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Report No. 10108-MON

# Mongolia Country Economic Memorandum Towards a Market Economy

December 2, 1991

Country Operations Division  
China and Mongolia Department  
East Asia and Pacific Region

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CURRENCY EQUIVALENTS

(As of September 30, 1991)

Currency Unit = tugrik (T)

\$1.00	=	T40	} (for commercial transactions)
T1	=	\$0.025	
\$1.00	=	T7	} (for barter trade transactions)
T1	=	0.14	

FISCAL YEAR

January 1 to December 31

WEIGHTS AND MEASURES

Metric System

ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
<i>Aimak</i>	Province/Provincial Government
CCA	Convertible Currency Area
CES	Central Electricity System
CMEA (COMECON)	Council for Mutual Economic Assistance
FTC	Foreign Trade Corporation
IBEC	International Bank for Economic Cooperation
IMF	International Monetary Fund
MB	Bank of Mongolia ( <i>Mongolbank</i> ) (the central bank)
MCC	Mongolian Coal Corporation ( <i>Mongol Nuurs</i> )
MFE	Ministry of Fuel and Energy
MFN	Most Favored Nation
MIAT	Mongolian International Air Transport
MND	Ministry of National Development
MOF	Ministry of Finance
MPC	Mongolian Petroleum Company
MPR	Mongolian People's Republic
MPRP	Mongolian People's Revolutionary Party
MTI	Ministry of Trade and Industry
PIP	Public Investment Program
PISC	Petroleum Import and Supply Corporation
REER	Real Effective Exchange Rate
SBA	(IMF) Stand-By Agreement
<i>Somon</i>	County/County Government
TR	Transferable Ruble
UNDP	United Nations Development Programme
USSR	Union of Soviet Socialist Republics

## MONGOLIA: Country Data (1990)

## General

Area (km <sup>2</sup> )	1,566,500
Population (millions)	2.1
Growth Rate (1979-89)	2.5 percent
Density (per km <sup>2</sup> )	1.3

## Social Indicators

Population Characteristics	
Crude Birth Rate (per 1,000)	35.3
Crude Death Rate (per 1,000)	8.5

## Health

Infant Mortality (per 1,000 live births)	64
Population per Physician	343
Population per Hospital Bed	85

## Nutrition

Calorie Intake as % of Requirements (1984-87)	117 average
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## Education

Adult Literacy Rate (%)	91
Primary School Enrollment (% of relevant age group)	93.9

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Source: Statistical Appendix and United Nations

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## MONGOLIA: Country Data (1990)

## Gross National Product (1990)

	% of GNP	1983-88	1989	1990
GNP at Market Prices	100	-	-	-
Gross Domestic Investment	33.8	-1.0	8.3	-29.2
Gross National Savings	-	-	-	-
Current Account Balance	-	-	-	-
Exports of Goods & NFS	25.9	1.3	-5.8	-9.8
Imports of Goods & NFS	56.4	-0.8	-14.3	-5.9
GNP per capita <u>/a</u> (US\$M)	-	-	-	-

/a Calculated in accordance with Atlas methodology.

## Output, Employment and Productivity (1990)

	<u>Value Added</u> (% of Total)	<u>Labor Force</u> (Millions)	<u>Labor Force</u> (% of Total)	<u>Value Added</u> (% of Average)
Agriculture	20.2	0.20	30.4	66.5
Industry <u>/a</u>	39.5	0.17	25.3	156.1
Services	40.3	0.29	44.3	91.0
<u>Total/average</u>	<u>100.0</u>	<u>0.66</u>	<u>100.0</u>	<u>100.0</u>

/a Where significant and available, separate manufacturing, mining and construction.

## Government Finance

	<u>General Government</u>			<u>Central Government</u>		
	<u>(Tug M)</u> 1990	<u>% of GDP</u> 1990 1985		<u>(Tug M)</u> 1990	<u>% of GDP</u> 1990 1985	
Current Receipts	5,323	50.6	52.5	-	-	-
Current Expenditures	5,469	52.0	49.4	-	-	-
Current Surplus	-140	-1.3	3.1	-	-	-
Capital Expenditures	1,276	12.1	10.0	413	4.1	-

## MONGOLIA: Country Data (1990)

## Money, Credit and Prices

	1985	1986	1987	1988	1989	1990
	(millions of tugriks outstanding, end of period)					
Money Supply	4,852.6	4,844.4	4,902.1	5,070.7	5,124.2	6,511.9
Bank Credit to Public Sector	7,109.4	7,608.5	7,558.7	7,606.2	7,562.4	8,112.5
Bank Credit to Private Sector	3.4	4.6	11.4	35.8	66.0	91.9
	(percentage or index numbers)					
Money as % of GDP	51.8	52.0	50.5	49.2	47.8	61.9
General Price Index (1980-81 = 100)	100.1	91.8	91.6	92.5	92.5	92.5
Annual percentage changes in:						
General Price Index	-0.5	-8.2	-0.2	0.9	0.0	0.0
Bank Credit to Public Sector	-	7.0	-0.7	0.6	-0.6	7.3
Bank Credit to Private Sector	-	48.4	147.8	214.0	84.4	39.2

## Balance of Payments

	1985	1986	1987	1988	1989	1990
	(millions of US\$)					
Exports of Goods & NFS	638.5	825.0	905.8	823.4	832.2	516.1
Imports of Goods & NFS (of which Petroleum)	1,406.8	1,883.7	1,884.9	1,922.0	2,017.7	1,123.5
Resource Gap (deficit = -)	-768.3	-1,058.7	-979.0	-998.6	-1,185.6	-607.4
Interest Payments (net)	45.0	1.7	11.3	34.2	48.9	43.6
Other Factor Payments (net)						
Net Private Transfers	-0.1	-0.1	-0.3	-0.3	-	-
Balance on Curr. Acct. excl. Net Official Transfers <sup>/a</sup>	-813.4	-1,060.6	-990.7	-1,033.1	-1,234.5	-651.0
Net Official Transfers					3.9	7.4
Balance on Curr. Acct. incl. Net Official Transfers	-813.4	-1,060.6	-990.7	-1,033.1	-1,230.6	-643.6
Direct Private Foreign Investment	-	-	-	-	-	-
Net MLT Borrowing	752.2	1,048.7	1,110.9	1,100.9	948.1	523.2
Disbursements	790.0	1,064.8	1,127.8	1,118.3	964.5	537.6
Amortization	37.8	16.1	16.9	17.4	16.4	14.4
Subtotal	752.2	1,048.7	1,110.9	1,100.9	948.1	523.2
Other Capital (net) and Capital n.e.i.						
Increase in Reserves (+)	30.8	-0.2	34.2	4.8	6.0	-53.1
Gross Reserves (end year)	-	72.2	148.5	149.2	278.9	177.3

<sup>/a</sup> This equals the total to be financed

## MONGOLIA: Country Data (1990)

## Merchandise Exports (Average 1984-88)

	<u>Value</u> (millions of TR)	% of Total
Minerals, metals	194.1	40.9
Construction materials	13.1	2.8
Other nonfood raw materials	107.2	22.6
Food raw materials	37.9	8.0
Food products	47.8	10.1
Manufactures	73.6	15.5
Others	0.7	0.1
<u>Total</u>	<u>474.4</u>	<u>100.0</u>

## Rate of Exchange (Selling)

	<u>Annual Averages</u>					<u>End Period</u>
	1986	1987	1988	1989	1990	Oct. 1991
US\$1.00 = Tugrik	3.18	2.89	2.89	3.0	4.67	40.0
Tugrik = US\$	0.314	0.346	0.346	0.333	0.071	0.025

## External Debt, December 31, 1990 (in millions of transferable rubles)

	TR million
Public Debt, incl. Guaranteed	10,445.5
Non-Guaranteed Private Debt	-
<u>Total Outstanding &amp; Disbursed</u>	<u>10,445.5</u>

## Net Debt Service Ratio for 1990

	Percentage
Public Debt incl. Guaranteed	13.4
Non-Guaranteed Private Debt	-
<u>Total Outstanding &amp; Disbursed</u>	<u>13.4</u>

## MONGOLIA: Country Data (1990)

## IBRD/IDA Lending (12/31/88)(US\$M)

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	IBRD	IDA
Outstanding & Disbursed	n.a.	n.a.
Undisbursed	n.a.	n.a.
<u>Total Outstanding incl. Undisbursed</u>		

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## Preface

Mongolia became a member of the World Bank Group (IBRD, IDA and IFC) on February 14, 1991. A World Bank economic mission visited Mongolia from June 21 to July 5, 1991. It was led by Mete Durdag, and its members included Alan Gelb, Frida Johansen and Kathy Ogawa; John Leimone (IMF); and Cevdet Denizler and Victor Gabor (Consultants). Ramesh Chander and Shahid Yusuf participated in the latter part of the mission's work and Peter Harrold contributed to the drafting of the report. This initial report represents the work of that mission. The mission wishes to thank the Mongolian authorities, and in particular the Ministry of Finance, the Bank of Mongolia and the Ministry of National Development, for their support and cooperation in providing the information and data used in this report. It also wishes to acknowledge the cooperation received and the benefit derived from recent work undertaken inter alia by the IMF, the Asian Development Bank (ADB), the United Nations Development Programme (UNDP), and by several United Nations Specialized Agencies.

This report is the World Bank's first review of the Mongolian economy. It analyzes Mongolia's economic policies and problems at the time of membership. After an introductory background chapter, Chapters 2, 3 and 4 focus on recent economic developments, the key reform and policy issues, and development prospects in the medium term. Annex 1 provides background notes on the main sectors and selected issues. A statistical appendix is contained in Annex 2.

MONGOLIA

COUNTRY ECONOMIC MEMORANDUM

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**MAP**

1. IBRD 23405

COUNTRY ECONOMIC MEMORANDUM

MONGOLIA

Executive Summary

Background

i. For most of its 70-year history as an independent state, Mongolia has been a centrally-planned economy with extremely close ties to the Soviet Union, particularly since 1946. During this period, the country has been gradually transformed from a rural, essentially nomadic economy to one with a large industrial sector, mainly for the production of semi-processed raw materials. Industrialization was made possible by large investments and loans from the Soviet Union, particularly in the early 1980s, which permitted Mongolia to run large fiscal and external deficits and to enjoy relatively high rates of growth.

ii. This began to change in the mid-1980s as Mongolians became increasingly dissatisfied with the rigidities of the centrally-planned system. Some reforms were initiated as early as 1986, but were not sufficient to improve the situation dramatically. Following popular demonstrations in March 1990 and the country's first multi-party elections in July 1990, a new coalition government was formed that pledged to "construct a market-oriented economy." Since then, the government has embarked upon a comprehensive program of reforms covering the entire spectrum of economic policies, including privatization, price liberalization and the establishment of new institutions for macroeconomic management.

iii. The new policy framework coincided with two major external shocks that have seriously affected the economy. First, owing to its own economic difficulties, the Soviet Union terminated its financial and technical assistance to Mongolia in 1991, except for the completion of ongoing turnkey projects; it has also found it increasingly difficult to maintain regular supplies to Mongolia of essential commodities such as cement, fertilizers, petroleum and spare parts. Second, the collapse of the CMEA system in 1991 has seriously disrupted Mongolia's external trade.

iv. Thus, the economic reform process in Mongolia has begun under adverse circumstances. The external shocks have had two major effects: in the short term, they have necessitated strong stabilization measures to reduce the very large structural deficits in Mongolia's fiscal and external accounts; and they have emphasized the need for policy changes to reorient and restructure the economy, so that efficient, self-sustaining growth can be resumed as soon as possible.

Recent Developments

v. The impact of the rapidly changing external environment was first felt in 1990, when GDP fell by 2.1 percent, the first decline in many years. This was followed by an estimated 10.8 percent decline in the first three

quarters of 1991 and perhaps 15 percent for the year as a whole. The most rapid declines have occurred in the construction sector, as investment decreased dramatically following the abrupt termination of external assistance. This has already created increased unemployment, although this has been moderated somewhat by the development of the private sector, where new jobs have been created in response to the liberalization.

vi. The reduction in foreign savings is already leading to problems in financing the fiscal deficit, equivalent to about 17 percent of GDP in recent years; and in 1991 the government resorted to heavy borrowing from the central bank. Reforms already underway, such as the conversion of profit remittances to taxes and changes in the price structure, have reduced old sources of fiscal revenue, while new ones are yet to be fully effective. Credit to the government in the first half of 1991 increased by more than in the whole of 1990; and this was also accompanied by a rapid growth in credit to state-owned enterprises. Estimating the impact of this on inflation is not easy, because of the paucity of data and because most prices were administratively doubled in January 1991. However, over and above that change, it is estimated that administered prices have been increased by a further 30 percent in the first nine months of 1991 and free market prices by about 70 percent. Clearly, the rapid growth of money supply in the face of declining production raises the spectre of hyperinflation, which is why stabilization measures are being put in the forefront.

vii. Perhaps the most serious impact is visible in the foreign trade sector. During 1986-89, Mongolia ran a fully-financed current account deficit equal to about 30 percent of GDP. This declined sharply in 1991, as imports and exports of goods and services fell by about 68 percent and 45 percent respectively compared to their 1989 levels in the face of the CMEA and USSR difficulties. Reserves became negative as Mongolia turned to hard currency imports to supplement declining CMEA supplies. All this has been compounded by recently poor prospects for Mongolia's main hard currency exports--cashmere, wool and leather products--because of mild winters in major markets.

viii. Thus, a wide range of measures is called for, both to arrest this serious economic decline and to introduce measures to stimulate efficiency gains and new sources of growth.

#### Stabilization and Macroeconomic Reforms

ix. Mongolia has moved swiftly to remove its old central planning system and new institutions and policy instruments are being put in place. In May 1991, a new central bank was created and the commercial functions of the old monobanking system are being privatized. Now that the central bank is operational, it has begun to tighten monetary policy, and strict money and credit targets have been adopted as part of Mongolia's stand-by program with the IMF. Clearly, with recent runaway money growth and rapid inflation, reimposing monetary discipline is the central bank's most important and immediate task. Beyond this, its main priority will be to establish itself and train its staff in regulating and supervising a private banking system, and in completing the privatization of its commercial banking functions. The latter has not proceeded as fast as had been expected, not least because of the thorny issue of bad loans on the books of these banks as a result of past directed credit.

While it is necessary to remove such loans from the banks' portfolios prior to privatization, it will also be necessary to avoid monetizing such debts.

x. Among the first measures that the government instituted were reforms of the taxation system, recognizing that old sources of finance would rapidly disappear. Indeed, continued adjustment of public finances remains at the heart of the stabilization effort and of the program to create a new economic system. Already, new corporate and personal income taxes have been instituted, and a new customs tax has replaced the old import price differential system. New indirect taxes have been imposed to fill the large revenue gap.

xi. The authorities have also begun to reduce public expenditures, primarily by postponing or eliminating investment expenditures and by reductions in the size of the civil service. In addition, cost recovery measures are planned in health and education to reduce net outlays. The major area where continued effort seems to be necessary is in reducing subsidies, which account for a quarter of public expenditure. In particular, industrial and trade subsidies should be eliminated rapidly, in light of reforms in these areas.

xii. On the external side, Mongolia has relied heavily on exchange rate measures to adjust its external accounts, and the rate has moved from T3 = \$1 in June 1990 to T40 = \$1 today. However, a special rate of T7 = \$1 has been maintained for barter trade with the Soviet Union. Foreign exchange retention is permitted (to certain, varying levels), and can be exchanged in a third, parallel exchange market, where even higher rates obtain. However, liberalization of foreign exchange has yet to be matched by similar measures for trade, which continues to be dominated by the old trade corporations and by compulsory state orders. It is urgent to remove this monopsony situation to improve incentives for nonstate corporations to increase export efforts.

xiii. Finally, the authorities have yet to define clear policy coordination mechanisms with regard to macroeconomic issues. The old central planning system has been formally discarded but is yet to be fully replaced by new institutions and processes, although these appear to be emerging under the leadership of the first Deputy Prime Minister.

#### Policies for Structural Change

xiv. Mongolia has also moved to institute a wide range of policies to improve efficiency in its industrial, agricultural and service sectors. These will need to be supplemented by medium-term development strategies, and accompanied by a re-orientation of the role of government. Price reform has been given a central role, and already prices accounting for some 60 percent of all transactions have been liberalized; most of the remaining 40 percent (excluding some public services) are scheduled to be freed by the end of 1992. While this is encouraging, price liberalization needs to be accompanied by the abolition of the state order system and in particular of the state marketing organizations in the agricultural sector. Instead, such organizations may offer in some cases minimum support prices to ensure some stability to farmers as new mechanisms are developed. For those public services that remain, appropriate pricing policies will be necessary, especially when this involves the passing through of the full cost of imported products, where the current barter exchange rate risks the possibility of severe distortions.

xv. The government has placed privatization of state-owned enterprises at the center of its reform program. Over 2,000 enterprises, including 340 large ones, are to be privatized through a voucher system. Originally, the government hoped to achieve this over a twelve-month period, but has since adopted a more realistic three-year timetable. It will be important to link the pace and sequencing of the privatization program to reforms in other areas, in particular price and marketing reforms; it is vital that the latter should precede the privatization program, not follow it. A particularly difficult issue is how to treat the enterprises' T10 billion of domestic debt. Clearly, enterprises will have to be valued on a net basis, and it may be necessary to convert debt into long-term bonds. Care will also be needed in addressing the possible macroeconomic impact of privatization, especially the wealth effects of the ownership transfer.

xvi. While considerable effort has already gone into the price reform and privatization programs, less attention has so far been given to the promotion of new private sector activities. Good progress has been made on the enabling environment, but this will need to be backed by supportive institutions. In particular, it will be essential to ensure that sufficient credit is available for new private enterprises and that they do not get squeezed out by state-owned ones. Similarly, a significant number of enterprises (in terms of asset value) will remain in public hands indefinitely and others for some time prior to their privatization; early thought will need to be given to how such enterprises will be managed and regulated and how the state's ownership role will be exercised.

xvii. These reform issues--especially price reform and privatization--will be crucial for medium-term sectoral development. In agriculture, privatization of the herds and a full role for market forces are the main issues. Industry is hampered in particular by inefficiency and locational issues deriving from the central planning system. The energy sector has suffered from poor pricing policies, and from its separation from modern technology, which has had an adverse impact on the urban environment.

xviii. As reforms take hold, new roles for government will become necessary and preparation for this needs to start soon. For example, the government will continue to have a role in the provision of agricultural services; industrial retraining, and especially management development, will be required; and public investment will need to be refocused away from production and towards the financing of essential economic infrastructure. The latter is especially important in transport and energy, where capacity constraints could pose serious obstacles to the government's desire to diversify the economy, especially in terms of external trade. There are perhaps two key roles for government. First is to reorient the government itself and the civil service to managing an economy indirectly instead of by the old administrative means. It is evident, for example, in the program to promote small business, that the government still thinks in terms of direct actions rather than enabling policies.

xix. The second is to focus resources on the social safety net. The socialist system made notable achievements in terms of health, education, housing and poverty alleviation. In the rush to discard the old structure, these functions of government should not be forgotten. During stabilization, special efforts need to be made to protect the most vulnerable groups from the

effect of output declines and relative price shifts. At the same time, long-term gains in human resource development need to be maintained and improved.

