities, it has become increasingly uneconomical for enterprises to have a full range of support activities in-house, especially for SMEs. This has resulted in a strong growth of independent support services firms.

In Mongolia, as in other former centrally planned economies, these services have been neglected in the past. Despite some cases of pooling of scarce resources by the business community, essential services (such as market information) are still inadequate, because funds and modern business skills are in short supply. Business organizations also lack information about each other's activities. Participation of some of these organizations in the Mongolian Business Development Centre (MBDC - see below) is a step forward. At present, the strongest representative of the business community would appear to be the Mongolian Chamber of Commerce and Industry.

#### **The Mongolian Chamber of Commerce and Industry**

The Mongolian Chamber of Commerce and Industry has both private and public sector members, and a special division dealing with SME. It has 420 member enterprises, some 40 per cent in the industrial sector. Activities include: information and advisory services, promotion of foreign contacts and exports, training and partnership in a number of development projects, such as the MBDC and an SME centre being set up by the GTZ. There appears to be a certain danger of overlaps with the new business centre. The Chamber emphasizes technological progress, export-orientation (implying greater attention to quality and standards), physical infrastructure and SMEs as development priorities.

At the moment, the Chamber does not have sufficient means for effective assistance to private enterprise in an emerging market economy. Staff of the Chamber would also need additional training. While donor assistance could, for example, help the Chamber to build up its information unit, it would seem that in the longer term the more effective way of increasing the availability of information and expertise to members would be through intensified contacts with the foreign business community - through Chambers of Commerce abroad and the International Chamber of Commerce. Finally, **the position of the Chamber vis-à-vis MTI must be clarified: the Chamber still is an NGO within the organizational structure of the ministry. The Chamber should be a completely independent organization.**

#### **The Mongolian Business Development Centre**

The MBDC was established in October 1994. It is an independent non-profit organization which caters not only for industry but for all types of business. It was founded at the initiative of the government, business organizations, other NGOs and

the donor community; it receives support in the form of finance and expertise from the latter.

The MBDC's main objectives are:

- To mediate between the private sector and the government, and to be involved in the preparation of government support programmes for private sector development;
- To provide a "one stop" service to public and private enterprises in Mongolia which would include business information, registration and licensing issues;
- To undertake training of trainers and of local consultants as well as to prepare and distribute training and consultancy packages, giving priority to business associations and management development institutions;
- To provide technical, managerial and commercial consultancy at the enterprises as well as at the subsector and sector level;
- To generate and promote international investment opportunities, and to provide information and advisory services to foreign investors.

At the time of the mission, the status and scope of activities of the MBDC had apparently not yet been determined completely by the partners in this project.

### **Applied R&D<sup>28</sup>**

Research institutes for the manufacturing sector cover the wool, wood, metals and leather industries. These are NGOs which are supervised and - in principle - financed by MTI. Under the central planning system, they were responsible for testing and quality control as well as for the transfer of technologies and designs to local factories, and to SMEs in rural areas. There were frequent contacts with East European countries.

The traditional foreign sources of information and technology are now largely lost, and the institutes can no longer afford study tours and purchases of documentation. As government financing was cut, pilot plants were turned into small production units producing for the market. Financial difficulties often make it impossible to upgrade the skills of the research staff, to maintain buildings and to replace equipment.

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<sup>28</sup> The following paragraphs are largely based on notes of a visit to the Research and Experimental Centre for Leather. The situation in other research institutes is similar, according to information received by the UNIDO mission (outdated equipment, need to upgrade research know-how, lack of funds).

Given the modest size of manufacturing activities, the shortage of qualified human resources, and the cost of laboratory and testing equipment, etc., it would make sense to retain centralized industrial research facilities. The main activity should be (applied) R&D, and know-how transfer to the relevant industries; the latter could be possibly expanded to include know-how which is not strictly technical, such as production management, end-product quality and marketing issues which are specific to certain industries<sup>29</sup>. Production, storage and repair and maintenance activities - as in the leather centre - should be left to commercial enterprises; the research centre could retain pilot production where this makes economic sense. In the long run, sales of services to industrial enterprises rather than in-house production should be a source of income.