### Development Prospects

xx. Mongolia's medium-term development prospects include its well-educated labor force, abundant agricultural and natural resources and the traditional resilience of its rural economy. However, the country also faces a number of basic developmental constraints, in addition to its serious short-term problems. In 1991, the economy has been hit by severe external shocks, and the authorities have responded by designing a strong stabilization program, while simultaneously pursuing structural reforms. The program is designed to limit the decline in GDP to 5 percent in 1992 and, after a year of zero growth in 1993, to resume average growth of 3 percent annually thereafter. [It should be noted that, as in other socialist economies in transition, GDP growth rates can be seriously understated during reforms because of large relative price shifts and unmeasured activity.]

xxi. This scenario is based on two critical assumptions: that Mongolia's external environment will not deteriorate further; and that the government's reform program and policies will be effectively implemented on schedule. The greatest risk to the government's program is the prospect of a further collapse in trade with the Soviet Union or its Republics. Given Mongolia's high import dependency and harsh climate, this could have potentially devastating consequences on its economy and people, although its rural sector may provide a degree of resilience and security. Even in the absence of further external deterioration, there is a risk that the government's targets may not be achieved because of policy failures, either of design or implementation. The program's realization may therefore require bolder and firmer reform implementation by the government and a strong private sector response.

xxii. Throughout the period of stabilization, Mongolia will have to rely heavily on external financing if it is to have an acceptable minimum level of imports to maintain production and begin a modest recovery. Nevertheless, the balance of payments is subject to considerable risk, implying that Mongolia should obtain external financing primarily on concessional terms, with restricted access to commercial sources. If such terms can be achieved, related debt service should not be a problem, provided that the servicing of Mongolia's debt to the Soviet Union remains manageable.

## I. GEOGRAPHY, DEMOGRAPHY AND HISTORY 1/

### Geography

1.1 Mongolia is a large but sparsely populated country, landlocked between the USSR to the north and China to the east, west and south. Its total land area (1.6 million km<sup>2</sup>) is about one-half the size of India and four times that of Japan. It is 2,400 km long from west to east and, at the maximum, 1,250 km from north to south. With an average elevation about 1,600 meters above sea level, its climate is markedly semiarid continental. Mongolia's winters are long and severe, with average temperatures falling below freezing from October to March. The average temperature in January is about -25°C, with lows often falling below -40°C.

### Natural Resources

1.2 Mongolia has abundant agricultural land and is also rich in mineral resources, including coal, copper, molybdenum, fluorite, gold, iron ore, lead, oil, phosphates, tin, uranium, and wolfram, of which the first three are the most important. Coal reserves total an estimated 20 billion tons. The main copper and molybdenum mines are at Erdenet, managed as a joint venture between Mongolia and the Soviet Union. The Erdenet mine produces copper concentrate for export to the Soviet Union and is by far the country's largest export earner. Thermal power, generated from domestic coal and imported diesel oil, is supplemented by electricity imports from the Soviet grid, especially for the Erdenet copper plant.

1.3 About 80 percent of the land is suitable mainly for extensive animal husbandry. Mongolia's 26 million head of livestock (1989) include: sheep (58 percent), goats (20 percent), cattle (11 percent), horses (9 percent) and camels (2 percent). Crop cultivation began on a significant scale only in the 1950s by developing virgin land. It is constrained by the severe climate, which permits only a 90-day growing and harvesting season and causes large crop losses because of sharp fluctuations in temperature (as much as 30°C during one day). Most crop cultivation takes place on large state farms. Forested areas cover approximately 10 percent of the territory (15 million ha).

### Demography

1.4 With a total population estimated at 2.1 million in July 1989, Mongolia's population density, at 1.3 persons per km<sup>2</sup>, is one of the lowest in the world. About 58 percent of the population lives in urban areas, including about a quarter in the capital city of Ulaanbaatar. Nearly 90 percent are Mongols, of which the Khalkha-Mongols comprise the largest subgroup (approximately 75 percent of the total). Other ethnic groups include Kazakhs (5.3 percent), Chinese (2 percent), Russian (2 percent), Tuvins, Uzbeks, Uighurs and others (1.5 percent). The official language is Khalkha Mongol.

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1/ This chapter draws extensively on: Mongolia: A Country Study, Federal Research Division, Library of Congress, eds. Robert L. Worden and Andrea Matles, 1991, and IMF Occasional Paper No. 79.

1.5 With an estimated birth rate of 35.1 per 1,000 and an estimated death rate of 7.6 per 1,000 in July 1989, Mongolia's 2.8 percent rate of population growth is one of the highest in Asia. Its population has more than doubled since 1960 owing, until recently, to the government's pro-natalist policy. The infant mortality rate was about 49-53 per 1,000. Life expectancy for males was 63 and for females 67.

### Political and Economic History

1.6 After the collapse of the Mongol Empire (established by Genghis Khan in 1291), Mongolia was a frontier province of China from 1691 until early this century and became an independent state on July 11, 1921. Following three years of constitutional monarchy, nominally headed by Buddhist leaders, the Mongolian People's Republic (MPR) was founded in 1924, with its capital renamed Ulaanbaatar (Red Hero).

1.7 Following World War II, Mongolia became a centrally planned command economy characterized by five-year plans that emphasized the development of industry and energy, and by increasingly close association with the Soviet Union, beginning with the signing of a Treaty of Friendship and Mutual Assistance in 1946. Mongolia joined Comecon in 1962 after which trade expanded and these nations became involved in building Mongolia's infrastructure and some of its large productive enterprises and mining complexes, in effect laying the foundation of a modern industrial sector (see Box 1.1).

1.8 The removal of Tsedenbahl (Mongolia's leader during much of this period) from power in August 1984 was an important event in the country's modern history that marked the beginning of the economic and political reforms now under way. Dissatisfaction with the rigidity of the centrally-planned economy was mounting and, partly influenced by the Soviet Union's "glasnost" and "perestroika" policies, Mongolia launched its own program of political openness and economic restructuring in 1986. The economic reform program had five goals: (a) acceleration of development; (b) application of science and technology to production; (c) reform of management and planning; (d) greater independence of enterprises; and (e) balance of individual, collective and societal interests. Accelerated development was to result from the attainment of the other four goals, while scientific research was to be redirected so that it would be better linked to economic development objectives. Reform of management and planning started with the streamlining of government agencies in charge of the economy and the duties of the State Planning and Economic Committee were limited to overseeing capital investment policy. The number of indicators specified in the five-year development plan and annual economic plans was also reduced. Enterprises were granted more financial autonomy, first for a limited number of enterprises, and later more widely. Specifically, enterprises were made accountable for their own losses--previously they would receive state subsidies--and for fulfilling sales contracts and export orders; output above state orders could be sold at the enterprises' discretion.

Box 1.1: MONGOLIA'S RELATIONSHIP WITH COMECON

Mongolia joined Comecon in 1962 and until recently its foreign economic relations have been predominantly with this group. Bilateral foreign economic relations with Comecon members were conducted mainly through the various joint intergovernmental commissions on economic, scientific, and technical cooperation. Intergovernmental commissions met annually or semiannually to coordinate planning and to discuss annual and five-year agreements on trade and technical and financial assistance. Mongolia coordinated its five-year plans with Comecon's five-year multilateral cooperation plans.

Participation in Comecon provided the following trade advantages: it ensured markets for Mongolia's exports and helped satisfy most of its import requirements; it offered "incentive prices" for such imports as fuel which were lower than prices charged to the more developed Comecon nations; and it financed Mongolia's trade deficit with the Soviet Union--by grant until 1980 and thereafter on concessional loan terms.

As a member of Comecon's International Bank for Economic Cooperation and International Investment Bank, Mongolia was able to secure loans at preferential rates. Most financial assistance came from the Soviet Union in the form of grants or concessional credits (2 percent per annum). It is estimated that Soviet credits to Mongolia totaled 450 million rubles for the Third Five-Year Plan period (1961-65), 470 million rubles for the Fourth Plan (1966-70), 550 million rubles for the Fifth Plan (1971-75), and about 1.1 billion rubles for the Sixth Plan (1976-80). These credits were used for capital investment (estimated at 32.2 percent from 1958-60; 47 percent from 1961-65; and 59 percent from 1976-79), technical assistance and trade financing. Soviet grant assistance to Mongolia is estimated at 50 million rubles from 1966-75; and 40 million rubles from 1976-80.

Turnkey projects, financed by loans mainly (but not exclusively) from the Soviet Union, were the main form of external assistance in the 1980s. The Soviet Union helped construct or modernize over 500 facilities during 1961-80 and by 1981, these accounted for more than half of Mongolia's total industrial output; 90 percent of thermal power generation; 80 percent of coal production; 70 percent of confectionery and bakery products; and 100 percent of woolen cloth, felt, formula food, copper and molybdenum concentrate, and fluorite output.

Other turnkey projects constructed during the 1980s include a woodworking combine, a glue factory, and two distilleries built by Poland; a clothing mill and flour mill built by Hungary; a tannery and a cement works built by Czechoslovakia; a furniture and a cardboard combine built by Romania; a meat combine built by the former German Democratic Republic; a sheepskin coat factory and the Sharin Gol state farm's fruit and vegetable processing factories built by Bulgaria; and a house-building combine and spinning mill built by the Soviet Union. Turnkey projects were often part of larger joint Soviet-Mongolian development programs, such as those at Baga Nuur, Choibalsan, Darhan and Erdenet.

Joint-stock companies and joint ventures between Mongolia and the Soviet Union and other Comecon members have been important in securing foreign investment and technical assistance as well as building infrastructure, developing the mining sector and founding financial and trading institutions. Examples include Mongolbank, Mongoltrans (Mongolian Transportation), the Ulaanbaatar Railroad, and the Erdenet Mining and Concentrating Combine. Many joint-stock companies were eventually handed over to sole Mongolian ownership by the Soviets. Major joint ventures that had not been turned over to sole Mongolian ownership as of 1987 are the following:

- Erdenet Mining and Concentrating Combine--Soviet Union
- Mongolbolgarmetall--Bulgaria--mining
- Mongolcheckhoslovakmetall--Czechoslovakia--exploitation of fluorite and tin
- Mongolsovtvetmet--Soviet Union--exploitation of nonferrous metals
- Sovmongolpromstroy--Soviet Union--construction

1.9 During the 70 years since independence in 1921, Mongolia has evolved from an underdeveloped, primarily pastoral economy to one with a large industrial sector, mainly but not exclusively exporting the nation's abundant agricultural and mining resources. The agricultural sector is still dominated by livestock breeding, but now includes significant amounts of cropping. In addition, a basic transportation network comprising railroads, roads and avia-

tion has been developed. Significant investment in the social sectors has resulted in near-universal adult literacy, a free health care system, and life expectancy approaching the level of developed countries.

1.10 Industrialization, made possible by large investments by the Soviet Union, led to rapid growth during the 1960s and 1970s. For example, net material product grew nearly 8 percent annually during 1970-75, and by a further 4.3 percent annually in 1975-80; and, gross industrial production rose by about 70 percent between 1960 and 1980. However, agriculture lagged behind, with the size of the livestock herd barely changing over the last 30 years. Industrial investments also permitted a growing volume of foreign trade as copper producing capacity came on stream, but export growth could not keep pace with Mongolia's rising import dependency.

1.11 Until the early 1980s, Mongolia experienced relatively high growth, despite the distortions and inefficiencies of the centrally planned economy. Since then, however, the economy has undergone increasing strains because of increasing difficulties in the CMEA countries and the inadequacy of domestic resources to sustain efficient growth policies. This was reflected in the declining growth rate of real GDP,<sup>2/</sup> from 7 percent in 1981-86 to 4.6 percent in 1987-89 (Table 2.1). In 1990, the deteriorating external environment and the increasing fluidity of domestic economic policies and institutions led to a -2.1 percent decline in GDP. Based on estimates for the first three quarters, GDP is expected to decline by about -15 percent in 1991. These output declines have been accompanied by sharp increases in unemployment and inflation, both entirely new phenomena in Mongolia.

1.12 The convergence of three factors in 1990/91 created the present difficult situation. First, Mongolia's capital-intensive, import-dependent centrally planned economy became incapable of generating self-sustaining growth. Second, external capital flows from the Soviet Union, which in recent years accounted for up to 30 percent of GDP, began to decline and ceased entirely in 1991. Third, the collapse of the CMEA system in 1991 resulted in severe dislocations in Mongolia's external trade, of which over 90 percent was with the USSR. These three elements form the background against which recent economic developments are reviewed in the following chapter.

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<sup>2/</sup> Mongolia's national accounts statistics are compiled according to the material balances approach to estimate Net Material Product (NMP), which is then converted to GDP according to the U.N. System of National Accounts (SNA). Particular caution is needed on the following points: (a) the extent, if any, of overestimation of growth that may have been engendered by the past regime's zeal to show Mongolia as a developed industrial country; (b) the adjustments required to move from NMP to GDP, especially the estimation of value-added in nonmaterial services and depreciation of capital stock; (c) the valuation problem due to "estimates at current prices" not always using prices actually paid by end-users and the lack of price indexes to arrive at the constant price estimates of GDP; and (d) conversion of GDP estimates in tugriks to dollars.

## II. RECENT ECONOMIC DEVELOPMENTS AND THE EMERGING CRISIS

### A. Background

2.1 This chapter analyzes recent economic developments in Mongolia and the government's response. In particular, it relates how the rapidly deteriorating external environment, especially the changed prospects for external trade and capital assistance, has created severe imbalances and generated serious production losses.

2.2 While Mongolia has experienced large external and domestic deficits for a long time, these did not generate monetary pressures because, until 1990, they were fully financed by concessional long term assistance from the USSR. In 1991, Soviet assistance was terminated and, combined with the loss of export earnings as a result both of the collapse of CMEA trade and the recently soft market for Mongolia's traditional exports, this led to the need for rapid and deep adjustment. In the short term, the authorities have attempted to maintain consumption standards and this has resulted in substantial monetary growth, with a consequent rise in inflation. The discussion that follows depicts the seriousness of the situation and underlines the need for tight monetary and fiscal policies to effect the necessary reductions in both consumption and investment. This task is complicated by the simultaneous need to restructure macroeconomic policies and institutions for the transition to a market economy. This chapter is concerned primarily with the extent of the adjustment effort required in terms of correction of fiscal deficits, reduction of monetary expansion and wage restraint.

2.3 A cautionary note is required at the outset about Mongolia's national accounts data and ratios of other macroeconomic variables to GDP. Despite continuing efforts by the government and several international agencies to adapt Mongolia's national accounts and other statistics to standardized international formats, a great deal of work remains to be done to achieve satisfactory reconciliation of various data. This is well illustrated by the frequent references in this report to specific data problems. These difficulties are expected to be addressed in the next year or two with the help of technical assistance from the UN and other international agencies, including a component for the State Statistical Office in a proposed Technical Assistance Project.

### B. Production, Expenditure and Employment

#### Production

2.4 The performance of the industrial sector (including mining and electricity), which accounted for around 27 percent of GDP in recent years (Table 2.1), contributed significantly to the decline in GDP in 1990 and 1991. Industrial NMP grew rapidly (9 percent per annum) during the first half of the 1980s, but slowed to 5 percent between 1985 and 1989 as a result of economic difficulties in the CMEA countries. Growing shortages of energy and imported spare parts led to stagnation in 1990, when industrial output grew by less than 1 percent, and to a substantial decline in industrial production in 1991, officially estimated at -10.7 percent for the first nine months, although this is probably an under-estimate. Lack of foreign exchange and the disruption of

trade with the Soviet Union is having a sharp contractionary impact on production in all the subsectors of industry, ranging from -13 percent in electricity output to -68 percent in fluorspar production.<sup>1/</sup>

Table 2.1: GROWTH OF NMP AND GDP AT CONSTANT (1986) PRICES, 1987-91  
(percentage)

	1987	1988	1989	1990	1991
Net material product	3.4	4.2	9.7	0.1	
Industry	2.8	3.7	11.4	0.7	
Agriculture	-6.4	2.4	13.8	-0.8	
Construction	19.1	11.8	9.6	-14.6	
Other	6.6	4.2	6.6	-16.0	
GDP	4.5	5.1	4.2	-2.1	

Source: Mongolian authorities.

2.5 Mining is of critical importance for Mongolia. It is the major source of its foreign exchange earnings through copper exports, and of energy, through coal production and through the copper-for-oil barter arrangement with the Soviet Union. While barter trade with the Soviet Union enabled Mongolia to survive the 1990/91 winter without major losses in production, disruptions in the supply of spare parts, energy and other inputs limited copper output in both 1990 and 1991 to around 320,000 tons compared to earlier levels of 360,000 tons. Coal production, having reached a peak of 8.6 million tons in 1988, declined to 8 million tons in 1989 and 7.2 million tons in 1990. This decline has continued in 1991 and output was only 5 million tons for the first nine months, reflecting serious shortages of equipment and spare parts. Reduced coal production has adversely affected electricity supply and heat generation, and caused serious difficulties in the 1990/91 winter.

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<sup>1/</sup> For instance, the output of bread, electricity, dairy products and leather coats declined between 5-15 percent; cement, knitwear and footwear between 20-30 percent; carpets and fresh meat products 34-38 percent; and canned meat and fluorspar 61-68 percent.

2.6 Agriculture, which contributes about 16 percent of GDP,<sup>2/</sup> is particularly vulnerable to Mongolia's severe climate and its production fluctuates over 2-3 year cycles. Agricultural NMP, after declining by over 6 percent in 1987, enjoyed two successive years of growth before again falling in 1990. The decline in 1990 was caused by a sharp 10 percent fall in crop production because of cold weather, late rains during the harvest season, and shortages of diesel and farm equipment. Although weather conditions in 1991 appear to have been favorable, shortages of inputs due to lack of foreign exchange and a delay in deregulating agricultural trade and prices are expected to continue constraining crop production. Meat production remained virtually stagnant during the 1980s, mainly due to inefficient pricing policies and state procurement (orders). However, the decline of 150,000 tons (to 500,000 tons) in 1990 was probably caused by: herdsman's desire to build up stocks following the easing of restrictions on the size of herd that can be privately owned; lack of essential items in the domestic market which herdsman usually demand; and inadequate procurement prices and continued restrictions on private trading in livestock products.<sup>3/</sup> Milk production also declined by 2.2 percent in 1990 and by a further 32 percent in the first quarter of 1991 compared to the corresponding period in 1990, although this probably reflects difficulties with the distribution system rather than production per se.

2.7 In terms of relative sources of growth, industry has continued to be the leading sector, albeit at a declining rate over the 1980s as economic difficulties have mounted (see Table 2.2). Interestingly, the distribution sector became the leading source of growth in 1986-90, reflecting higher unit costs and the growth in private consumption.

### Expenditure

2.8 Mongolia's national accounts data do not provide reliable estimates that permit detailed observations on the pattern of, and changes in national

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<sup>2/</sup> Considering that Mongolia is basically an agricultural country, it is surprising that agriculture accounts for such a small share of GDP. This is explained mainly by the following. First, some agricultural activities are recorded for definitional reasons under other sectors, e.g., processed agricultural products are included under industry. Second, in estimating GDP at market prices, almost all indirect taxes (e.g., price differentials) are attributed to the trade and distribution sector, and this leads to overestimation of trade's share at the expense of the other sectors. Correcting for this latter distortion results in an increase in agriculture's share to 20 percent.

<sup>3/</sup> In January 1991, the government reduced state orders for meat by 15 percent, while raising mutton procurement prices by 60 percent; retail prices for mutton and goat were raised by 100 percent.

**Table 2.2: SOURCES OF NMP GROWTH, 1980-90**  
(% Shares of growth)

	1980-85	1986-90
Agriculture	18.7	12.9
Industry	44.4	36.7
Distribution	22.1	37.2
Other	14.8	13.2

Source: Appendix Table 2.4.

expenditures.<sup>4/</sup> Nevertheless, an approximate picture of Mongolia's overall expenditure pattern is shown in Table 2.3 below.

**Table 2.3: GROSS NATIONAL EXPENDITURE, 1986-90**  
(percentage of GDP in current prices)

	1986	1987	1988	1989	1990
GDP at m.p.	100.0	100.0	100.0	100.0	100.0
Resource balance	36.2	29.1	28.0	33.1	26.8
Total resources/uses	136.2	129.1	128.0	133.1	126.8
Consumption	69.7	83.4	85.9	87.0	96.9
Public	24.3	24.5	24.0	23.2	22.0
Private	45.3	58.9	61.9	63.8	74.9
Investment	66.5	45.7	42.1	46.1	29.9
Gross fixed investment	51.2	46.9	44.1	44.8	32.1
Stock changes	15.3	-1.2	-2.0	1.3	-2.2

Source: Mongolian authorities and Bank staff calculations.

<sup>4/</sup> In addition to the weaknesses in GDP estimates noted above, there are the following problems as well: (a) estimation of the resource balance in tugriks (i.e., net imports of goods and nonfactor services) is rendered difficult because of the exchange rate issue; (b) no breakdown of consumption expenditure between the public and private sectors is available; and (c) estimates of depreciation of fixed capital are suspect, and it is not possible to divide total gross investment between the public and private sectors.

2.9 Mongolia has been able to maintain a very high negative resource balance because of large inflows of external resources (mainly from the Soviet Union), which averaged about 32 percent of GDP during 1986-89. Consumption over this period rose from about 70 percent to 87 percent of GDP, entirely reflecting the increase in private (or nongovernment) consumption to almost 64 percent of GDP in 1989. Investment, which originated mainly in the public sector, declined from a very high level of 66.5 percent of GDP in 1986 to about 45 percent in 1987 and continued at this level in 1988 and 1989. Thus, in the second half of the 1980s, public sector expenditure (both consumption and investment) was restrained in relation to GDP. The surge in private consumption (if not due to statistical error) is harder to explain, but seems to be the result of continued balance of payments support from the Soviet Union, even after major turnkey projects were completed in the mid-1980s.

Table 2.4: FINANCING OF INVESTMENT, 1986-90  
(percentage of the total)

	1986	1987	1988	1989	1990
Gross domestic investment	100.0	100.0	100.0	100.0	100.0
Gross domestic savings	45.6	36.3	33.5	28.2	10.4
Foreign savings	54.4	63.7	66.5	71.8	89.6
<u>Memo item</u>					
GDS/GDP (%)	30.3	16.6	14.1	13.0	3.1

Source: Table 2.3.

2.10 Mongolia's extraordinarily high levels of investment reflect the highly capital-intensive nature of several major mining, power and transportation projects that were carried out in the early 1980s to increase copper producing and processing capacity. This is reflected in very high capital-output ratios for this period, of the order of 8-10. Once these projects were completed, investment fell to more normal, albeit still high levels.

2.11 Since 1990, Mongolia's rapidly changing economic relations with the CMEA and its new economic reform measures have brought about significant changes in the pattern of national expenditure. First, external resources fell below 27 percent of GDP as a result of reduced Soviet aid--a decline that would have been even sharper but for the more than 50 percent devaluation. Second, faced with this revenue shortfall, the government started tightening and streamlining its current, and especially investment expenditures. This led to a modest contraction in the public consumption ratio and a sharp drop in the investment rate. Third, the restraint in public sector expenditure, as a percentage of GDP, was greater than the reduction in external resources required. This would have created greater room for private investment had the incentives and means for it been in place. However, the reform program was still at an early stage and the increased resources available to the private sector (as a percentage of GDP) were absorbed by higher private consumption.

2.12 A corollary of the rising consumption rate is the declining domestic savings rate, as shown in Table 2.4. Consequently, during the second half of the 1980s, a rapidly growing proportion of total investment, which was itself declining, was financed by external resources. This trend needs to be reversed if Mongolia is to embark on a path of self-sustaining development in the near future.

### Employment and Wages

2.13 The production declines described above have already begun to be reflected in pressures on employment and wages. As a centrally planned command economy, Mongolia has not previously experienced open unemployment because the state found or created employment for every school leaver or graduate. Until recently, there was only some frictional unemployment (about 2 percent of the labor force) comprising workers temporarily out of work before being placed in another job.

2.14 Mongolia has a rapidly growing population and 44 percent of the total is under 16 years of age (Table 2.5). Mongolia also has a relatively high labor force participation rate due to the state's commitment (until recently) to provide jobs to everyone, the high level of educational development, and women's interest in employment. By contrast, the economy's capacity to efficiently absorb the growth in labor supply is limited because the leading sectors--mining, mineral-based industries, and livestock--are essentially capital- and land-intensive activities. Labor-intensive activities, such as light industry and the retail sector, have also been constrained by past development emphases. The policy of guaranteed employment has therefore led to overmanning in state enterprises and the bureaucracy as well as a number of inefficient "make-work" projects.

2.15 The slowdown in the economy in 1989 and subsequent declines in production in 1990 and 1991 (paras. 2.4-2.6) have affected employment adversely. Since 1990, new entrants to the labor force have not been guaranteed employment, and existing employees of some state enterprises have been laid off following the streamlining or privatization of these enterprises--though the latter (i.e., redundancy of existing workers) has not yet reached a serious level. The government itself has released some 3,000 workers. As a result, the number of registered unemployed by mid-1991 increased to 36,000 (3.8 percent) from 20,000 a year earlier. If nonregistered unemployed are also included, the Ministry of Labor estimates unemployment at about 45,000 (4.8 percent) in mid-1991. This would have been much worse but for the rapid growth of private sector employment which, nil a few years ago, had already reached 56,000 5/ or about 8.6 percent of total employment by mid-1991.

2.16 Although an overall unemployment rate of about 5 percent is not very high, the government is understandably concerned about this new phenomenon. Unemployment is concentrated mainly among the young urban population; 60 percent of the total live in the Ulaanbaatar area, where unemployment is almost 12 percent. Second, because of the sharp deterioration in the economy in 1991 and an expected increase in redundancies as a result of privatization, the

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5/ This comprises 32,000 employed in 4,200 enterprises, 20,000 in about 3,000 cooperatives, and 4,000 self-employed.

**Table 2.5: POPULATION AND EMPLOYMENT STATISTICS, 1988-90**

	1988	1989 ( '000)	1990	Structure 1988-90 (%)	Growth 1988-90 (% p.a.)
Total population <u>/a</u>	1,997.0	2,044.0/ <u>b</u>	2,095.6	100.0	2.52
Under 16	n.a.	904.3	920.6	44.1	1.80/ <u>c</u>
Active age	n.a.	995.1	1,028.2	48.9	3.33/ <u>c</u>
Over active age	n.a.	144.6	146.8	7.0	1.52/ <u>c</u>
Labor force resource	n.a.	928.0	n.a.	100.0/ <u>d</u>	n.a.
Total employed	n.a.	764.0	n.a.	82.3/ <u>d</u>	n.a.
Employment by sector <u>/e</u>	616.1	633.2	647.5	100.0	2.52
Material sphere	443.3	451.4	463.3	71.6	2.23
Industry	119.2	119.6	123.4	19.1	1.75
Agriculture	183.6	186.0	189.4	29.5	1.57
Nonmaterial sphere	172.8	181.8	184.2	28.4	3.25

/a At the beginning of the year.

/b The census data of January 5, 1989.

/c For 1990 only.

/d For 1989 only.

/e Average annual figures.

Source: State Statistical Office.

authorities are concerned that the total number of unemployed might exceed 110,000 (11 percent) by year-end (with a corresponding unemployment rate of over 25 percent in Ulaanbaatar).

2.17 Wages had until recently been centrally controlled and remained virtually unchanged. Since retail prices had also been kept almost unchanged, real wages rose only as a result of promotions, productivity increases, and job reclassification. The wage structure also reflected the general pattern observed in other socialist economies in that wage scales were determined in great detail by industry and on an egalitarian basis. Monthly wages in the material sector rose only from T526 in 1981 to T568 in 1989; for example, in that year, average wages in industry were T618 and in agriculture T449. Bonuses came to be regarded as a wage supplement, distributed equally to almost everyone.

2.18 Starting in 1988, enterprises were gradually given increasing autonomy in determining wage and bonus payments. Nevertheless, average wages remained more or less unchanged in 1988-90 despite price increases, implying declines in real wages. In January 1991, most state enterprises and government institutions doubled all wages for workers to compensate for price adjustments. However, they are unlikely to offer any further wage increases

in 1991 and, with inflation continuing, this will result in further wage erosion, which appears inevitable given the need to reduce aggregate consumption as part of the stabilization program. One exception to this general decline is private sector wages, which are about twice as high as public sector wages. This tight policy towards wages in the public sector is critical to the achievement of the goals of the stabilization program in the area of public finance.

### C. The Need for Stabilization

#### Public Finance

2.19 A significant part of the solution to the crisis confronting Mongolia lies within the public sector, both in reducing the extremely high fiscal deficits and in restructuring the public finance system to one suited to a market economy. The consolidated state budget covers the central government, 3 cities, 18 aimaks and 351 somons. Although the operations of state enterprises are not included in the state budget, they account for over two-fifths of budgetary revenue and receive loans and transfers from the budget to finance a substantial portion of their investment. Thus, the state budget accounts for a large part of overall economic activities. This is reflected in the high ratio of total government expenditure to GDP, which averaged about 64 percent during 1985-89. On the other hand, total revenue, although large by market economies' standards, has lagged substantially behind expenditure, giving rise to a structural deficit of about 16 percent of GDP on average in the second half of the 1980s (Table 2.6).

Table 2.6: SUMMARY OF STATE BUDGET, 1980-91

	1980	1986	1987	1988	1989	1990	1991 (Jan-June)
(In million of tugriks)							
Total revenue	3,452.6	4,331.3	4,511.3	4,650.6	5,211.3	5,334.0	4,187.2
Tax	3,125.3	3,911.4	4,052.3	4,204.2	4,715.4	4,411.0	3,616.3
Nontax	327.3	419.9	459.0	446.4	495.9	923.0	570.9
Total expenditure	3,988.6	5,977.2	6,330.6	6,660.9	7,012.3	6,744.6	4,769.1
Current	3,337.0	4,845.9	5,038.0	5,146.1	5,382.8	5,468.5	4,439.9
Capital	651.6	1,131.4	1,292.6	1,514.8	1,629.5	1,276.1	329.2
Fixed capital	n.a.	461.8	446.3	416.8	441.8	412.5	n.a.
Capital transfers	n.a.	669.6	846.3	1,098.0	1,187.7	863.6	n.a.
Overall deficit	-536.0	-1,645.9	-1,819.3	-2,010.3	-1,801.0	-1,410.6	-581.9
(in percent of GDP)							
Total revenue	51.1	46.5	46.5	45.1	48.6	51.0	-
Tax	46.3	42.0	41.8	40.8	44.0	42.1	-
Nontax	4.8	2.5	4.7	4.3	4.6	8.9	-
Total expenditures	59.0	64.2	65.2	64.7	65.3	64.4	-
Current	49.4	52.0	51.9	50.0	50.2	52.3	-
Capital	9.6	12.2	13.3	14.7	15.2	12.2	-
Fixed capital	n.a.	5.0	4.6	4.0	4.1	3.9	-
Capital transfers	n.a.	7.2	8.7	10.7	11.1	8.3	-
Overall deficit	-7.9	-17.7	-18.8	-19.5	-16.8	-13.5	-

Source: Ministry of Finance.

2.20 Until the end of 1988, budgetary deficits were fully financed by the Soviet Union through concessional loans, and in 1989 and 1990, Soviet aid still covered 90 percent and 80 percent of total financing respectively. However, with the cessation of Soviet aid in 1991, the recent slowdown of economic activity, and the introduction of fiscal reform measures, public finances have undergone major and rapid changes. While new revenue instruments are emerging, the disappearance or weakening of traditional sources of revenue is causing significant revenue shortfalls. On the other hand, expenditures are proving difficult to cut and to restructure; hence, the deficit is growing and its financing is increasingly coming from monetary resources.

2.21 Revenues. Traditionally, the main sources of tax revenue have been turnover taxes and profits taxes on state enterprises and cooperatives, together accounting for about 90 percent of total tax revenue and amounting to 45 percent of GDP (Table 2.7). Turnover taxes have two components: the first is known as the import price differential, representing the difference between the import contract price and the (fixed) domestic wholesale price of the imported commodity. The share of revenue from import price differentials in the budget averaged about 36 percent during 1980-89 but has been declining since 1987 because of rising import prices. The second is the domestic turnover tax levied on some public utilities (e.g., electricity and water supply) and a few domestically produced goods (e.g., vodka, beer, and adult footwear), with vodka yielding by far the largest contribution (70 percent). The domestic turnover tax is included in the wholesale price of the taxed item. The combined share of import price differentials and domestic turnover taxes in total revenue is about 40 percent, equivalent to about 20 percent of GDP.

2.22 The share of profits taxes in the budget rose gradually from 28 percent (equivalent to 14 percent of GDP) in 1980 to about 43 percent (21 percent of GDP) in 1989. Profits are defined as the difference between gross sales revenue and production costs (including turnover taxes on inputs, depreciation and production taxes). Some loss-making enterprises are exempt from profit taxes and receive support from the budget. Until recently, profits of state enterprises and the taxes paid on them were planned by the authorities, and the profits tax was in effect a mandatory transfer of funds to the budget.

2.23 Other sources of revenue accounted for less than 10 percent of budgetary revenues and represented 4.5 percent of GDP between 1980 and 1990. Taxes on individuals have not been an important revenue source. Nontax revenues comprise social security payments and fees obtained from cooperatives and state enterprises. Social security payments averaged around 4.5 percent of total revenues during 1980-90 and accounted for more than half of nontax revenue. Revenues from cooperatives and other sources make up 1 percent of overall revenues.

2.24 The revenue structure described above was based on the concepts of central planning; this has now been changing, with implications for the level of revenues as a result of the January 1991 tax reforms. These reforms, aimed at expanding the tax base and improving the elasticity of the tax system, include: the replacement of "planned" profits taxes on enterprises with corporate and individual income taxes; the introduction of a customs duty at a uniform rate of 15 percent to replace import price differentials; and preparations to convert domestic turnover taxes to a more broad based sales tax and the introduction of selective excise taxes in 1992.

**Table 2.7: STRUCTURE OF PUBLIC FINANCES, 1986-91**  
(percentages)

	1986	1987	1988	1989	1990	1991
<b>Total Revenue</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Current revenue	99.9	99.0	100.0	99.9	99.9	100.0
Tax revenue	90.2	89.8	90.4	90.4	82.9	86.4
Income taxes	38.0	39.8	43.4	44.8	43.9	25.4
of which:						
Corporate taxes	36.0	37.7	41.4	42.9	42.4	23.6
Goods & services	53.2	51.0	51.1	48.5	39.1	22.6
of which:						
Turnover & excise taxes	52.5	50.4	50.4	47.9	38.7	21.2
Other taxes	0.1	0.1	0.1	0.1	0.1	38.9
Nontax revenue	9.0	9.6	8.9	9.0	13.1	13.1
of which:						
Social security & payroll taxes	5.5	5.6	5.8	5.8	4.4	9.1
Capital revenue	0.1	0.1	-	0.1	0.1	-
<b>Total Expenditures</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Current expenditures	81.1	79.6	77.3	76.8	81.0	93.1
Wages & salaries	13.6	13.1	13.2	12.9	13.4	24.4
Purchases of goods	24.4	24.6	24.0	22.7	24.6	17.6
Interest	0.1	0.5	1.5	2.5	3.4	-
Subsidies & transfers	41.6	39.0	36.1	37.9	38.6	46.7
of which:						
Social security payment	10.1	10.5	10.8	10.4	11.8	23.8
Other	-	-	-	-	1.1	4.5
Capital expenditures	18.9	20.4	22.7	23.2	18.9	6.9
Fixed capital	7.7	7.0	6.3	6.3	6.1	-
Capital transfers	11.2	13.4	16.5	16.9	12.8	-

Source: Mongolian Authorities

2.25 While these tax reform measures are necessary, their immediate result, when coupled with the decline in production and trade, has been lower receipts from traditional sources of revenue. In addition, the revenue generating potential of these new taxes has been, and will remain limited in the short run because of the time needed to put an effective tax administration in place. For example, during the first half of 1991, realized revenue from import price differentials was only T0.5 billion, compared to the budget's target of T2.5 billion and actual receipts of T1.6 billion in 1990. Revenue from this source is expected to be around T0.8 billion by year end, far below the target. The newly introduced import duties, which will gradually replace import price differentials, have so far yielded only T38 million. Revenue from the profits tax on enterprises has also been lower than expected during

the first half of 1991, for similar reasons, and for 1991 as a whole is expected to fall about 20 percent short of the budget target of T2.5 billion.