A recent UNDP assessment of the science and technology infrastructure in Mongolia<sup>30</sup> concludes that there are too many R&D institutes in the country. It proposes a rationalization of the R&D structure, to concentrate human and financial resources on activities which are essential for the country. To ensure greater benefits of R&D to society, the mission proposes various measures: the creation of technology transfer points at university R&D institutes; greater (financial) autonomy; a stronger involvement of the private sector, and the attraction of foreign capital and know-how to the R&D sector. **A national R&D policy would be needed to guide research to areas of greatest future relevance for the country.**

In accordance with the findings of the UNDP mission, **it would be worth investigating whether the various industrial research and know-how transfer activities cannot be combined in one institute with a centralized administration and management, and separate research units for key products. This could lead to considerable cost savings. A research unit for the cashmere industry might be added to the activities, given the potential of this industry as a foreign exchange earner. The status of the institute vis-à-vis the government would have to be redefined.** Modernization of the research centre would require foreign financial support as well as technical and managerial expertise.

### **Standardization**

Standardization of domestically produced goods is important to ensure health and quality standards and to enhance competitiveness in international markets. The Mongolian National Institute for Standardization and Metrology founded in 1953 was an independent organization until 1993, when the National Development Board became responsible for it. The Institute is also closely linked with MTI.

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<sup>29</sup> In a number of industrializing Asian countries, special "productivity centres" help firms to organize their activities in a more effective way. Should the Mongolian industrial research centre not be able to take on these tasks, then the suggestion made by the Boston Consulting Group to establish separate productivity centres could be followed up.

<sup>30</sup> UNDP - Report of the UNDP Science and Technology Assessment Mission to Mongolia, n.d., n.p.

Currently the Institute comprises 12 different departments at headquarters (110 personnel) including policy development, testing and standards laboratories, training and international cooperation. It is in charge of overall standardization in the country. There are also regional centres for standardization and metrology in 21 aimags. There exist 3,500 national standards in Mongolia, but technical standards have not yet reached the international level. Since Mongolian manufacturers still lack awareness of quality standards and safety, the Institute has the important responsibility of disseminating information about standardization and ensuring that standards are applied in the industrial sector.

The Institute is aware of the need to raise national standards to those which apply in the international market economy. It has therefore set up the eight technical committees for priority sectors, namely:

1. Leather products
2. Wood products
3. Building materials
4. Quality assurance
5. Metrology
6. Information technology
7. Environment protection
8. Documents and information

The technical committees are responsible for the formulation of standards. **The Institute should be strengthened and should cooperate closely with international standards organizations;** it needs technical as well as financial assistance from international donors to carry out their work. Thus far, only a technical cooperation project for testing laboratories (food, household and chemical products) funded by JICA is to be implemented in 1995.

## 5.2 Physical infrastructure

### **Transport**

Mongolia has only 42,000 km of main roads, in spite of its large territory; of these, only 1,300 km are paved, and the surface of these roads is usually in bad condition<sup>31</sup>. While traffic is very light outside the major population centres, due to the very low population densities, the bad state of the roads slows down transport, increases repair costs and reduces the lifetime of vehicles. Some 70 per cent of freight tonnage is carried by road. Most trucks are of Russian origin and have a high fuel consumption. Spare parts and tires are costly and difficult to obtain. Long distance transport was still dominated by public enterprise in 1993, but private hauling companies were being established in increasing numbers. Livestock is mostly moved

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<sup>31</sup> Figures on transport were taken from: New Zealand Ministry of External Relations and Trade, Morrison Cooper and Partners - Mongolian Technical Assistance Fund: Wool Industry Development Project, 1993.



on the hoof; the daily distance covered is limited, and as the animals graze on the way, this form of transport is not detrimental to livestock quality.

The railway network has some 1,800 km of track, the Trans-Siberian railway which connects Mongolia with Russia and China being the main railway line. The gauge is the same as in Russia, but a wheel assembly change is needed at the Chinese border, which delays transport.

Because of the country's peculiar geography and low population density, the role of the private sector in providing or upgrading the basic transport infrastructure will be limited. Much of it can never be profitable from the point of view of private enterprise. In the interest of a coherent national economy, however, further investments in basic transport, energy and telecommunications infrastructure are required. This is clearly a task which will involve the government.

**There is a particular need to improve roads and railways connecting major population centres, where the medium and larger-scale industries are concentrated; but roads elsewhere also need to be upgraded to allow better flow of raw materials and semi-processed goods to main factories, and to allow a better supply of the local population and industries with essential consumer and producer goods. If a strategy of high-value/low volume exports is followed, then Ulaanbaatar airport may have to be upgraded to provide adequate air transport facilities.**

The cost of the investments needed to improve Mongolia's transport infrastructure cannot at present be borne by the government. The World Bank has formulated a US\$ 300 million programme to upgrade and rehabilitate the country's infrastructure. This includes management support to institutions and enterprises in the transport sector.

### **Telecommunications and postal services**

In 1993, Mongolia had 66,400 telephones, giving a density of 30 telephones per 1,000 inhabitants. Even if the fact that about 30 per cent of the population are nomads is taken into account, this is only a fraction of what is needed in a modernizing economy. In some of the less advanced European countries, such as the Czech Republic and Ireland, the density is around 250 per 1,000 inhabitants. **A major effort will be required to increase the availability of telecommunications, especially to the business community; the speed and reliability of international postal services must also be improved.** Again, the low population densities would argue for public sector involvement to ensure widespread availability of services.

### **Energy**

Mongolia is largely self-sufficient with regard to electric energy. Energy generation is essentially coal-based; at present, coal is in short supply because of technical problems in the mines. Apart from the fact that little attention is apparently paid to air pollution by the generating plants, equipment is obsolete and inefficient. In 1993, 291 million kWh of electricity were lost in transmission and distribution - 10

per cent of total generated power<sup>32</sup>. Communal heating in towns is also inefficient: the temperature of heating elements in buildings cannot be regulated (it is common to see open windows on mild winter days) and the distribution system is not always properly insulated, leading to heat loss. It can be assumed that energy use in industry is inefficient as well, and a major cause of the sector's high input costs. **Energy audits in manufacturing plants could be a first step to energy saving measures.** The World Bank and the AsDB are involved in preparatory work for an Energy Sector Master Plan which will address the problems related to energy generation and distribution.

Mongolia has large solar energy potential; during certain months of the year strong winds prevail as well. These renewable energy sources are hardly used at present. They could help to reduce pollution and natural resource depletion by coal-based energy/heat generation plants. The possibility of producing solar energy equipment locally has already been discussed. Renewable energy could also help to improve the quality of life in remote rural areas which are not connected to the electricity network. Solar cells could, for example, be used to power telephones.

### **Water**

Because of low precipitation levels and high evaporation rates during summer, **Mongolia has limited water supplies. Moreover, no surface water is available during the severe Mongolian winter. As indicated above, this has an effect on industry choice: the country basically cannot accommodate industries which consume large quantities of water.**

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<sup>32</sup> Statistical Office of Mongolia, op. cit., Table 4.7.

## **VI. INDUSTRIAL POLICY AND THE ROLE OF GOVERNMENT**

### **6.1 Introduction**

In a market economy the responsibilities of the central as well as local governments are more diversified and intricate than those in a centrally planned economy since a free market economy itself requires complex legislation, regulations and economic framework. Thus, in order to make a smooth economic transition, the functioning and coordination of government agencies must be improved.

To cope with the economic reform, a series of reorganizations has been taking place at the ministry level, leading to the abolishment or merging of ministries; the number of government employees has also been reduced. With regard to industry, much of the government's attention has focused on the privatization process through the State Privatization Commission (SPC). While this process has not been completed, the focus should be shifting to the formulation and execution of industrial policy. This implies not only a gradually declining role for the SPC; the role of the Ministry of Trade and Industry (MTI) and its internal organization will have to be re-assessed, and ministry staff will have to acquire new skills.

There has also been little progress with regard to the formulation of overall development priorities, let alone a coherent national development strategy. The National Development Board (NDB), which is responsible for this strategy, is still in the process of reorienting its activities and adapting its staff to new tasks. As a consequence, there is as yet no overall vision of the role of manufacturing in future development.

**One major role of the government with regard to industrial development is to formulate and implement an industrial policy. By formulating an appropriate industrial policy the government promotes industrial development. Formulation of an industrial policy, however, is less complicated than implementing it. A crucial issue is how the government could implement the formulated policy within the capacity and capability of its organs. Here comes the requirement of well-defined responsibilities between the central government and local governments, and among ministries, and between the government and industrial supporting institutions.**

### **6.2 The Ministry of Trade and Industry**

**The country has a small manufacturing sector whose size may shrink even further, and the ministries have a shortage of staff dealing with manufacturing. Overall responsibility for the formulation and implementation of an industrial development policy should be transferred to MTI.**