2.26 Expenditures. Mongolia's relatively large state budget has been absorbed mostly by current expenditures, whose share in total expenditures averaged about 78 percent (or 52 percent of GDP) during 1980-90. Within current expenditures, the largest category (44 percent) was social and cultural expenses, which included free food, health, social security payments, pensions, subsidies and transfers to households and public establishments. As a result of changes introduced in late 1990 in the laws on pensions and social security and the cost of living adjustment following the doubling of prices, budgetary payments on this subcategory started rising sharply in 1991. National development expenditures, which include interest payments, purchases of goods and services and, until 1991, export subsidies, have been the second largest item (38 percent) in current expenditures. The share of wages and salaries in current expenditures has gradually declined from 20.4 percent in 1980 to 13.4 percent in 1990, but will probably increase to 24 percent in 1991 due to the doubling of wages and salaries at the beginning of the year.

2.27 A distinctive feature of the current budget has been the overwhelming importance of subsidies and transfers to households and nonprofit organizations, which accounted for between 47-51 percent of the total during 1985-90 (subsidies alone made up about one-third of the total). The 1991 budget envisaged a sharp contraction (to 37 percent) in the share of this category, with transfers exceeding subsidies for the first time because of anticipated increases in social security payments as a result of new legislation. Indeed, social security payments during the first half of 1991 reached 23.8 percent, almost double the 1990 share. On the other hand, subsidies could not be reduced as much as budgeted and the combined share of subsidies and transfers increased from about 39 percent in 1990 to about 47 percent in the first half of 1991. This remains the priority area for future action in rationalizing the budget.

2.28 Capital expenditures absorbed about 17 percent of total budgetary outlays (or about 10 percent of GDP) during 1975-86. Their share rose rapidly after 1986 because of the government's increased emphasis on housing, education, and health facilities, reaching a peak level of 23.3 percent of budgetary expenditure (15.5 percent of GDP) in 1989. However, with the deepening of the economic crisis and declining public revenue, capital expenditures were cut back to 19 percent of the total (15.5 percent of GDP) in 1990 and 6.9 percent in the first half of 1991. In 1991, the government either slowed down or completely stopped the construction of several large projects because of resource and foreign exchange constraints. As a result, investment outlays were lowered sharply to T330 million in the first half of 1991, compared to the 1990 (full year) level of T1,276 million and the planned 1991 level of T1,553 million. Investment cutbacks in 1990/91, mostly in the material sector, reflected a policy decision to check the growth of the fiscal deficit as well as to reduce the government's role in the productive (material) sectors. Shortages of construction materials, both domestically manufactured and imported, also contributed to the decline in public investment.

2.29 Fiscal Decentralization. In recent years, local governments have started exercising a greater fiscal role, particularly on the expenditure side. Although the central government continues to hold all powers of taxa-

tion, local governments have been given increasing responsibility for the collection of taxes and their use. In the first half of the 1980s, local governments received about 30 percent of all budgetary revenues, but over the second half their share gradually increased to 53 percent. This increase is the result of the government's new policy permitting local governments to retain a greater portion of profits taxes generated by state enterprises within their districts.<sup>6/</sup> The more significant aspect of fiscal decentralization, however, has been the increased spending at local level. As a result, the share of local governments in total budgetary expenditures has increased from an average of 35.5 percent in the first half of the 1980s to 50 percent in 1990. Most of this increased spending financed investments in schools, hospitals, and local infrastructure.

2.30 As already noted, the financing of Mongolia's budget deficits, which ranged from 13-14 percent of GDP in the first half of the 1980s to 15-20 percent in the second half, came almost entirely from foreign borrowing (Table 2.8) until 1990. In fact, on a net basis, the budget was accumulating bank deposits until 1989 i.e., exercising counter-inflationary pressure. However, this concealed the fact that the central government was supplementing foreign resources with "indirect bank financing" by advancing tax payments from and/or suspending subsidy payments to state enterprises, which in turn were resorting to bank financing. This practice helped to keep the size of the budget deficit down to available foreign resources, while the growing bank loans to state enterprises were periodically capitalized.

2.31 In 1989, the government decided to halt this practice and, as a result and coupled with falling external resources, it incurred net bank borrowing equivalent to 1.8 percent of GDP in 1989 and 3 percent of GDP in 1990, despite a contraction in the budgetary deficit (Table 2.7). However, in 1991, the government revived its earlier practice of taxing enterprises' unrealized "windfall profits" arising from revaluation of their stocks at the doubled prices, which raised T1.6 billion, equivalent to about 17 percent of total revenue. This had the positive short-term effect of restricting the fiscal deficit to 14.2 percent, instead of 25 percent of GDP, and its monetary financing to 2.3 percent instead of 13 percent of GDP. However, this reveals the structural weakness of the revenue system, and, in particular, its inelasticity in the face of inflation, measures that will need to be addressed. Even so, the fiscal deficit has begun to have a significant impact on monetary developments.

### Monetary Developments

2.32 Until late 1990, monetary policy in Mongolia, as in other centrally planned economies, passively accommodated the financing needs of the annual plan and the budget. The quantity of money was automatically adjusted to attain physical output targets given fixed prices and depended upon actual

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<sup>6/</sup> The local governments are allocated certain segments of the tax base, including state enterprises, for the purpose of tax collection. This allocation is reviewed periodically. In addition, certain categories of taxes on individuals (e.g., tax on private herds and individual income tax) and production taxes (salt and timber) are collected only by the local governments.

Table 2.8: FINANCING OF BUDGET DEFICIT, 1980-91

	1980	1986	1987	1988	1989	1990	1991 (Jan.- June)
(in millions of tugriks)							
Total financing	536.0	1,645.9	1,819.3	2,010.3	1,801.0	1,410.6	581.9
Foreign, net	565.6	1,700.8	1,852.4	2,016.1	1,607.9	1,097.8	12.0
Disbursements	620.7	1,750.5	1,901.3	2,066.8	1,658.3	1,165.5	24.0
Amortizations	55.1	49.7	48.9	50.7	50.4	67.7	12.0
Domestic	-29.6	-54.9	-33.1	-5.8	193.1	312.8	569.9
Bank credit, net	n.a.	-420.2	-46.3	222.6	159.0	595.8	575.7
Bonds	-	-	-	-	-	-	-
Other	n.a.	365.3	13.2	-228.4	34.1	-283.0	5.8
(in percentage of GDP)							
Overall financing	8.0	-17.7	-18.8	-19.5	-16.8	-13.5	
Foreign financing	8.4	18.3	19.1	19.6	15.0	10.5	
Domestic financing	-0.4	-0.6	-0.3	-0.1	1.8	3.0	

Source: Ministry of Finance

implementation of the plan. This policy was carried out by the State Bank, which until recently performed both central and commercial banking functions (i.e., a monobanking system with some 400 branches) under a national credit plan that set out credit and deposit targets for the entire economy, credit programs of the individual State Bank branches and direct lending to state enterprises, cooperatives and individuals. The annual credit plan was determined by aggregating financing requirements of each State Bank branch, which in turn reflected the needs of state enterprises. As a result, interest rates were not a factor in the mobilization and allocation of capital nor in managing aggregate demand.

2.33 Since late 1990, the Mongolian authorities have been establishing a new monetary management and financial system. The goal is to develop monetary policy instruments and institutions that can fulfill their conventional functions in a market economy and be an effective instrument for the achievement of internal and external balance.

2.34 Despite significant progress, monetary policy during the first half of 1991 remained completely passive and financed the budget deficit as well as the needs of state-owned enterprises, which was reflected in sharp monetary expansion. Currency in circulation, the main determinant of base money in Mongolia, grew on average 9 percent annually during the 1985-90 period, but increased by 68 percent during the first half of 1991 (implying an annual growth rate of 182 percent). Money and broad money also rose rapidly: 9 per-

cent and 12 percent, or at annualized rates of 19 percent and 25.5 percent respectively during the first half of 1991. While some increase in money supply was necessary to accommodate the 1991 price adjustments, the rapid growth in credit to the government and state enterprises has contributed significantly to the continued rise in inflation. Thus, monetary restraint will form a critical component of stabilization policies in the next two years.

Table 2.9: MONETARY SURVEY, 1986-91 /a

	End of Period /b					
	1986	1987	1988	1989	1990 /a	1991 /a
(in millions of tugriks)						
Net international reserves	181.9	275.1	289.8	307.5	270.2	-3.7/b
Other foreign assets, net /c	-529.9	-472.2	-250.9	-41.2	-364.1	-1,329.8
Net domestic assets	4,557.9	4,571.6	4,735.3	4,821.2	6,460.7	8,452.9
Domestic credit	5,520.3	5,432.8	5,786.1	5,903.1	6,573.9	10,890.1
Government, net	-2,385.3	-2,431.6	-2,209.0	-2,050.0	-1,454.2	-878.5
State enterprises	7,608.5	7,558.7	7,606.2	7,562.4	7,549.7	10,084.4
Private sector	297.1	305.9	388.9	390.7	478.4	1,684.2
Of which: Cooperatives	(292.5)	(294.5)	(353.1)	(324.7)	(351.2)	(907.2)
Other items, net	-962.4	-861.2	-1,050.8	-1,081.9	-113.2	-2,437.2
Broad money (M2)	4,199.9	4,374.5	4,774.2	5,087.5	6,366.8	7,119.4
Money	2,738.1	2,835.3	3,021.7	3,509.6	4,658.5	5,095.7
Currency issue	439.9	490.0	526.1	581.1	742.7	1,248.3
Less: Currency held in bank	-	-	-	-	-	-81.3
Current accounts	2,298.2	2,345.3	2,495.6	2,928.5	4,013.1	3,928.7
Quasi-money	1,461.8	1,539.2	1,752.5	1,577.9	1,708.0	2,023.7
(annual percentage change)						
Domestic credit	1.7	-1.6	6.5	2.0	11.4	-
Government, net	-21.3	-1.9	9.1	7.1	29.1	-
State enterprises	7.0	-0.7	0.6	-0.6	-0.2	30.0
Private	5.1	3.0	27.1	4.6	22.4	200.0
Of which: Cooperatives	(4.7)	(0.6)	(19.9)	(-8.0)	(8.2)	(-)
Broad money (M2)	-4.3	4.3	9.1	6.6	25.1	33.6/d
Of which: Currency in circulation	(7.8)	(11.5)	(7.4)	(10.5)	(27.8)	(57.1)/d

/a Data presented according to new classification system; to the extent possible, historical data have been revised accordingly.

/b Based on constant exchange rate of T40 per US dollar.

/c Includes net balances held at IBEC, net borrowing from IBEC, and borrowing in rubles from the Foreign Trade Bank in Moscow, and capital subscriptions to IBRD and ADB.

/d Percentage change in the first six months of 1991.

Sources: Data provided by the Mongolbank and staff calculations.

## Inflation

2.35 As in other socialist countries, Mongolia has until recently had an administered price system whose main objective was to maintain stable prices for consumer goods and production inputs. Retail prices remained almost

unchanged in the 1980s (Table 2.10).<sup>7/</sup> On the other hand, the wholesale price index, including both domestic and imported goods, increased by about 5 percent a year over the same period, while foreign contract prices for exports and imports rose by about 3 percent and 6 percent per annum respectively. Farmgate prices, which were set too low to support low prices for agricultural raw materials and basic foodstuffs, remained virtually unchanged for three decades until 1991.

2.36 Price reform is the most crucial component of the Mongolian government's economic reform program, which has been evolving since mid-1990. In this context, farmgate prices for agricultural products were increased by between 30-70 percent from the beginning of 1991. All retail and wholesale prices except for 35 categories of key commodities (Table 4.2) <sup>8/</sup> were "freed" <sup>9/</sup> on January 20, 1991, while simultaneously all retail prices, including controlled ones, were doubled and wholesale and producer prices increased by an average of 55 percent. In June 1991, gasoline prices were raised fourfold. By October 1991, 18 of the remaining 35 categories of commodities with fixed prices were also "liberalized." In addition, producers were permitted to continue selling their output in excess of state orders at market-determined prices which, for both liberalized and controlled products, were two to three times higher than those in state and cooperative shops.

2.37 It is not yet possible to measure the inflationary impact of these price reform measures, since official price indexes continue to reflect "listed prices" only. In an attempt to develop appropriate price indexes, the government has recently started sampling 17 key prices in state shops, cooperatives and private free markets, and a larger sample survey is being developed. Sample data indicate that the cost of living (including fixed and liberalized prices) has increased, in addition to the doubling of retail prices in January 1991, by a further 30 percent in the first nine months of 1991--free market prices alone have risen by 70-80 percent during the same period. There are indications that inflation is being checked, despite the government's decision to liberalize most prices, by: the restraint that state enterprises can still exercise in raising prices, thanks to the continuation of "soft budget constraints"; the use of an overvalued exchange rate for most imports; the very small volume of transactions in the free market because of both continuing trade restrictions and shortages of goods; and the tightening of monetary policy.

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<sup>7/</sup> Nonetheless, retail unit prices of most goods in the official retail price index rose by between 4 percent and 125 percent during 1980-88 while prices of some goods declined by 25 percent on average. This suggests that the official data might have understated inflation.

<sup>8/</sup> These items are estimated to account for about 40 percent of urban household expenditure and less than one-third of rural household expenditure.

<sup>9/</sup> The apparent contradiction in this sentence between the freeing of prices of certain commodities and administratively raising the same prices represents the government's position on this issue.

Table 2.10: PRICE INDICES, 1980-90  
(1980=100.0)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Consumer prices	100.0	102.5	102.5	102.5	103.1	102.1	102.1	102.1	102.1	n.a.
Wholesale prices	104.7	110.8	116.5	121.9	126.8	133.2	138.0	144.7	152.0	n.a.
Implicit NMP deflator	101.7	104.1	105.4	101.5	99.8	89.7	89.5	90.6	91.6	88.2

Source: Mongolian Authorities

### Foreign Trade and Balance of Payments

2.38 Mongolia's economy is almost uniquely vulnerable to external economic shocks because of the relatively large size and particular composition of its foreign trade. Merchandise exports and imports accounted for about 22 percent and 50 percent of GDP respectively in 1988/89.<sup>10/</sup> The country's foreign trade is characterized by a limited range of products and markets on the export side, and of sources on the import side, and by a large, chronic deficit. In 1988/89, two categories of goods, namely, minerals (mainly copper and fluorite) and other nonfood raw materials (mainly cashmere, wool, camel hair and hides) accounted for over 70 percent of total export earnings, with copper concentrate alone accounting for about 50 percent. As for market concentration, the Soviet Union purchased over 80 percent of Mongolia's exports and supplied a similar share of its imports. The Soviet Union was also until recently financing Mongolia's large surplus of imports over exports, amounting to approximately \$1.1 billion (31.6 percent of GDP) in 1988/89 (Table 2.11). This foreign trade structure, however, came under great strain in 1990 and finally collapsed in 1991.

2.39 In 1990, exports fell by 40 percent compared to the previous year, owing to changes in the CMEA trade and payments system, the breakdown in the Soviet economy, declining world prices of fibers and minerals, and the recession in the industrialized countries. Other factors contributing to this dramatic decline included domestic production difficulties arising from power shortages, insufficient imported spare parts and equipment, and exceptionally warm weather during the last two winters that affected Mongolia's traditional markets for cashmere, camel hair products and leather goods.

2.40 Mongolia's most important mineral, copper, is produced by a joint Soviet-Mongolian enterprise, and its entire annual output (360,000 tons of ore) was, until recently, exported to the USSR for processing. One-third of export earnings from copper is left with the mining company to meet its requirements and the rest is shared with the Soviets. According to a new agreement with the Soviet Union (June 1991), Mongolia may now annually export

<sup>10/</sup> Since trade performance in 1990 was affected by the then pending transformation of CMEA arrangements and economic deterioration in both the Soviet Union and Mongolia, 1988/89 data are used here to reflect the pre-reform trade structure.

Table 2.11: SUMMARY OF THE BALANCE OF PAYMENTS, 1986-91  
(\$ million)

	1986	1987	1988	1989	1990	1991 (Proj.)
<u>Trade balance</u>	-587.3	-542.1	-628.7	-743.8	-318.4	-54.9
Exports fob	740.8	816.9	829.1	795.8	468.1	432.0
Imports fob	-1,328.1	-1,359.0	-1,457.8	-1,537.8	-782.8	-486.9
Turnkey projects <u>/a</u>	-510.7	-468.4	-391.9	-374.0	-264.5	-77.4
Services balance	37.7	20.1	-12.2	-116.6	-68.1	-12.8
Unrequited transfers	-0.1	-0.3	-0.3	3.9	7.4	45.1
Current account	-1,060.6	-990.7	-1,033.1	-1,230.6	-643.6	-100.0
Medium- & long-term capital	1,051.0	1,113.2	1,102.7	1,228.2	516.8	94.6
Disbursements	1,067.1	1,130.1	1,120.0	1,250.5	537.1	97.4
Repayments	-16.1	-16.9	-17.3	-22.3	-20.3	-2.8/ <u>b</u>
Short-term capital <u>/c</u>	30.6	-20.0	-76.5	-33.3	66.8	-7.0
Capital account	1,060.4	1,024.9	1,037.9	1,236.6	590.5	29.1
Net errors and omissions	-21.2	-68.4	11.7	41.7	6.8	-58.5
Net change in reserves	0.1	-34.2	-4.8	-6.0	53.1	39.6
Remaining financing gap						31.3
<u>Memorandum items</u>						
Exports of goods & services/GDP (%)	28.2	27.0	25.9	23.5	23.3	
Imports of goods & services/GDP (%) <u>/d</u>	64.4	56.4	54.9	57.9	52.1	
Current account deficit/GDP (%)	36.3	29.6	27.2	34.6	28.3	
Net reserves in weeks of imported goods	2.7	4.5	4.8	3.7	3.4	

/a Includes both goods and services; data are not available for disaggregation.