**With regard to manufacturing, the future tasks of MTI would fall into four main categories:**

- Formulating and implementing a policy for the industrial development in the context of an overall NDB development strategy for the country;**

- **Stimulating industries and industrial support activities which are likely to contribute to future growth (stimuli should not introduce new market distortions);**
- **Support to and a continuous dialogue with organizations representing private sector industrialists;**
- **Intensive cooperation with NDB, other related government agencies and donors to ensure that foreign assistance to the manufacturing sector is focused on essential issues.**

Stimuli to industrial enterprises will in many cases be provided through the measures discussed in Chapter IV. These are not specifically designed for the manufacturing sector. Special support to the sector which would involve MTI could include:

- Identifying priority industries and related projects (e.g. R&D) for tax and customs duty rebates;
- Support to the provision of basic infrastructure such as industrial estates;
- Support to industrial training and information dissemination;
- Establishing or revising safety and environmental regulations (in cooperation with the Ministries of Health, Labour, and Environment);
- Monitoring the implementation of industrial investment projects and financing schemes for the sector.

MTI should furthermore continuously rethink its role and its strategies as the economy evolves. During the transition period, its role could be strong, as explained above. Different and evolving tasks should lead to adaptations in organizational structure. **The present structure of MTI, for example (see Chart 1) needs to be reconsidered to allow it to cope successfully with its tasks under market economy conditions:**

- The Foreign Trade and International Cooperation Department is in charge of two totally different activities. It is now intended to separate these. Overall responsibility for international cooperation should go to NDB, as suggested in the 1993 Resolution on NDB and MTI. Cooperation with UNIDO, which is now under the MTI's Industry and Foreign Investment Department, should no longer be a separate category;
- Tourism (now under Foreign Trade and International Cooperation) deserves a separate department, given the potentially great role as a foreign exchange earner of this activity;

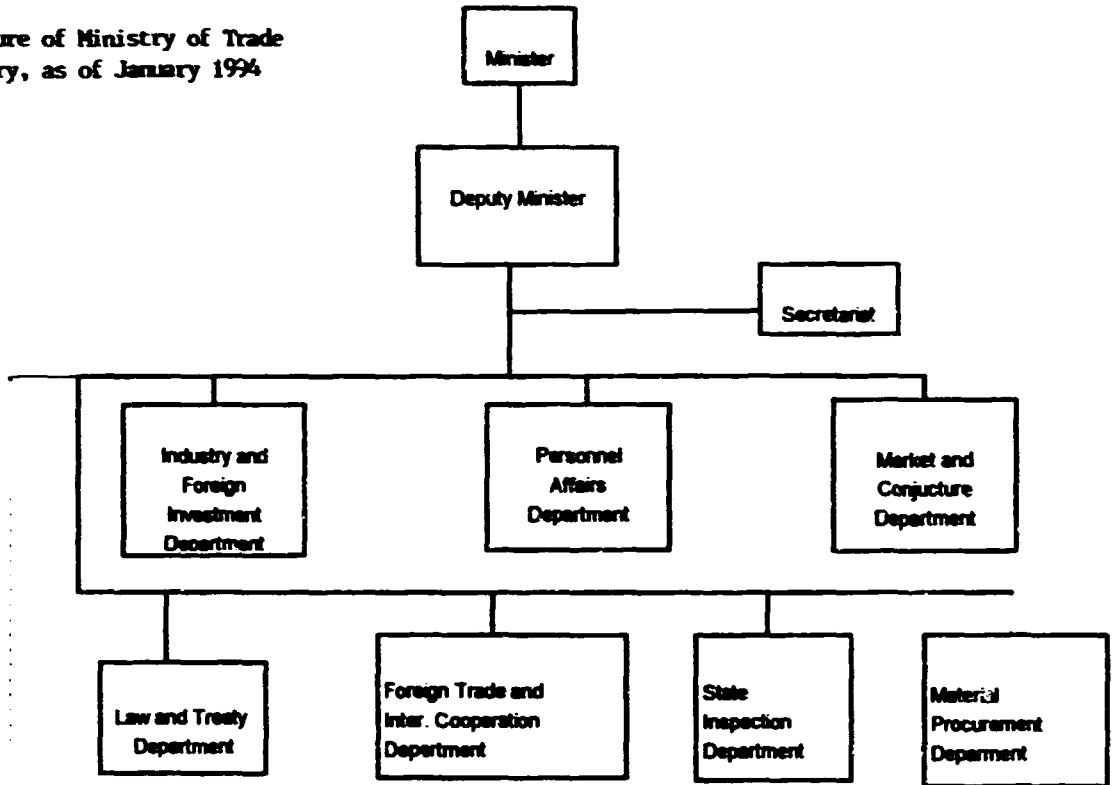
- The activities of the foreign investment unit in the Industry and Foreign Investment Department are not restricted to industry; this would be an argument to set up a separate foreign investment department, possibly under NDB;
- Within the Department of Industry, the cooperation among staff responsible for various industries - which appears to be good - might be further intensified (the concept of "linkages" can be applied here as well) to maximize the benefits to overall policy implementation;
- Collection of statistical information, now a major task of substantive officers in the MTI, should in principle be left to the Statistical Office of Mongolia; its staff and other resources should be expanded correspondingly. The Statistical Office, moreover, has been trained in the application of the ISIC system through a UNIDO project. This system is now replacing the system formerly used by the CMEA countries. While MTI should have its own database, its professional staff should concentrate on substantive issues;
- The status of the NGOs which remain under MTI should be clarified. It was, for example not clear to the mission why the ministry is still involved in wholesale companies - wholesaling should be left to the private sector.

Staff at MTI is not sufficiently prepared for the task of formulating and implementing policies and support measures in accordance with the continuously changing requirements of a market economy. The large and increasing number of foreign assistance projects also place a great strain on the staff resources of the Ministry. To enable staff to cope with their changing responsibilities, a radical shift in mentality from "controlling" to "promoting" the industrial sector is needed, and at the same time there is an acute need for staff training. The remaining ties between privatized (former public) enterprises and the ministry should also be cut: it is apparently still quite common for these enterprises to involve MTI staff in management issues, requests for loans, etc.

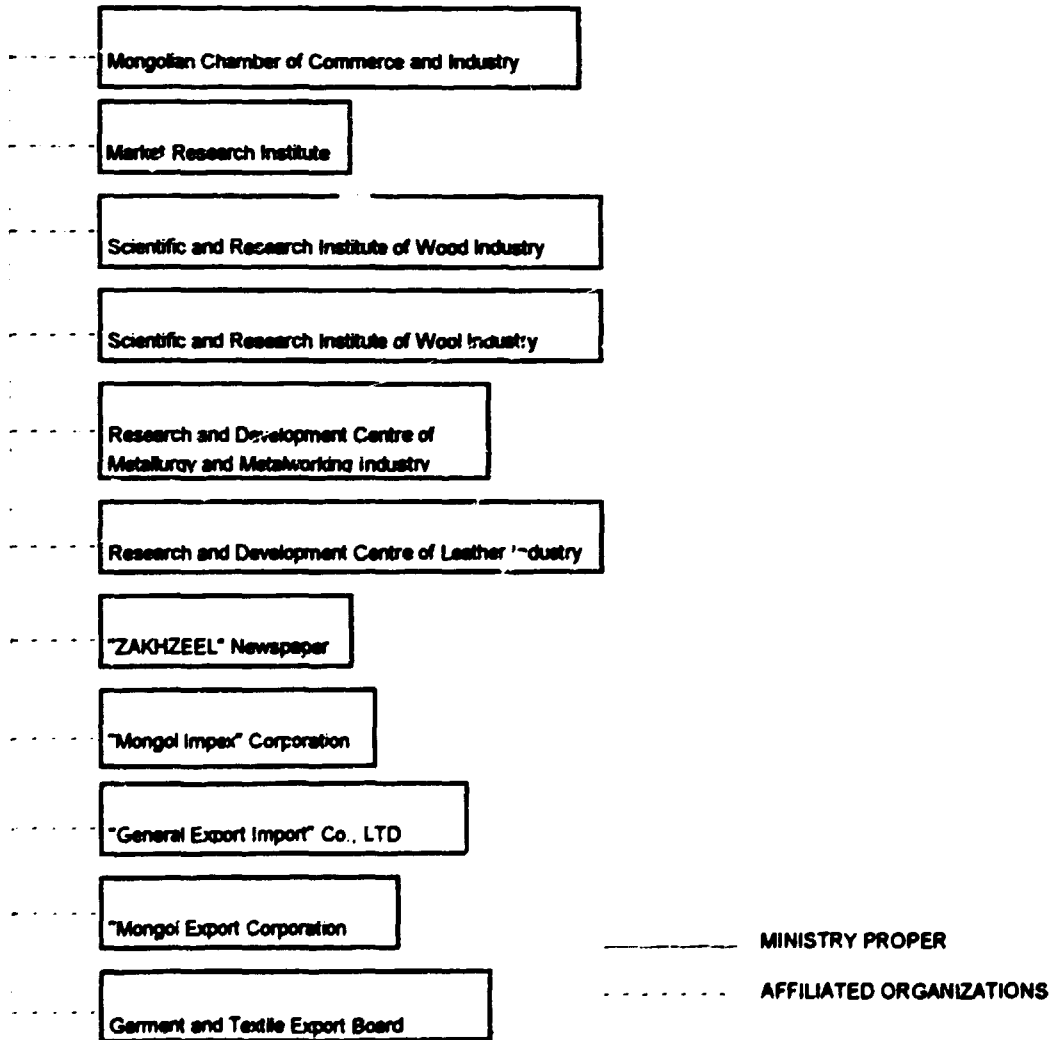
In order to train MTI staff and to assist the ministry in formulating and implementing industrial policies, the establishment of **Industrial Policy Support Unit** could be proposed. An experienced chief technical adviser should lead this unit for a period of two to three years. Preferably this chief technical adviser should be from one of the more advanced developing countries in Asia: it seems essential that such a person understands Mongolia's present problems. An independent policy research unit (possibly connected with the Economic College, but also involving representatives of the ministry and the business community) might also be set up. The AsDB is proposing the establishment of something similar for the agro-processing industries. Coordination with this project would be of great importance.