/b Excludes projected servicing of debt obligations to former members of CMEA.

/c Includes changes in the balances of nonconvertible currency deposits held by nonresidents, net borrowing from IBEC and other clearing accounts as reported by the State Bank.

/d Turnkey projects included in imports of goods and services.

Notes: Calculations based on official exchange rates. Data for 1989/90 reclassified to reflect standard international presentation.

Source: Mongolian authorities; IMF and World Bank staff estimates.

60,000 tons of copper ore to third countries, although this level is not expected to be reached in 1991. Unit prices for export of copper concentrate to the USSR were about two thirds of the world market price during the first half of 1991 due to the lower copper content of Mongolian concentrate; and sales to third markets had to be made at about two thirds of the USSR price, in part to offset higher transportation costs.

2.41 Exports of molybdenum (produced jointly with copper) and fluorite declined in 1990 because of unresolved payments problems with the USSR. Coal exports earned about \$17 million in the first half of 1990 but had to be suspended in the second half in order to meet domestic demand following a fire in the main coal mine. No exports will be permitted in 1991 as priority is given to supplying the coal-based power plants. Exports of cashmere and cashmere products, which yielded \$50 million (6 percent of total exports) in 1989, have suffered from the dislocation of trade with the USSR, the recession in the industrialized countries, warm winters in traditional markets, and the collapse of the international wool price.

2.42 Compared to a number of roughly similar market and socialist economies, Mongolia's import/GDP ratio is the highest by a significant margin.<sup>11/</sup> This is largely the result of the Mongolian economy's integration with that of the Soviet Union. About 1,000 enterprises and other installations built with Soviet assistance produce more than half of the national income, about 60 percent of industrial production and 100 percent of energy supply, all of which depend on equipment, spare parts and critical inputs imported from the Soviet Union. Inefficient industrialization and pricing policies have also resulted in a high import dependency for such items as milk products (55 percent of consumption), vegetables and fruits (75 percent), eggs (50 percent), sugar (100 percent) and vegetable oil (100 percent), which could be partly satisfied domestically.

2.43 Excluding turnkey projects,<sup>12/</sup> almost 60 percent of remaining imports in 1988/89 were in two categories of commodities: machinery, equipment and vehicles; and fuel, minerals and metals. Foodstuffs and other consumer foods made up another 25-30 percent. With imports nearly halving from 1989 to 1990, all sectors of the economy as well as consumers started experiencing difficulties in maintaining traditional levels and patterns of production and consumption.

2.44 In 1990, imports declined by about \$755 million (or 49 percent) and exports by about \$328 million (or 43.5 percent), reflecting the sharp reduction in Soviet aid and the limited cushion that Mongolia's meager reserves could provide. This sharp contraction in imports is continuing in 1991. The value of total import contracts signed during the first five months of 1991 was about 64 percent of that in the same period last year, but the corresponding ratio for actual imports was only 43 percent (Table 2.12). Petroleum and food imports were the only categories in which the economy's normal requirements were being met to any significant extent, owing mainly to barter arrangements with the USSR (copper for petroleum) and food aid from the USA, Japan and other countries.

2.45 Mongolia has also suffered from a deterioration in its terms of trade (Table 2.13). During 1972-85, contract prices for imports and exports among the CMEA countries were determined through a formula using a five-year moving average of world market reference prices. However, in 1986, CMEA traded goods prices were fixed at the prevailing world prices and kept unchanged thereafter. As a result, Mongolia did not benefit from the decline in world petroleum prices or from the doubling of copper prices during 1986-89. Some improvement took place in 1989 when the price of petroleum from the USSR was renegotiated downward to world market levels. Following the dissolution of the CMEA trade regime and the movement to dollar-denominated trade in 1990, relative export and import prices have substantially changed. In particular, the price of copper fell by 21 percent relative to the price of petroleum products. As a result of this and other price changes, Mongolia's terms of trade with the USSR declined by 23 percent during the first half of

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<sup>11/</sup> Mongolia's imports/GDP ratio was 52 percent in 1988/89 compared to an average of 30 percent for Paraguay, PNG, Romania, Bulgaria and Vietnam.

<sup>12/</sup> There are no disaggregated data for turnkey projects which, except for ongoing projects, came to a halt in 1991.

**Table 2.12: DECLINE OF FOREIGN TRADE IN 1991**

	1991			1990			1991
	Jan. (\$ mln)	May (%)	/a	Jan. (\$ mln)	May (%)	/a	1990 (%)
Exports, contracts	302	100.0		578	100.0		52.2
Exports, actual	109	36.1		238	41.2		45.8
of which: to USSR	97	89.0		190	79.8		51.1
Imports, contracts	511	100.0		800	100.0		63.9
Imports, actual	164	32.1		382	47.8		42.9
of which: from USSR	113	68.9		306	80.1		36.9

/a Percentage of contracted value in own category.

Source: Ministry of Trade and Industry.

1991, representing a fall in the purchasing power of exports equivalent to 6.6 percent of GDP on an annual basis.

**Table 2.13: TERMS OF TRADE, 1986-91**  
(in transferrable rubles)

	1986	1987	1988	1989	1990	1991 (1st 1/2)
Export price index (1980=1)	1.17	1.22	1.27	1.32	1.34	-
Import price index (1980=1)	1.54	1.59	1.62	1.64	1.67	-
Terms of trade index (1980=1)	0.76	0.77	0.78	0.81	0.80	0.75
Change in terms of trade (%)	-11.3	1.0	2.2	2.7	-0.2	-6.2

Sources: Mongolian authorities and IMF staff calculations.

2.46 The direction of Mongolia's foreign trade has also begun to change as a result of the breakdown of trade, transportation and payments relations with the Soviet Union. Within the CMEA, Mongolia conducted the bulk of its trade with the Soviet Union,<sup>13/</sup> with a much greater market concentration

<sup>13/</sup> Between 1930 and 1952, the Soviet Union was Mongolia's sole trading partner. While trade with other CMEA countries began in the early 1950s, it developed significantly only after Mongolia joined the Comecon in 1962.

than was the case for other CMEA countries.<sup>14/</sup> In 1990 and 1991, Mongolia's trade with the USSR and other former CMEA countries dwindled to a fraction of earlier levels but still accounted for a large proportion of total trade. Meanwhile, trade with the convertible currency area (CCA) increased rapidly during 1985-90, albeit from very low levels. In an attempt to boost its dwindling reserves of convertible foreign exchange, the government has encouraged exports to the CCA by the introduction of export subsidies. Thus, exports to and imports from the CCA, which were balanced at about \$18 million in 1986, increased to about \$53 million in 1989. In 1990, exports for convertible currency declined to \$43 million along with the general fall in exports due to production difficulties and unfavorable world market conditions, but imports from the CCA sharply increased to \$80 million because of the disruption of trade and financing relations with the CMEA. Mongolia's main trade partners in the CCA during the pre-reform era included Japan, the Netherlands, Switzerland, Germany, the UK, and Austria; and, with the present opening up of the economy, trade relations are now being developed with the US, Australia, Republic of Korea and several other countries in the CCA. To this end, the government has already negotiated MFN status with Japan, the US, and Republic of Korea, is considering an application to join GATT, and is about to sign a cooperative agreement with the EEC.

2.47 Capital flows to Mongolia have been limited until recently to project loans (for turnkey projects and equipment associated with projects) and trade financing provided by the Soviet Union, and to a much lesser extent by other CMEA countries. These loans generally carried an interest rate of 1.5-2 percent per annum and a 15-year maturity, although actual amortization payments were determined through bilateral negotiations for the five-year arrangements. Technical assistance loans--the Soviet term for turnkey projects and equipment loans--accounted for about two-thirds of capital inflows on average during the last two decades, and the remainder has been trade loans. Capital inflow from other countries has so far been negligible, while there has been a capital outflow of \$5-6 million per annum to China since 1986 with the repayment of debt contracted in the 1960s.

2.48 Almost all of Mongolia's external debt is owed to the USSR. It is denominated in transferable rubles (TR) and, at the end of June 1991, amounted to about TR10.5 billion. Repayments, however, have been suspended by mutual agreement since January 1, 1991. The government is currently negotiating modalities for debt servicing and repayment with the USSR, including the appropriate exchange rate for the transferable ruble. These negotiations are proceeding on the agreed principle that future debt service "should not impede Mongolia's economic development."

2.49 International Reserves. Foreign exchange reserves increased significantly in the 1980s--in line with the policy to increase exports to the CCA--peaking in 1989 (Table 2.14). During this period, Mongolia's reserves were adequate in terms of months of imports from the CCA (42 months in 1989).

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<sup>14/</sup> In 1989, the share of the Soviet Union in Mongolia's exports and imports was 81.1 percent and 89.3 percent respectively; the corresponding ratios were 79 percent and 75 percent for Bulgaria and between 50-60 percent for Czechoslovakia, German Democratic Republic, Hungary, Poland, and Romania.

With imports from the CCA increasing significantly in 1990, and with all external trade now being settled in convertible currency, there have been significant draw downs of foreign exchange in the past two years. Net reserves turned negative in 1991, with gross foreign exchange reserves falling to well below one month's imports.

Table 2.14: INTERNATIONAL RESERVES, 1980-91  
(\$ million, end of period)

	Net Reserves	Gross Reserves			Liabilities
		Total	Foreign Exchange	Gold	
1980	23.0	23.0	9.1	13.9	-
1981	21.8	21.8	8.6	13.2	-
1982	23.7	23.7	11.4	12.3	-
1983	19.3	19.3	7.3	12.0	-
1984	32.9	32.9	22.1	10.8	-
1985	57.5	57.5	40.7	16.8	-
1986	57.3	72.2	53.5	18.7	14.9
1987	91.7	148.5	128.4	20.1	56.8
1988	96.6	149.2	130.3	18.9	52.6
1989	102.5	278.9	260.1	18.8	176.4
1990	49.3	177.4	122.6	54.7	128.1
1991 June	-0.1	114.2	92.4	51.8	114.3
July	-2.9	112.9	61.0	51.8	115.8

Source: Mongolbank

### Summary

2.50 During the past two years, Mongolia's economy has been hit by severe external shocks and is in the difficult process of adjusting to new realities. Its ability to consume and invest has been reduced rapidly and deeply, and tight monetary and fiscal policies will need to continue if serious inflation and payments problems are to be avoided. Given the authorities' objective of developing a market economy, the need for macroeconomic reforms is all the more urgent. However, if the cost of adjustment is to be kept within tolerable limits, it will be vital to institute policies that begin to reverse the recent declines in production, while ensuring that social indicators do not show signs of reversal.

### III. KEY REFORM AND POLICY ISSUES

#### A. Introduction

3.1 Mongolia's current economic difficulties, although mainly the legacy of its socialist past, have been greatly exacerbated by external shocks. Thus, the government is faced with the twin challenges of overcoming the immediate crisis and, at the same time, developing the new institutions required to manage a market-based economy. Its reform program attempts to address both challenges and includes policy measures needed to stabilize the economy and structural reforms designed to improve market signals, promote competition and diversify the country's sources of foreign exchange. A brief chronology of the key reforms undertaken to date is shown in Box 3.1.

3.2 The government's response has been wide-ranging and ambitious and demonstrates its clear determination to restructure the economy radically and rapidly by replacing the old command plan structure with market-based systems. The policy framework is largely the work of the coalition government formed in September 1990, and it continues to evolve. This chapter describes the main features of the reform program and seeks to identify the key issues that, not surprisingly, remain to be addressed. The reforms fall into three broad categories that are discussed separately: those designed to strengthen the government's ability to manage the economy through indirect means; those required to enhance allocative efficiency and to increase the country's export potential; and, those directed towards the creation of a social safety net to protect the poor, the sick and the elderly.

#### B. Macroeconomic Management

3.3 The authorities have moved with remarkable speed to dismantle the old central planning system and are now struggling hard to establish the new institutions needed to operate a market-oriented economy through indirect means of macroeconomic management. The latter is clearly the most critical area for continued reform efforts, given the lessons of experience in Eastern Europe and China which show the difficulties that can arise when price and enterprise reforms take place in the absence of an appropriate macroeconomic framework.

3.4 Although a promising start has been made, Mongolia's reforms need to continue focusing on three areas: financial sector reform, specifically the development of the central bank and of new commercially-oriented financial institutions; fiscal reform, in particular the introduction of new taxes and the restructuring of budget expenditures; and planning reform, especially the creation of new systems of policy coordination appropriate to the needs of a market economy. These three areas are addressed in turn in the following paragraphs.

#### Financial Sector Reform

3.5 Initial Steps. Until 1991, Mongolia had a monobank system, and all central and commercial banking activities were carried out by one institution. The State Bank of Mongolia functioned essentially as a cashier, directing

Box 3.1: KEY ECONOMIC AND STRUCTURAL REFORMS

1986

- Increase in domestic wholesale prices.
- Limited autonomy granted to public sector enterprises for investment.
- Introduction of long-term bank loans for investment.

1987

- Modification of investment planning system for setting overall targets.
- Expansion of investment autonomy of public sector enterprises.
- Rationalization of number of government ministries.

1988

- Reduction in five-year plan performance indices.
- Further decentralization of budgetary operations to local level.
- Limited liberalization of agricultural pricing and marketing in excess of state orders.
- Promotion of private sector cooperatives under new Law on Cooperatives.
- Introduction of more depreciated noncommercial tugrik/US dollar exchange rate.

1989

- Liberalization of intra-public-sector-enterprise pricing and expansion of operating autonomy.
- Modest easing of restrictions on private herd ownership.
- Elimination of monopoly of state trading corporations.
- Increase in selected administered retail prices.
- Easing of foreign exchange surrender requirements.
- Introduction of preferential domestic prices for exported goods.

1990

- Elimination of restrictions on private ownership of herds.
- Freeing of selected retail prices.
- Legalization of two-tiered banking system and establishment of two commercial banks.
- Rationalization of government ministries; elimination of State Planning Committee.
- Establishment of Customs Affairs Department and Tax Service Department.
- Promulgation of new Foreign Investment Law.
- Devaluation of tugrik vis-à-vis US dollar for commercial transactions.
- Introduction of foreign exchange auction system.
- Negotiation of most-favored nation trade agreements with countries in the convertible currency area.

1991

- Increase in retail prices of most goods.
- Lengthened maturity structure of term deposits and increased interest rates.
- Substantial reduction of budgetary subsidy for imported goods and to loss-making enterprises.
- Devaluation of tugrik vis-à-vis US dollar to T40/\$.
- Adjustments to wages, pension benefits, and private savings deposits to ameliorate impact of price increase.
- Privatization Law passed and program for small privatization initiated.
- Banking Law passed, and Bank of Mongolia established as the central bank. Separate commercial banks established.
- Direct export rights granted to selected manufacturers.
- Foreign trading rights issued on nondiscriminatory basis.
- Stock market regulation established.

credit in line with the Planning Committee's instructions and handling foreign transactions in line with CMEA barter arrangements. It operated some 400 branches around the country which accepted savings deposits and disbursed credit to enterprises and government agencies.

3.6 In May 1991, a new Banking Law became effective, under which the State Bank was divided into a central bank, called the Bank of Mongolia (BOM), and a foreign trade bank called the State Bank of Mongolia (International). The Bank of Mongolia's chairman is responsible to the legislature (Baga Khural), thus making the central bank independent of the government. The commercial banking activities of the former State Bank have been transferred to seven new commercial banks, which have gradually been taking over most of the former State Bank's 400 branches. The Bank of Mongolia will eventually

retain only 21 branches in 3 cities and 18 aimaks. By mid-1991, 136 branches had already been taken over by the commercial banks. The Banking Law provides the framework for the development of a fully functioning central bank capable of managing money and credit using indirect instruments, leaving the allocation of resources to markets.

3.7 Since mid-1991, the new central bank has been tightening monetary and credit policies in order to contain inflation and impose financial discipline on the enterprise sector. Cash reserve requirements of 8.5 percent have been applied to the nonbank deposit liabilities of commercial banks and remaining central bank branches, and these reserves are interest-earning. In addition, the interest rate on the central bank's overdraft facility has been raised from 5 to 15 percent, with the target being to achieve a positive real rate by mid-1992, once reliable price data are available. For the time being, it will be supported by quantitative ceilings on access to the facility. Since indirect instruments will take some time to become effective, the stabilization program recently agreed with the IMF includes quantitative targets for limiting quarterly and annual growth of credit. As the reforms progress, further instruments of indirect management will be created.

3.8 The central bank has also begun to exercise its supervisory and regulatory functions. Banks established before the May 1991 Banking Law are to be re-licensed, and those that do not meet the Law's capital adequacy requirements will be combined with other banks. The Bank of Mongolia is also working on the development of regulations and on supplementary legislation to the Banking Law covering such matters as leasing, debt recovery and accounting standards.

3.9 Issues. Mongolia's macroeconomic performance in the short and medium run will depend inter alia on the central bank's effectiveness in three areas: imposing discipline on the rate of growth of money supply; developing its role as a central bank; and fostering the growth of the private sector, both in finance and in production.

3.10 The first obvious priority is to maintain a tight monetary policy, given that net domestic credit and currency grew by annualized rates of 175 percent and 147 percent respectively in the first half of 1991. This will require strict adherence to the agreed monetary program and, in particular, firm resistance to the demands of state-owned enterprises for additional credit. In the interim period between now and the ultimate privatization of most enterprises, it will be important to avoid the acquisition of additional bad loans and, for existing loans, to attempt to force the enterprises concerned to rationalize their operations--not only because of the inflationary impact of granting further credit, but also the need to ensure access to credit for the nascent private sector.

3.11 One key prerequisite for the re-establishment of price stability will be to neutralize the already high level of liquidity created in the first three quarters of 1991. It seems unlikely that the privatization program will achieve this, so other routes must be explored. The government has recently commenced issuing bonds, with a first issue of T300 million; but, with only an 8 percent interest rate, these are unlikely to find willing takers, and forcing these on banks would be retrograde. Instead, the government should con-

sider issuing price index-linked bonds, which could be an attractive savings instrument in present circumstances. Furthermore, the stock of housing currently remaining in public hands could be privatized over the medium term, thereby becoming a major source of revenue and of liquidity absorption.

3.12 To strengthen its central banking functions, the Bank of Mongolia is introducing programs to train its staff in the new ways of doing business and is receiving significant technical assistance for this purpose. It will also be important to modernize the present payments and clearing system which, in its existing form, inhibits both the efficiency of the banking sector and the availability of timely information on which to base policy. But it is the private banking sector that may need the most attention.

3.13 In this latter connection, two issues deserve emphasis. First, the transfer of former State Bank branches to the new commercial banks should be accelerated, and every effort made to complete this early in 1992. Since a major obstacle is doubtless these branches' bad debts with state-owned enterprises, the separation of such loans from the banks may be necessary to speed up the transfer. To avoid subsequent widespread failure, care will be needed to avoid monetizing such debts and generating inflation. Second, the central bank should play a major role in training the staff of the new commercial banks, especially in credit, risk and project appraisal.

3.14 In terms of its impact on Mongolia's future development prospects, financial sector policy will need to ensure that the emerging private sector has adequate access to bank financing. This will require that, within any given macroeconomic target of permissible credit expansion, a growing proportion of total credit is redirected from the public sector (currently accounting for 95 percent of total credit) to the private sector. Privatization will contribute to this process. In addition, the improved finances of those state enterprises that remain (e.g., by increasing the share of "own" funds) would help reduce their claims on the banking sector as a proportion of total credit, thus allowing greater room for private sector credit.

### Public Finance Reforms

3.15 Initial Steps. Mongolia's pre-reform fiscal system was geared in a classic way to the central planning system. The two major sources of revenue were: remitted profits from state-owned enterprises arising from the fixed price structure; and import price differentials, deriving from the wide disparity between import and domestic prices for consumer goods, many of which are imported. As reforms progress, both these revenue sources will shrink. This means that the tax system will need restructuring to find new, more neutral levies appropriate to the needs of a market economy. This task will be complicated enough, but is compounded at present by the need for a drastic reduction in the fiscal deficit, previously running at around 20 percent of GDP. The restoration of financial discipline is, therefore, the cornerstone of the short-term stabilization program, with the aim of reducing the overall deficit to 12 percent of GDP in 1992.

3.16 The first steps in this area were put in place with the January 1991 tax reforms. Their aim is to expand the tax base and improve the elasticity of the tax system and they include: the replacement of "planned" profit taxes

on enterprises by corporate and individual income taxes based on market economy concepts; the replacement of import price differentials by customs duties at a uniform 15 percent rate; and the planned conversion of domestic turnover taxes to a more broadly based sales tax, and the introduction of selective excise taxes in 1992. Although these actions were all in the right direction, the authorities considered them insufficient to make up the losses from traditional revenue sources and additional measures were introduced in September 1991. These included: a 10 percent customs surcharge, raising the average rate to 25 percent; and, the doubling of excise rates, specifically on liquor, tobacco and gold. Automatic payroll deduction of social security payments, which had been suspended, is also being reinstated.

3.17 On the expenditure side, about 80 percent of expenditures were current, of which about half were subsidies and transfers. In the early stages of reform before 1990, the size of the bureaucracy had already been reduced significantly, thus offering little prospect for further savings in the government's wage bill. Major savings in the short term have therefore been derived from a 30 percent cut in capital expenditures. Future capital expenditure will be linked to the availability of foreign project assistance.

3.18 A variety of other measures are being considered for the near term. These include administrative strengthening over both revenue collection and expenditures, a review of the structure of government to identify areas for further possible cuts, and the holding of wage and salary increases below the rate of inflation. Additional measures under consideration to strengthen both sides of the budget include the introduction of user fees and increased charges for public services, and cost recovery for education and health services, the latter through a proposed national health program financed by contributions from employers and employees. However, all these measures remain to be worked out in detail.

3.19 Issues. The start that has been made in restructuring the budget will eventually provide Mongolia with the foundations of a market-oriented public finance system. However, in addition to the measures under preparation, which are all vital, a variety of other issues need to be addressed in the medium term, both to improve the tax and expenditure structure and to reduce the deficit.

3.20 In terms of budget structure, a major effort is already underway to reclassify the budget along Western lines. In this regard, two issues seem to be relatively neglected at present. First, all enterprises should be moved off-budget as soon as possible, especially those that will remain in the public domain; otherwise, it may prove very difficult to harden their budget constraint. Second, a more rational system needs to be developed for allocating revenue and expenditure responsibilities between the central and local governments (aimaks), not least so that local government expenditures can be regulated more tightly.

3.21 On the tax side, the big steps and main decisions have already been taken, but certain issues need to be re-examined. First, the elaboration of sales tax regulations should be undertaken with a view to their conversion in a few years' time to a value-added tax. This would imply the use of tax

credits,<sup>1/</sup> and thus the avoidance of cascading. Second, the present structure of income and corporate taxes seems to warrant more attention. Both income and company taxes are highly progressive, starting at very low rates (2.4 percent for income taxes, rising to 50 percent). With the scheduled completion of price reform in 1992, such wide ranges will be less necessary and hard to administer. This is compounded in the case of the income tax by complex rules for exemptions. Moreover, the progressive nature of the company tax may encourage the breaking up of enterprises into units of uneconomic size. In the circumstances, early consideration should be given to a simplification of tax rates and exemptions, although this should be carefully designed since it is not advisable to change the tax structure frequently.

3.22 Perhaps the most unusual feature of the company tax is that wages and depreciation are not regarded as costs for purposes of assessing tax liability. The government argues that to permit wages to be deductible would encourage wage hikes. However, this is an inappropriate instrument for taxing wages, and not only does it discriminate against employment at a time when unemployment is rising, it also encourages the concealment of wages in nonmonetary forms, such as food distribution. In particular, it discriminates against the creation of new, labor-intensive enterprises in the private sector, and against self-employment. It is therefore recommended that, when tax rates are revised, this should be done on the basis of treating wages as costs, and including a reasonable depreciation allowance to encourage investment. This is not to say that Mongolia might not need a tax based wage policy, but different instruments should be used.

3.23 The final area that seems to offer scope for early results is a thorough review of subsidy policies. As can be seen in Table 3.1, a wide range of subsidies account for a significant share of total expenditure. With reforms in agricultural procurement and ownership, changes in the exchange rate, and the impending privatization of industry, most of these subsidies could be eliminated soon. While some price subsidies will have to be retained, these should be targeted in line with the social safety net. Controlling subsidies would also allow the government greater scope for incremental expenditures to protect the losers in the reform process, to retrain the workforce, and to provide vital economic infrastructure. The key to this is the speed of price and exchange rate reforms and privatization, discussed below.

### Policy Coordination

3.24 Initial Steps. The heart of the old central planning system was the State Committee for Social and Economic Development, the Mongolian equivalent of the State Planning Commission found in all socialist economies. Signifying its determination to move away from the old system, Mongolia abolished the Committee in late 1990 and established instead a Ministry of National Development (MND) from a small residue of the old committees, plus the State Committee for Science, Technology and Higher Education. However, MND still retains many of the functions and habits of a planning committee, especially with

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<sup>1/</sup> Crediting a producer in his tax bill for sales taxes paid on inputs used.

Table 3.1: STRUCTURE OF SUBSIDIES, 1989-90  
(T millions)

	1989	1990
Industry	340	447
Agriculture	502	528
Trade	478	347
Prices	170	96
Other	41	56
<u>Total</u>	<u>1,531</u>	<u>1,474</u>
<u>Total current expenditure</u>	<u>5,383</u>	<u>5,469</u>

Source: Appendix Table 5.4: Ministry of Finance.

regard to the system of state orders for agriculture and exports, and for project preparation. Since August 1991, it has also begun to perform the secretariat function for a newly established Economic Policy Committee, headed by the First Deputy Prime Minister.

3.25 Issues. The rejection of the old central planning system has been so strong in Mongolia that any suggestion that new forms of planning are needed is unwelcome. On the other hand, the need for an institutional framework and process to coordinate macroeconomic and development policies between ministries no longer subjected to centralized direction is a matter of high priority, especially during the transition. Inexperience and policy disagreements have resulted in individual ministries and agencies striking out in different directions; and major policy initiatives have been taken without adequate interministerial discussion or consensus. Thus, the implementation of macroeconomic policy is fragmented--with agencies not sharing information, and the skills and experience of Mongolia's limited cadre of able decision makers not being harnessed to the full.

3.26 In addition to the need for policy coordination, there are other different roles for the government that will require attention. These include the need for the government to intervene in cases of market failure, especially those related to the emergence of privately owned monopolies; and to devise improved methods for managing those enterprises that will remain in public hands.

3.27 The other area where institutional development seems to be a priority is the improvement of the public sector investment program (PSIP) and the capacity of MND officials to carry out project appraisals suitable to the new structure of the economy. The current PSIP was reviewed in mid-1991 and one-third of all projects was eliminated but, as the shape of the economy

begins to change and the likely availability of investment resources in the future becomes apparent, the PSIP will need to be revisited and projects re-assessed on a new basis. Current methods focus on meeting output targets and on payback periods, and pay little attention to economic benefits and to cost minimization.

3.28 To form the basis for the PSIP and as a backdrop to the general formation of economic policies, MND, or some other central body, will over time need to develop a capability for development strategy formulation. This goes beyond the short-term needs of the stabilization program or the reforms needed to establish a market economy. There are many examples of this sort of development planning in East Asian economies such as Japan, Republic of Korea and Thailand. Four specific tasks would seem to be important:

- (a) Long-term analysis of possible choices, options, and directions for the economy, taking an integrated look at resources, infrastructure, etc. For example, what would be the implications of faster mining exploitation? Of continuing population growth at current rates?
- (b) Convening interministerial groups, with outside experts, to assess specific important projects from various perspectives (such as a large mining project with important implications for transportation and energy). Such activities might be directed towards producing special reports to the legislature.
- (c) General reviews of the developmental implications of government programs.
- (d) Evaluations of the effectiveness of various government programs, with a view to providing feedback on their cost/benefit ratios. These would provide an independent view of the programs supported by various ministries and could be useful in bringing problems to the surface quicker than would otherwise occur.

### C. Improving Incentives

3.29 In the move from the command plan to a market economy, the role of incentives is paramount. Perhaps the hardest economic management lesson to be learned in reforming socialist countries is that the key to creating successful markets lies in removing obstacles, rather than in taking direct action. Specifically, this is a question of removing barriers to competition and refraining from efforts at sheltering public enterprises from the impact of such competition.

3.30 There are three main areas where reforms are necessary in this regard, all fully recognized in Mongolia: prices and markets; the external sector; and enterprises. Already, major actions have been taken on all three fronts, which are described below. However, the order in which these are discussed is intentional, because the government's present intentions with respect to sequencing raise some questions. In particular, experience to date in Mongolia and in other reforming socialist countries suggests that perhaps

excessive reliance is being placed on the role of privatization relative to other reforms. The discussion that follows below is not intended to discourage privatization in Mongolia or its present timetable, but rather to urge the authorities' continued attention to the related reforms on which the ultimate success of privatization depends.

### Price and Market Reforms

3.31 Initial Steps. Until the end of 1990, Mongolia's official price structure was similar to that found in other socialist countries which followed the Soviet model; low energy prices, subsidized food and housing, free social services, cheap capital goods, and very expensive consumer goods. These price differentials were made possible through a rigid system of price controls and distribution through state channels, designed to contain final consumption and thus to generate large levels of funding for capital intensive industry. In Mongolia, it is estimated that the price differentials on imported consumer goods--which account for about half of total supplies--were equivalent to tariffs of 250 percent. Housing rents in Mongolia average about T300 per month, including heating, which represents about 20 percent of an average wage of T1,500.

3.32 Official price data are unreliable and, historically, reflect only official price changes. Nevertheless, data for 1980-89 reveal that wholesale prices, which enjoyed some degree of flexibility in the 1980s, grew much more rapidly than retail prices, generating considerable erosion in the yield from the "taxation" of retail margins.

3.33 Major price adjustments were made in January 1991. There was also some realignment of relative prices, especially of intermediate and primary goods, which was designed to reduce the need for budgetary subsidies. Retail prices fixed by the government were doubled, to raise them above wholesale prices, while the increases in wholesale prices were usually less than 100 percent. Farmgate prices were raised sharply (30-70 percent), as were tariffs for public services, and the tugrik was devalued, from 5.63/\$ to 7.1/\$. Budgetary subsidy funds were cut sharply, from T1,474 million in 1990 to T700 million for 1991, and their scope was greatly reduced. Most wages were adjusted to compensate fully for the price changes.

3.34 In addition to this, the January 1991 measures represented a step towards price liberalization. They reduced the number of public sector tariffs determined centrally, and limited controlled prices to:

- (a) 35 categories of retail prices (down from 220 before);
- (b) 10 categories of imported goods;
- (c) wholesale prices of certain goods still subject to state orders; and
- (d) certain other wholesale prices of basic goods.

**Table 3.2: CLASSES OF PRICE CONTROLLED GOODS  
(as of January 1991)**

Food products	Industrial products
1. Meat and meat products	1. Cotton, cotton textiles & products
2. Flour	2. Cotton
3. Rice	3. Children and baby clothes
4. Bakery products	4. Work footwear (shoes, fur boots, children boots)
5. Sugar & sweet products	5. National dress, national cloth (textile)
6. Apples & other fruit products	6. Irons, sewing machines, vacuum cleaners
7. Milk & milk products	7. Detergent, toothpaste, soap
8. Dried milk	8. Cement, brick, plywood, sawn timber, processed and unprocessed wood
9. Butter	9. Furniture made from wood
10. Vegetable oil	10. Matches and candles
11. Animal fat	11. Coal, firewood
12. Baby food	12. Students' handbags, pencils, pens, textbooks, notebooks
13. Alcoholic (beer, vodka) and nonalcoholic beverages	13. Window glass
14. Tea (green, black)	14. Paper
15. Salt	15. Oil paint, drying oil (onùopa)
16. Cigarettes, tobacco	16. Wall paper
17. Eggs	17. Medicine, medical instruments
18. Potatoes, cabbage, onions	

Some goods were subject only to maximum prices, some were subject to two-tier pricing, with above-quota sales allowed at liberalized prices,<sup>2/</sup> while the prices of other goods were freed. Table 3.2 shows the classes of commodities still with controlled prices after the measures.

3.35 Another important development in January 1991 was the introduction of rationing coupons covering ten items. Rations are issued to families in accordance with their size, with no allowance for their age composition. There is some variation in the rationed quantities by city/aimak depending on

<sup>2/</sup> For example, 15 percent of meat was intended to be sold on free markets and the percentage was to rise in later years.

the availability of specific commodities. Table 3.3 shows the rations for a family of six in Ulaanbaatar in June 1991.

Table 3.3: MONTHLY FOOD RATIONS, JUNE 1991  
(For Family of 6 in Ulaanbaatar)

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Meat	16.2 kg
Flour, grade 1	10.2 kg
grade 2	10.0 kg
Rice	1.8 kg
Sugar	3.5 kg
Butter	2.4 kg
Vegetable oil	1 bottle
Tea	1 block
Soap	2 blocks plus detergent
Vodka	3 bottles

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Source: Government of Mongolia.

3.36 In September 1991, the prices of half of the remaining 35 commodities still under control were liberalized and this has reduced the value of controlled sales to the equivalent of 40 percent of urban household expenditure and 20 percent of rural household expenditure.<sup>3/</sup> It is expected that further liberalization will take place in 1992, leaving only public utilities, transportation, housing rents and certain medicines subject to price controls. While state orders for agricultural products will continue to dominate distribution through the 1991/92 winter, market distribution is expected to dominate in the rural sector from mid-1992.

3.37 Issues. It is generally recognized that the private sector's response to the government's efforts to reform prices has so far been disappointing. However, private traders have only highly restricted access to either domestic or imported goods because of the maintenance of the state order system and the continued dominance of the state distribution system. The imposition of rationing and the maintenance of price controls on many consumer goods has effectively excluded private traders from this system and, in any event, the controlled margins are too small to be attractive. So long as the state order system is rigidly maintained, price reform will not lead to market development.

3.38 The government has stated its intention of removing these barriers in 1992 and the list of commodities that will remain subject to control is similar to that found in many market economies. It is very important that the

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<sup>3/</sup> The items remaining controlled after this round include: rationed goods; petroleum products; selected consumer goods such as tent covers; medicine; and rents and public utilities.

government stick strictly to its timetable, and accompany the price moves by simultaneous and matching liberalization of the state marketing system. This implies, in particular, the abandonment of the ration system and its replacement by a targeted social safety net. This reform would promote the success of the trade and privatization reforms discussed later in this chapter.

3.39 The above dwarfs any related issues in this area. There are, however, some that deserve attention, and these relate to the ongoing role of the state in this area. As noted, continued state determination of the prices of energy, housing and much transportation seems reasonable. However, it is important that such prices be adjusted to reflect long run marginal costs. They were held low until 1991, and have not been increased by the same margin as most prices. They already account for a substantial proportion of subsidies. An urgent priority therefore is for analysis to determine appropriate adjustments for such prices even though inflation and exchange rate movements will pose problems.

3.40 The government will also need to be ready to correct for market failures, of which two types should be considered. First, it is possible that some markets may be very slow to develop, causing problems for producers. The obvious and most serious case in this regard is agriculture, especially meat and grains. The government should be ready to offer minimum support prices, at levels below expected market prices but above variable costs. The second area relates to possible market failure because of monopolies. Many industries in Mongolia have only one enterprise and, after price liberalization and privatization, such enterprises may seek to exercise their monopoly power by charging unreasonable prices. It seems unlikely in Mongolia--as is also the case in other socialist countries--that the sophisticated administrative skills needed to deal with this through direct intervention will be present or easily developed. Rather, the solution will be to proceed on a parallel track with trade reforms, and permit the external sector to provide the necessary competition. It is recognized, however, that such liberalization will need to be phased, in order to avoid wiping out large sections of industry overnight; it will in any event be constrained for some time by acute foreign exchange shortages.