Finally, because of the many interrelated factors which determine industrial development, it is essential to establish or maintain close working relationships between MTI and the ministries of Finance, Labour, Food and Agriculture, Environment, Geology and Mineral Resources, Science and Education, Fuel and Energy, Roads, Transport and Communications.

Chart 1:  
The Structure of Ministry of Trade  
and Industry, as of January 1994



Non Governmental organizations



## VII. THE ROLE OF DONOR AGENCIES

The overall priorities for activities taking place in a UNDP framework in Mongolia, and their implications for industrial policy are:

- Biodiversity: priority to be given to environmentally sustainable industries;
- Poverty alleviation: priority for industries with strong employment and local linkage effects;
- Improved management of the economy: strengthening the global policy, investment project management, and external cooperation management and coordination capacities of the National Development Board (NDB);
- The advancement of enhanced public and private management capacities: support for the Government of Mongolia's Management Development Programme which involves:
  - public sector reforms (public administration and civil service reform, decentralization and local administration strengthening);
  - private sector development (privatization and privatized enterprise restructuring; small- and medium-sized enterprise promotion);
  - programme support (management development policy; management education, training, research, and consultancy; support systems).

The priorities for industrial development which have been suggested above are in line with the UNDP priorities.

A large number of donor agencies has in recent years actively assisted in establishing a more favourable environment for industrial development. The most important among these is the AsDB, with a 1993 project for a loan and technical assistance for industrial sector development. The project aims at improving the overall economic policy framework and provides support to SME (not specifically to industrial enterprises). This would help to stimulate activities in the manufacturing sector.

Together with the FAO, the AsDB is also involved in a large agro-processing project with a primary focus on the firm and institutional level rather than the policy level - although the establishment of a National Development Council for the Agro-processing Industries is suggested. The firm-level analysis completed in August 1994 could be of great importance to UNIDO's SIS project.

Other relevant donor activities include:

- The European Union TACIS programme will begin execution of a major "Small- and Medium-Sized Enterprise Promotion" project in the first quarter

of 1995 which will include policy support for NDP and consultancy services for businesses through the Mongolian Business Development Center (MBDC);

- The European Union Asia and Latin America Programme will begin execution in 1995 of a "Strengthening of Management Development Institutions" project that will prepare 60 trainers and 20 consultants through the Mongolian Business Development Center (MBDC). The participants in the course will be economics and management professors from the institutions that are members of the Consortium of Mongolian Management Development Institutions. Through this project the personnel will enhance the national capacity for industrial policy implementation at the enterprise level;
- The government of the Netherlands has under consideration a government of Mongolia/UNDP proposal for a major project in the area of Privatized Enterprise Restructuring;
- The German government is financing a GTZ small- and medium-sized industries project that includes trade promotion, training, advisory services, and credit. This project is located at MTI;
- The Asian Development Bank (AsDB) is undertaking a "Strengthening of the State Privatization Commission" project that includes policy recommendations on privatization and enterprise restructuring, training in general and financial management, and the in-depth study of two privatized industries;
- The Asian Development Bank has also undertaken a six month consultancy on small- and medium-sized enterprise promotion policy as part of the technical assistance related to a "Strengthening the Industrial Sector" loan.