3.41 Factor Prices. The successful liberalization of product prices would require that producers respond to commodity price signals by adjusting the level and composition of their production in the short run and the size and structure of their capital assets in the medium to long run. This would be possible only if enterprises enjoy adequate flexibility in their use of labor and capital. On the other hand, the immediate liberalization of factor markets in Mongolia is more problematic than for product markets. The proper operation of factor markets requires further reforms, notably in defining ownership and governance of enterprises and strengthening the financial system. Private owners (or independent managers in state-owned enterprises) might be in the best position to provide countervailing force against wage pressures. For liberalized credit markets to work well, solvent banks, market-based lending practices, and appropriate regulation are needed. Until such institutions are in place and become fully operational, there may be a need to regulate factor markets in the early stages of reform.

3.42 During the transition period, when stabilization has a very high priority, restraint in wage increases is needed to prevent a wage-price spiral. Such restraint can be effected through: freezing or limiting increases in the wage fund or average wages and employment in state enterprises; moral suasion, backed by tight credit and fiscal measures, to check wage increases in the private sector; and limiting the increase in minimum wages. Mongolia has already come a considerable distance in removing restrictions on labor mobility and wage determination by enterprises, with a view to improving incentives to reward gains in productivity. The government is also keeping wage increases in the public sector below the inflation rate. Nonetheless, private enterprises have been offering wage increases much higher than inflation. Government would be advised to monitor this situation carefully and, in particular, utilize its control over credit to ensure moderation in wage increases during this critical transition period.

#### External Sector Reforms

3.43 Initial Steps. Under the old, monopolistic trade system, 95 percent of Mongolia's trade was with the CMEA countries, handled by the large state-owned enterprises and by five foreign trade corporations (FTCs).<sup>4/</sup> The government recognizes the need both to diversify its sources of foreign exchange, and to reform the trade regime into one that reflects and supports the move to markets. Similarly, the old foreign exchange regime was one which involved full surrender of foreign exchange earnings and administrative allocation of foreign exchange under an annual plan. Foreign investment has been high in Mongolia, but solely from the CMEA countries before 1990 and concentrated in mining and related processing activities. With the collapse of the CMEA system, the government has recognized the need to move rapidly in this area and has already initiated reforms in the foreign exchange system, foreign investment and the trade regime.

3.44 In the foreign exchange regime, there have been two major changes. First, there has been a series of devaluations, taking the exchange rate from T3 = \$1 in June 1990, first to T5.6, then T7.1 in May 1991, and in June 1991 to its present three-market structure: the commercial rate is T40 = \$1 and the rate for barter trade is T7.1 = \$1; in addition, there is a free market rate in a thin market, where rates have ranged between T100-T150 = \$1 in 1991. This third market has emerged because of the new foreign exchange retention scheme, under which full surrender is only required for state orders. Foreign exchange earned above orders and earned by private exporters can be retained in full. Enterprises and cooperatives not subject to state orders may retain 50 percent and 90 percent respectively of their earnings. Such retained earnings may be held in foreign exchange accounts, or sold. This is the source of foreign exchange for the third market, although it is a very small number at present.

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<sup>4/</sup> Mongolimpex handled CCA country trade. Four others handled CMEA trade: Teknikimport handled imports of machinery and equipment; Rasnoimport handled imports of consumer goods; Autoneftimport handled imports of vehicles and petroleum products; and Mongolexport handled all exports.

3.45 Mongolia has high hopes for foreign direct investment and passed a generous foreign investment law in 1990, which included provisions for unrestricted repatriation of capital and remittance of profits and dividends. The Ministry of Trade and Industry takes responsibility in this area.

3.46 In the area of trade, decentralization has begun by the issuing of trade licenses to private and public enterprises. Some 340 such licenses have been issued. The government has stated its intention to eliminate licensing requirements, and to phase out the state order system. Nevertheless, in 1991, the government issued \$385 million of export orders, of which 81 percent was for barter trade with the USSR, compared with total projected exports of \$432 million. With continued state ownership of enterprises, such orders can be expected to be fulfilled. Thus, the state order system continues to dominate trade, and all trade contracts in the first five months of 1991 were signed by the state FTCs. It should also be noted that preparations for further diversification of trade have been launched by MFN treaties signed with Japan, USA, Republic of Korea and a cooperative agreement with the European Communities; an application to GATT is also being considered.

3.47 The major additional reform being proposed is to move from the rigid import plan via state orders to an "indicative import plan," with categories of imports identified with sources of foreign exchange. Except for barter trade and "emergency imports", centralized distribution of imports is to be phased out over time.

#### Foreign Trade

3.48 The private sector's apparent lack of response to the above trade and exchange reforms is relatively easy to explain, given its lack of experience in such matters, coupled with the maintenance of the state order system and the shortage of supply in the domestic market. This is compounded by the poor world market situation for wool and cashmere, Mongolia's most obvious exports to CCA countries. In addition, the expected continuation of barter arrangements with the Soviet Union (or with its republics in the future) means that reforms in this area must be designed carefully. Moreover, it must be recognized that FTCs are the repository of expertise in trade matters, and that such skills are scarce.

3.49 Nevertheless, it is hard to foresee significant progress in trade so long as the mandatory state order system is in place. This system should be dismantled as soon as possible and replaced by voluntary contracts at freely negotiated prices. It is recognized that mineral exports to the Soviet Union are a special case, and that these will need to continue as a separate arrangement.

3.50 It is particularly important to eliminate the state order system and the rigid foreign exchange allocation system with respect to imports. While special arrangements may continue to be needed for barter imports from the Soviet Union, and perhaps, in the short term, for some targeted "critical" imports funded by official aid, there is an urgent need to liberalize all other imports, both as a source of competition to potential domestic monopolies and, more generally, to facilitate and stimulate exports.

3.51 With the disappearance of the state order system, the need for FTCs as state instruments would disappear and they can become trading houses, specialized in foreign trade and earning income on margins charged between procurement and export prices, or between import and domestic prices. There will, however, be residual functions for the state to perform, including export promotion (trade fairs etc.) and advisory service to exporters, and these should be developed out of the existing FTCs.

#### Foreign Exchange Policy

3.52 The new foreign exchange policy represents a significant improvement over the previous one in two respects; it demonstrates the authorities' recognition of the need to move towards a unified exchange rate, and the new rate structure, at least vis-à-vis cash transactions, comes closer to a realistic, market-based rate. Despite the above progress, the present policy still has two major shortcomings: Mongolia continues to have sharply differentiated multiple rates of exchange; and depreciated rates are not fully passed on to the end users. Mongolia has stated its intention of holding the present commercial rate at least until the end of 1991, as a nominal anchor against inflation. This is wise since, in such a heavily import-dependent economy, there could easily develop a price-exchange rate spiral.

3.53 Regarding multiple exchange rates, the most serious shortcoming is the very appreciated rate for barter transactions, which accounted for about 80 percent of total foreign trade in 1990. This conflicts with the objective of encouraging exports and their diversification as well as efficient import substitution. The government could only justify and sustain such a highly appreciated exchange rate for barter trade if the economy continued to have the state order system, soft budget constraints for state enterprises, price controls, and restrictions on the movement of capital and labor, which are all scheduled to be phased out over the short to medium term. What may be a cause of concern, however, is that, in order to maintain the appreciated rate, the government could be tempted to delay reforms in the above areas. The unification of the two official rates as soon as possible is therefore a high priority.

3.54 The foreign exchange retention scheme, while contributing to the existence of multiple exchange rates, serves to encourage exports to CCA countries by enabling the exporter to raise his "average" rate of exchange and by giving him access to free foreign currency. Nonetheless, it constitutes only a second best option and it should be eliminated when the state order system and compulsory surrender of foreign exchange are abolished. It operates through and makes possible the parallel foreign exchange market, which has been officially tolerated since mid-1990 and become de facto part of the official exchange rate system. The market is still very thin and, as a result, the exchange rate in the parallel market (about T150/\$ in October 1991) cannot be taken as a representative market-determined rate. It serves, however, as a useful index of changes in foreign exchange shortage during the period of transition but, as soon as the related reforms in the foreign exchange system have been implemented, it can be eliminated.

3.55 The second major shortcoming of current foreign exchange policy is that the depreciated official rate of T40/\$ is rarely passed on to the end

users of imports. This is mainly because the resultant domestic prices are not considered "affordable." For instance, shortly after the June 1991 devaluation, MIAT raised its fares to cover the increased tugrik cost of its foreign exchange liabilities but was soon forced to rescind this decision because of the sharp decline in the number of passengers; it has instead taken recourse to central bank financing. The sharp devaluation should have generated a large shift in relative prices, with increases in the prices of imports, close import-substitutes, and exportables relative to those of domestic (nontraded) goods. Such a shift has not taken place because of import and exchange controls, the rationing of some import commodities (e.g., rice), and the predominance of administrative pricing. Thus, instead of being exposed to large relative price changes in line with the rising price (both official and shadow) of foreign exchange, Mongolia's producers and consumers have been subjected to progressive tightening of supply and growing shortages. This practice is severely reducing the impact of the devaluation and should be stopped, through the lifting of administrative interventions.

3.56 In summary, the two key steps that appear to be necessary are to unify the multiple rates as soon as possible, and to eliminate obstacles to the impact of the exchange rate on the domestic economy. Only then will a more reasonable judgement be possible about the appropriateness of the exchange rate.

#### Foreign Direct Investment (FDI)

3.57 The opening up of Mongolia and the enactment of a foreign investment law have already generated 32 joint venture agreements with new partners, of which 22 were signed in the first half of 1991. They mostly involve commodities such as cashmere, camelwool, horse hair, meat and mining, and some in trading and tourism. It is notable that to date all such ventures utilize Mongolian inputs and none is based in the assembly/processing mode so popular in other Asian countries, especially Southern China. To encourage further projects, the government is considering establishing development zones, or even a processing zone.

3.58 There would be merit in Mongolia creating one location specifically geared to export enterprises, where transport arrangements can be coordinated and supplies of power, heat and water guaranteed. However, the government will need to be realistic about the types of foreign enterprise likely to come to Mongolia and their potential impact. It seems likely that most will follow the recent pattern, seeking to add value to Mongolia's natural resources, especially in animal by-products, at least in the short term. Transport costs will probably make processing of imported materials uneconomic, and Mongolian labor is not relatively cheap. Moreover, significant investment in raw materials processing, if it comes, will await improvements in transport capacity for exports. Therefore, expectations of the benefits likely to flow from FDI in the short term will need to be modest.

3.59 The two areas where immediate action seems to be most warranted are in strengthening FDI administration and in selective promotion. Mongolia is very distant and must therefore make the foreign investment process as simple as possible, preferably via a "one-stop" agency where the foreign investor can obtain all necessary permissions as well as information about potential local

partners. In addition, such an agency should selectively promote foreign investment, by forging institutional links with overseas agencies who can target potential foreign investors in Mongolia's export industries. This is an appropriate use for technical assistance.

### Enterprise Reform and Privatization

3.60 Initial Steps. The development of the private sector is one of the key elements of the government's economic strategy. It involves both the promotion of new activities, in particular by the provision of an enabling legislative framework, and the privatization of about one-third (by asset value) of existing public enterprises. The authorities hope to achieve rapid progress in this area, believing it to be the key to cementing the basis of the new market economy. Privatization and new private sector activities are designed to replace the previous system of state-owned enterprises operating under mandatory planning and distribution.

3.61 Although considerably more attention has been given so far to privatization than to the promotion of new private sector activities, the latter has by no means been neglected. This began in 1988 with the promotion of private sector cooperatives, and has spread with the promulgation in 1991 of the company law, bankruptcy law, consumer protection law, and anti-monopoly law. The number of private cooperatives has grown from 180 in 1988, employing 3,500 persons, to nearly 3,000 in 1991, employing well over 20,000 (excluding the livestock cooperatives). Other private firms have appeared since the reforms began, and now number some 4,200, reportedly employing about 32,000. These are mostly engaged in services and producing light consumer goods for the domestic market. Including an additional 4,000 self-employed, some 56,000 people out of total employment of about 650,000 are now working in new private sector activities (about 8.6 percent).

Table 3.4: NUMBER AND VALUE OF STATE ENTERPRISES TO BE PRIVATIZED

Privatization category	Number of enterprises				Value (T million) of enterprises			
	Ulaan-baatar	Darhan & Erdenet	Aimaks	Total	Ulaan-baatar	Darhan & Erdenet	Aimaks	Total
Large privatization (blue coupons)	90	28	226	344	3,881	1,570	5,304	10,755
Small privatization (green coupons)	498	48	1,055	1,601	3,035	428	2,185	5,648
Agricultural coop.	1	0	277	278	7	0	3,732	3,739
Partly state-owned	101	25	238	364	9,873	4,437	2,801	17,111
<u>Total</u>	<u>690</u>	<u>101</u>	<u>1,796</u>	<u>2,587</u>	<u>16,796</u>	<u>6,435</u>	<u>14,022</u>	<u>37,253</u>

Source: The State Privatization Commission

3.62 The privatization program is about to enter its critical implementation phase, through a voucher system (see Box 3.2) similar to that being implemented in the Czech and Slovak Federal Republic, Poland and Romania. In addition, a stock exchange is being created to permit share trading following

privatization and, to some extent, to facilitate the privatization process. The voucher scheme will cover the majority of the 1,600 small enterprises and the 340 large enterprises that are to be completely privatized, as well as the 364 firms to be partially privatized. The privatization of small firms and shops is already underway and is scheduled to be completed by the end of 1991. In addition to privatization by voucher, there is also some leasing and sale of small enterprises, including shops. The "large" privatization was to have begun in October 1991 and to be completed in one year, but this schedule has now reportedly been extended to 1994. The only enterprises scheduled to remain in state ownership are those in mining, energy, rail and air transportation, communications, and water supply. Although these are large in terms of asset value, they are small in number.

3.63 The company law was an important milestone, as it defined ownership, and specifically the state ownership of existing enterprises, all of which have had to re-register. This has enabled the government to be in a position to define both its privatization program and its remaining ownership responsibilities with some certainty.

3.64 It is also intended to privatize livestock herds and most state farms, and some of this has already occurred spontaneously, covering about 40 percent of the total herd. While pastureland will remain public, the privatizing of farmland awaits the passing of the Land Law. In the meantime, some leasing arrangements have been introduced.

#### Privatization

3.65 The privatization program will transform the face of the Mongolian economy permanently. The initial, very rapid timetable for completing the process in 1992, however, seemed overhasty and could have been expected to lead to widespread enterprise failure and to some backlash against reform. The new timetable for completion by 1994, while it remains ambitious, is therefore welcome and much more realistic. However, to avoid "drift" in existing enterprises, it is urgent that a final, realistic timetable be drawn up as soon as possible and adhered to.

3.66 The key issue with respect to the timetable for privatization is the sequencing of related reforms. Price and domestic trade reforms will dramatically affect the valuation of existing enterprises, as well as the prospects for the creation of new private enterprises. This suggests that the phasing of privatization should be coordinated with price and marketing reforms in particular. Thus, enterprises in those sectors where price controls and state orders have already been lifted should be privatized first, while others should await the completion of price reforms. This is a further reason why delays in price and market reforms should be avoided. However, piecemeal privatization over a long period of time could have negative consequences because of its effects on individual decisions. Moreover, significant delay could yield to the takeover of enterprises by their workers, with the consequent decapitalization that has been observed in other countries. Thus, the publication of a timetable for each enterprise would be most appropriate.

3.67 A particularly difficult issue is that of the debt of firms to be privatized. One proposal is to cancel the outstanding debt of T10 billion,

Box 3.2: MECHANICS OF PRIVATIZATION BY VOUCHERS

1. The privatization program will be implemented through free distribution of vouchers that will be used in the bidding for publicly owned assets. It has two distinct components: (a) small privatization, which includes some 1,600 small businesses, all agricultural assets, livestock, and others with a total book value <sup>1/</sup> of T9.4 billion; and (b) the privatization of 340 large state-owned enterprises with a book value of T10.8 billion and partial privatization of further 364 firms with a book value of T17 billion.<sup>2/</sup> Each citizen is to be given two vouchers. Green vouchers have three tickets and are for the purchase of small assets. Blue vouchers have one ticket, for purchase of big assets. The face value of each citizen's vouchers will be about T10,000, so that the total national voucher value will be about T20 billion and corresponds approximately to the book value of assets to be privatized. This represents about one and one half years' GDP at mid-1991 prices and far exceeds the financial savings of households, which are only about T1 billion.

2. Small properties will be sold at auctions, arranged by local authorities under the guidelines prepared by the Privatization Commission, with no reserve prices. The public will be informed by listing the assets to be auctioned in newspapers across the country. Any individual can bid for the assets by simply taking part in the auction with their vouchers; no cash will be used in auctions. The highest bid wins the asset, and the Privatization Commission will issue the ownership certificate to the winner. Individuals will be able to trade, buy and sell the green vouchers for cash, but cannot use them for bank credit. Banks may provide brokerage services for coupon holders but local markets will not be regulated in any way.

3. Large firms will also be sold by auction with the use of brokers and the stock market. First the Privatization Commission will decide which enterprises are to be privatized each week. These enterprises will then be converted to joint stock companies, and 10 percent of their shares will be granted to the present employees, who will then be allowed to participate in the auction on an equal basis with others. The remaining shares will be sold in batches with successive blocks of shares sold sequentially. The mechanics of the process is as follows. Once the auction is announced, individuals will bid with their blue vouchers for a number of shares through brokers located across the country. After collecting the bids the brokers will phone in a bid for a batch of shares, in terms of vouchers, to the stock market. The share batches will be sold each hour, and the broker with the highest bid for the batch wins the shares and then distributes the shares to his or her clients. The batches will be sold in this way until all the shares of the enterprise are finished. Blue vouchers can be transferred up to three times but cannot be freely traded or sold to foreigners. They must be used to buy shares in the large firms which may then be traded on the stock market and sold to foreign investors in accord with the general provisions governing foreign investment. The voucher scheme is to charge a fee of T200 per person for the vouchers (except for some 75,000 poor citizens). The revenue of T300 million will accrue to the privatization fund to cover such items as brokers' commissions; two months' severance pay for an estimated 20,000 workers in the firms being liquidated; training for enterprise directors, brokers, bank officers, and accountants; public awareness programs; and communications and other office expenses.

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<sup>1/</sup> Book value is the depreciated value of investments at historical cost, not revalued for inflation. The book value of all assets is therefore substantially below replacement cost because of depreciation and the high rates of inflation in 1990 and 1991.