Japan's Mongolian Development Support Group has published a study on major issues of the transition to a market economy which apart from general issues discusses the informal sector, SME, HRD, foreign investment and exports. These are generally recognized as key development issues, but it is not clear whether follow-up activities are envisaged.

Finally, the 1993 New Zealand hide and skin industry development project should be mentioned. There has been no follow-up to this project so far, but the extensive analysis made during this project could be a useful input in a project to develop the cattle filière.

Future projects for the manufacturing industry could benefit greatly from the many projects which intend to establish a sound overall environment for the sector - if the government's capacity for properly handling donor support and coordination among donors are further improved. A meeting of government representatives and major donors, to discuss assistance issues among others, was held in Tokyo on 8 and 9 November 1994. As a result, US\$210 million was pledged to finance Mongolia's support and development programmes in 1995.



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**ANNEX: PROJECT SUGGESTIONS IN SUPPORT OF INDUSTRIAL POLICY  
IMPLEMENTATION**

**Project Title: Industrial policy support unit****Issues to be addressed:**

In the present transitional period from a centrally planned to a market economy, the government of Mongolia is endeavouring to formulate an industrial policy with the assistance of UNIDO. Both the formulation and the execution of such policy face a major obstacle in insufficient public management capacity in the Mongolian State to meet the demands of the transitional period. Thus, this capacity must be enhanced as part of the transitional period itself. For example, the Ministry of Trade and Industry is insufficiently prepared, both organizationally and from the point of staff skills, for the challenges of a market economy. Technical cooperation, in the form of an industrial policy support unit, staffed with a chief technical adviser, could help to overcome this obstacle.

**Expected project results:**

The industrial policy support unit would be established with a dual intention: assisting MTI staff in formulating and implementing a fully-fledged industrial policy; and training staff of the ministry. In order to ensure that MTI staff fully masters the task of formulating and implementing policies, and to establish an adequate organizational structure for this purpose, the project should have a duration of at least two years.

**Evidence of government priority, commitment and participation in the activity:**

The government is committed to a restructuring of its ministries and an improvement of their performance. This is a basic objective of the government of Mongolia's Management Development Programme (MDP) approved by government of Mongolia Resolution 199 of 27 December 1993. The MDP contains a "Public Administration and Civil Service Reform Component" whose long-term policy, middle-term programme perspective, and short-term action plan were presented at the Global MDP Workshop (25-26 October 1994). The implementation of these elements is being supported by a major UNDP "Public Administration and Civil Service Reform" project. The strengthening of the public policy and management capacities of the MTI should be undertaken within the framework of the government's MDP policies. The government also attaches great importance to the speedy implementation of a development policy for the manufacturing sector. During discussions with the UNIDO mission, MTI staff showed great interest in the suggested project.

**Project Title: Study of the stockbreeding filière****Issues to be addressed:**

The industries which are based on cattle - meat and dairy processing, wool and skin processing, leather and woollen products - play a key role in Mongolia's manufacturing sector, and should continue to do so in the future. These industries could also help to diversify the country's sources of export earnings. At present however, the industries in the "cattle complex" suffer from a large number of problems, including raw material supply, outdated equipment, lack of adequately trained human resources and management capability, etc.

A "filière" study of this complex of industries could analyze the interrelations among the various activities, as well as the role played by support industries.

**Expected project results:**

The establishment of a development programme for the industry group based on cattle could be based on this study, removing obstacles to growth and exploiting the potential for further synergies between the industries. If successful, the programme can be repeated elsewhere. This project should take account of the large agro-processing project being implemented by FAO/AsDB.

**Evidence of government priority, commitment and participation in the activity:**

The cattle-related industries are considered priority industries by the government. The government's involvement in the FAO/AsDB rural processing project is an expression of its commitment to the development of the subsector.

**Project Title: Support to research centre for the manufacturing industry****Issues to be addressed:**

A recent UNDP assessment of the science and technology infrastructure in Mongolia proposes a rationalization of the R&D structure, to concentrate human and financial resources on activities which are essential for the country. There are now separate research institutes for the manufacturing sector which cover the wool, wood, metals and leather industries under MTI. Financial difficulties often make it impossible to upgrade the skills of the research staff, to maintain buildings and to replace equipment.

In accordance with the findings of the UNDP mission, it would be worth investigating whether the various industrial research and know-how transfer activities cannot be combined in one institute with a centralized administration and management, and separate research units for key products. Reorganization and upgrading of the facilities would require foreign assistance.

**Expected project results:**

While improving the performance of research for industry, this project could lead to considerable cost savings. A research unit for the cashmere industry might be added to the activities of the research centre, given the potential of this industry as a foreign exchange earner. The activities could also include know-how transfer which is not strictly technical, such as production management, end-product quality and marketing issues which are specific to certain industries.

**Project Title: Energy saving and renewable energy programme****Issues to be addressed:**

Energy generation in Mongolia is essentially coal-based. Little attention is apparently paid to air pollution by the generating plants, equipment is obsolete and inefficient. Communal heating in towns is also inefficient: the temperature of heating elements in buildings cannot be regulated and the distribution system is not always properly insulated. It can be assumed that energy use in industry is inefficient as well, and a major cause of the sector's high input costs.

**Expected project results:**

Heating systems in permanent settlements using Mongolia's large solar energy potential - a virtually unexploited renewable energy source - could help to reduce pollution and natural resource depletion by coal-based energy/heat generation plants. There is already a UNIDO project in the field of renewable energy: SI/MON/90/801 (wind generation). Solar heating elements could be constructed locally by SMEs, boosting employment. Energy audits in manufacturing plants, for which no local capacity is available, could be a first step to energy saving/clean production measures in the sector.

**Evidence of government priority, commitment and participation in the activity:**

With World Bank and AsDB assistance, the government of Mongolia is formulating an Energy Sector Master Plan which will address the problems related to energy generation and distribution. The suggested project would support the government's commitment to improved performance in the energy sector and, generally, to limit adverse environmental effects of development.

**Project Title: Workshop on statistical methods****Issues to be addressed:**

In support of policy making in a market economy, a shift is needed from statistics based on the Material Production System (MPS) to the International Standard Industrial Classification (ISIC) system. Under an ongoing project (SI/MON/94/802) staff from the Mongolian State Statistical Office has already received training in the application of the ISIC system. It is, however, imperative that also the Ministry of Trade and Industry (MTI) becomes acquainted with and uses the ISIC system in their statistical efforts. The State Statistical Office staff, while equipped to train MTI staff in the use of ISIC, will not have the necessary time available for such training, as their limited staff time is taken up with the reclassification of their industrial database.

**Expected project results:**

Through a 2-3 day workshop for MTI (under the auspices of project SI/MON/94/802) to be undertaken during a planned follow-up mission to the State Statistical Office by a UNIDO expert, the MTI staff's skills can be improved and the basis laid for a unified statistical system in the country.

**Evidence of government priority, commitment and participation in the activity:**

In the Mongolian government's "list of projects, proposed for implementation with the UNIDO assistance" the implementation of the National Industrial Statistics Programme Plus (NISPP Plus) was cited in order to support the State Statistical Office in its functions of storing, analyzing and monitoring industrial statistics. Since national industrial statistics are in part also collected and handled by the Ministry of Trade and Industry, staff of this Ministry should be included in the training to achieve a full implementation of a unified system of national industrial statistics.

**Project Title: Promotion of Industrial Subcontracting and Partnership****Issues to be addressed:**

The networking of small and medium enterprises among themselves and with large manufacturing firms, through production linkages, is an indispensable dimension of industrial resilience and competitiveness. Subcontracting, supply and partnership relations between industries of various types and sizes, especially between large and small enterprises, is a feature of every modern industrial economy.

The project is to reinforce the capacity of SMEs in Mongolia to increase their production and employment, to upgrade their manufacturing processes and products, to improve their productivity and international competitiveness, to encourage import substitution and to promote the export of manufactured products from the SME sector.

**Expected project results:**

The project establishes and operates national "subcontracting and partnership exchanges" (SPXs) in a professional organization such as the Mongolian Chamber of Commerce and Industry or the Mongolian Business Development Centre. The SPXs assist in setting up a roster of subcontractors, suppliers and main contractors, and act as centres for technical information, match-making and promotion, as well as clearing-houses for industrial subcontracting and partnership inquiries and opportunities.