<sup>2/</sup> As of April 1991, the total book value of state assets in Mongolia, including assets in the nonmaterial sectors, was estimated at T51 billion. Of these, the material sectors' assets, which would be subject to privatization, had a total value of T37 billion, including T13 billion for shares to remain in the hands of the government.

along with the enterprises' deposits of T4.5 billion. It was noted earlier that this also affects the development of the banking system and obviously has implications for the market. Cancellation seems inappropriate and potentially highly inflationary. However, it is possible that some of this debt can be

exchanged for long term bonds, perhaps to be held by the new development bank or fiscalized through creation of a special fund within the budget framework. This issue needs to be addressed with considerable care.

3.68 Another important issue that merits the authorities' early attention is the possible macroeconomic effects of privatization. First, many firms are likely to run into difficulties once they are removed from state support. Their need for temporary assistance in restructuring may be difficult and, indeed, inappropriate to ignore, and the government will need to prepare for this in its fiscal planning. Similarly, there may well be a monetary effect, as individuals sell their shares to those with financial savings in order to finance consumption. Thus, the privatization program would seem to call for a rather careful fiscal and monetary policy stance.

3.69 While good progress has been made in defining an overall legal framework for privatization and the creation of a new private sector, less attention has been paid to one key regulatory aspect. There are, as yet, inadequate accounting and auditing standards in Mongolia, and there are very few professionals trained in these skills. A major effort would seem to be called for in this area if a market system is to be developed, especially one based on share capital which requires consistent accounting and audit systems to provide information on which shareholders can make decisions.

#### Private Sector Development

3.70 The attractiveness and priority of the privatization program should not distract attention from the needs of the new private sector, and the policy framework needed to foster it. Good progress has already been made in the legislative area, but more is needed. One such issue raised earlier is the need to ensure that the private sector is not crowded out of available credit, and that specific provision be made for this in the credit plan. Similarly, the reform of the state order system is a critical next step; this will not only stimulate the creation of private trading companies, but also provide new enterprises with access to raw materials and energy, currently a severe constraint.

3.71 As the private sector develops, the government will also need to give consideration to the technical assistance needs of new enterprises--especially in such areas as bookkeeping, technology acquisition, health and safety--and the appropriate institutional set-up for this, on which there is much international experience. A phenomenon which appears likely to occur in Mongolia is that such industries may well emerge most rapidly in rural areas, as it is the rural population that is likely to see the most rapid gains in income from the reforms, once relative prices are fully corrected. If this does occur, it will place particular demands on transport and on local government, but is a potential source of rapid employment generation.

#### Public Enterprise Management

3.72 Although over 2,000 enterprises are to be privatized with assets valued at over T20 billion, a much higher level of assets will remain in public ownership in mining, energy, transport and telecommunications. Very little thought appears to have been given at this stage to the issue of corporate

governance for these remaining enterprises, but this will be vital not only from a fiscal standpoint, but also because these enterprises are responsible for essential inputs to the private sector. This is an entire topic in itself which will need serious attention, in particular with regard to: adjustment of tariffs and user-charges to achieve full cost recovery; appropriate systems of preventing administrative interference in the day-to-day operations of enterprises; efficient ways for government to exercise its ownership functions, such as through boards of directors or holding companies; and ways to permit the poor to continue to have access to public services.

#### D. The Social Safety Net

3.73 It is clear that, even without the transition to a market economy, Mongolia would have faced severe difficulties in the short term because of the external shocks its economy has experienced. However, the break-up of the state-owned enterprises will remove the safety net for many citizens and the government recognizes its obligations in this regard. The rural nature of the economy offers some comfort in this regard, as many affected persons still have close ties to rural areas, which assist in food security; indeed, there has been some migration from cities to the rural areas in 1990/91. However, not everyone is so placed, and there is a segment of the urban population that will bear the brunt of the adjustment.

3.74 Several steps have already been taken. One was to institute a severance pay system for redundant workers. A second measure was to provide resources in the 1991 budget for local governments to distribute either as welfare funds or for job creation. Further, the fees raised from the issue of privatization vouchers are to be used for retraining or job creation. While cost recovery principles are to be introduced in health and education, provisions are being made to ensure continued access for those unable to pay. The base pension, which is now below the poverty line, will be reviewed in light of price developments in 1991.

3.75 While appropriate cost recovery systems are one good direction for change, care will be needed to ensure that the health and education system does not break down. It has been observed in several reforming socialist economies that the break-up of state-owned enterprises--which provide many such services directly or indirectly--leads to a rapid deterioration in standards and coverage, with potentially serious long term effects. Therefore, sufficient budgetary resources will have to be provided to maintain a social safety net during the transition, especially in primary health care and primary education and in particular in rural areas.

3.76 The biggest question, however, derives from price reform and the abolition of the ration system scheduled for 1992. To prepare for this, the State Statistical Office is developing an index of minimum living standards to establish an objective measure of poverty. The government recognizes the need to protect the most vulnerable through targeted assistance, and this is clearly the most appropriate use of fiscal savings derived from a reduction in generalized subsidies. The key point here, however, will be to attempt to make protection of the poor consistent with the new market economy. Therefore, to the extent possible, such protection should be offered through income supplements, not through price controls or subsidies.

#### IV. DEVELOPMENT PROSPECTS

##### A. Background

4.1 Mongolia has been hit by severe external shocks at the same time as it is seeking to bring about a radical transformation of its economy. In any circumstances, this would make the assessment of development prospects hazardous. Furthermore, the external shocks have not yet worked themselves through Mongolia's economic system. Indeed, the probability that Mongolia will be affected by a continuation of external problems seems quite high. In particular, the economic difficulties of the Soviet Union and its Republics raise particularly difficult problems, especially with respect to Mongolia's export prospects and the associated essential imports. If essential imports continue to be unreliable or unavailable, the impact on Mongolia would be serious indeed, requiring an even sharper adjustment than the one already envisaged. The scenario described below was drawn up by the government during August 1991 on the assumption that the Soviet Union would be able to implement the barter trade agreement reached in July 1991, and that the necessary reforms would be fully implemented on schedule.

4.2 It is the seriousness of its economic situation and the extent of the adjustment required that provide the essential case for the rapid shift to a market economy. Stabilization would be necessary with or without the structural reform program, as the source of the shocks is external. It is the judgment of the authorities, which we endorse, that a market system will be much better equipped than a centrally-planned system to provide the essential flexibility required to absorb the external shocks and return the economy to a path of sustainable growth. The scenario described below assumes that stabilization would take about two years to achieve and growth would resume in 1994. However, current uncertainties suggest that a period of negative or no growth could be extended further, either because of insufficient policy reforms or because of a continued deterioration in Mongolia's external situation, or both.

##### B. The Government's Program and Scenario 1/

4.3 The government has prepared and begun to implement an impressive program of economic reforms and stabilization policies. They essentially aim at arresting the current economic decline while setting the stage for sustained recovery, containing inflation, and making progress towards balance of payments viability. However, the program's realization may require firmer and bolder implementation by the government of reforms as suggested in Chapter III, with a commensurate private sector response. It also assumes that barter trade with the Soviet Union will continue as agreed by the two governments.

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1/ The government program, summarized in an official document entitled "Memorandum on Economic Reform and Medium-term Policies" (September 1991), has a quantitative framework for 1991-94 with special emphasis on the first two years (Table 4.1).

4.4 After declining for two successive years, the strength of the recovery of GDP will depend on the extent to, and speed at which the economy's current bottlenecks can be eased as well as on producers' response to economic reforms. The former will be facilitated by the improved availability of foreign exchange from exports and external aid, and by the timely development of new market-oriented institutions. While this will help create an environment conducive to growth, producers' response will depend on the strength of incentives (i.e., prices and other factors affecting profitability), overall price stability, and their confidence in government policies. These in turn will depend on the success of the government's price and trade reforms, privatization program, and macroeconomic management. This is discussed below with reference to three critical macroeconomic indicators: production, the saving-investment balance, and the external balance and foreign borrowing requirements.

#### Production

4.5 Economic recovery is expected to be led initially by the agricultural sector. While agricultural performance is subject to year-to-year fluctuations depending on weather conditions, growth over the medium term is expected to resume gradually its pre-reform rate of 4-5 percent as the shortage of critical imports is eased and producer prices, distribution, and ownership of productive factors are liberalized. Both the government and the donor community recognize the urgency of agriculture's recovery and are directing significant resources to its critical needs. Producer prices were freed in July 1991, to become effective from the beginning of 1992. Their full effect, however, will only be felt when the state order system is abolished by end-1992. The supply response to the liberalization of farmgate prices will be enhanced as herd ownership and crop farming are privatized. The government plans to draw up an action program by mid-1992 for the completion of privatization of agricultural activities by end-1992 and land ownership (crop land only) by end-1994. All these reforms will be meaningful only if the marketing and transportation of agricultural products are also privatized and/or deregulated, and government subsidization of retail prices of farm products do not undermine private trading.

4.6 Industrial output, comprising manufacturing, mining and energy production, is expected to remain below capacity in the short run because of shortages of spare parts, raw materials and energy. While this situation is expected to be eased with the improved flow of aid and export earnings over the medium term, recovery of production is likely to be restrained by the closure or restructuring of uneconomic units. Efforts to encourage direct foreign investment through the new company and foreign investment laws, the establishment of small- and medium-sized enterprises through special programs and decentralization of industrial conglomerates, and the upgrading of technology in those enterprises which are viable in new market conditions will set off a gradual process of structural adjustment in the sector in line with more rational economic prices and incentives, and thus serve as the medium-term sources of growth in industry, especially in agroprocessing.

4.7 The energy sector is of critical importance to Mongolia's recovery, particularly the coal-based power plants. In the short run, energy supply is expected to be improved by relieving current shortages of spare parts for both

coal mines and coal-based power plants and by importing new equipment needed for the transport of coal. The barter agreement with the Soviet Union (copper for petroleum), if fully implemented, would meet in large part the country's need for petroleum products. Mining value-added can be increased in the medium term through the fuller use of existing capacity if new export markets can be secured. A good start has already been made with limited exports of copper concentrate to Japan in 1991. Small-scale mining, particularly in construction-related minerals and precious or semi-precious metals/stones, will probably be developed by domestic capital alone or jointly with foreign capital, once prices and trade are deregulated.

4.8 The easing of transportation bottlenecks will be critical to achieving new, viable sources of export earnings. In this regard, three aspects are crucial: the recently signed agreement with China regarding the use of Tianjin port; the need to improve the trans-shipment of goods by rail at the Mongolian/Chinese border; and upgrading airport facilities at Ulaanbaatar. These improvements will facilitate transport flows as trade is increasingly routed through China rather than the USSR in search of diversified export markets.

4.9 The government envisages that the above policies will be adequate to limit the decline in GDP to 5 percent in 1992 and, after a year of zero growth in 1993, to resume average growth of 3 percent annually thereafter.

#### Saving and Investment

4.10 During the next few years Mongolia will need to manage its scarce savings and foreign exchange very prudently. Investment will therefore have to be limited to the essential minimum until savings begin to recover after the adjustment program is complete. However, it can be expected that the efficiency gains stimulated by the reform program will generate growth with only low levels of investment, and the order of magnitude for such investment is shown in Table 4.1. Budgetary investment will focus on socioeconomic infrastructure, and a "core" investment program will be prepared in early 1992.

4.11 Resources for such an investment program are expected to come mostly from external sources. While tax reforms and expenditure cuts should bolster budgetary savings, the latter may continue for some time to be drained by income and capital transfers (consumer and producer subsidies, respectively), leaving a negative balance. With the progress of privatization, price reform, better targeting of subsidies, and fiscal reform, budgetary savings could start financing government investment in the final years of the period. Nonetheless, the overall fiscal balance would remain negative over the entire period.

4.12 Overall, private savings, which start from a very low base indeed, are expected to recover slowly after adjusting to lower income levels and then to rise gradually in line with further banking reforms and with the growth of the private sector.

4.13 The rapid acceleration in inflation in 1991 will need to be checked implying that the overall fiscal deficit should not be monetized and that the

**Table 4.1: KEY MACRO INDICATORS, 1990-94**

	1990	1991	1992	1993	1994
(percentage change)					
<b>Output</b>					
Real GDP	-2.1	-15.0	-5.0	0.0	3.0
Nominal GDP	-2.0	44.5	37.7	25.0	18.5
<b>Prices</b>					
GDP deflator	0.0	70.0	45.0	25.0	15.0
Consumer prices	0.0	130.0	50.0	30.0	20.0
(percent of GDP)					
Total investment <u>/a</u>	32.1	14.1	14.0	14.0	14.0
Gross national savings <u>/a</u>	3.4	4.0	3.0	5.2	7.5
Current account deficit <u>/a</u>	28.7	10.1	11.0	8.8	6.5
<b>Budget and Money</b>					
Revenue	50.7	62.7	48.5	48.5	48.5
Expenditure	64.1	76.9	60.4	58.5	57.0
Overall deficit	-13.4	-14.2	-11.9	-10.0	-8.5
Broad money	60.5	56.6	54.9	53.8	53.5
Currency in circulation	-7.1	10.7	9.7	8.1	7.2

/a The program does not provide data on these items beyond 1991.

Source: "Memorandum on Economic Reform and Medium-Term Policies,"  
September 10, 1991.

private sector's access to credit would steadily increase as it acquires former state enterprises. The program therefore envisages a tight monetary policy, supported by newly introduced cash reserves requirements as well as direct credit controls. This demand management policy, coupled with the positive supply response expected to result from price and trade liberalization measures, is expected to lower inflation from close to 130 percent in 1991 to 50 percent in 1992 and falling gradually thereafter.

#### Trade Prospects and External Resource Requirements

4.14 In Chapter II, we reviewed the sudden collapse in Mongolia's major export markets, especially for leather, cashmere and meat products, and the external situation will continue to hamper the recovery of exports from their highly depressed level of \$432 million (estimated) in 1991. This constraint may gradually be eased from 1992 if workable barter trade arrangements can be made with the Soviet Union or neighboring Soviet Republics. On the other hand, prospects for diversifying markets for traditional exports are limited

in the short term because of anticipated excess supply in the world copper market, continuing weak demand for cashmere and the relatively low quality of Mongolian meat products. Moreover, to diversify its exports, both in terms of geography and commodity, Mongolia will need to overcome serious transportation problems and to break into competitive world markets, both of which would require time. Thus, the recovery of exports will only be modest over the period under consideration.

4.15 Mongolia's dependence on imports in the pre-reform era was unusually high because of turnkey projects financed by the former CMEA countries, and the very high level of import financing available from the Soviet Union. Despite the response of other financing agencies, the present depressed level of imports will improve only slightly over the next two to three years, partly because of an expected further deterioration in its terms of trade and partly because of the need to build up the country's international reserves. The limiting of imports will be achieved through both a realistic exchange rate policy, coupled with newly introduced customs duties, and the continued use of the foreign exchange allocation mechanism.

4.16 However, even if the authorities are able to pursue the minimum investment/minimum imports scenario described above, Mongolia would still need a substantial inflow of external resources to maintain its production, consumption and investment at basic levels. In this respect, the most crucial period is the next 18 months (1992/93) when the relieving of bottlenecks would help bolster the reform program and lay the foundation for future recovery. Recent meetings of donors in Tokyo (September 1991) and Ulaanbaatar (October 1991) suggest that external financing requirements for this initial phase of the transition period, taking Mongolia through mid-1992, and amounting to about \$150 million, may be available on appropriate terms. However, as indicated in Table 4.2, considerable levels of external assistance will still need to be mobilized if a reasonable level of imports is to be maintained. Given the assessment that Mongolia cannot be considered creditworthy for large levels of commercial borrowing (paras. 4.22 and 4.23), most of this assistance should be on concessional terms.

### C. Risks and Other Possible Outcomes

4.17 The scenario outlined above is based on two critical assumptions: that the external environment will not deteriorate further; and that the government's reform program and policies will be effectively implemented on schedule. The greatest risk comes from the possibility of a further collapse in trade with the Soviet Union or its Republics. Already, internal difficulties in the Soviet Union have prevented the delivery of many items under the barter agreement negotiated in July 1991, with petroleum supplies running 50 percent below schedule and severe shortages of certain critical items such as explosives for the coal mines. While the government's program emphasizes policies to develop trade with nontraditional partners, the Soviet Union is projected to continue to account for about 80 percent of Mongolia's total trade, and to provide the major market for its most important export, copper concentrate, as well as being the source for all essential imports of petroleum.

**Table 4.2: EXTERNAL FINANCING REQUIREMENTS, 1992-94**  
(\$ million)

	1992	1993	1994
Exports, f.o.b.	485.0	550.0	630.0
Imports <u>/a</u>	608.0	643.0	703.0
Current account deficit excluding grants	123.0	93.0	73.0
Amortization <u>/b</u>	0.4	0.4	0.4
Change in net reserves	36.2	26.9	33.5
<b>Financing requirements</b>	<b><u>159.6</u></b>	<b><u>120.3</u></b>	<b><u>106.9</u></b>
<b>Financing</b>	<b>159.6</b>	<b>120.3</b>	<b>106.9</b>
<b>Identified</b>	<b>80.0</b>	<b>30.0</b>	<b>25.0</b>
<b>Direct investment</b>	<b>5.0</b>	<b>10.0</b>	<b>15.0</b>
<b>Grants</b>	<b>20.0</b>	<b>10.0</b>	<b>10.0</b>
Food, medicine, & other	(10.0)	(10.0)	(10.0)
Bilateral balance of payments support	(10.0)	(-)	(-)
<b>Loans for balance of payments support</b>	<b>55.0</b>	<b>20.0</b>	<b>-</b>
Multilateral sources	(55.0)	(20.0)	(-)
Bilateral sources	(-)	(-)	(-)
<b>IMF</b>	<b>(-)</b>	<b>(-)</b>	<b>(-)</b>
<b>Unidentified</b>	<b><u>79.6</u></b>	<b><u>80.3</u></b>	<b><u>81.9</u></b>
<b>Memo item</b>			
Debt service ratio (%) <u>/c</u>	13.1	12.1	11.6

/a Excludes imports and payments associated with turnkey projects.

/b Including repayments of short-term trade debt.

/c In percent of exports of goods and services.

Source: Government of Mongolia and staff estimates.

4.18 If the present difficulties in trade between Mongolia and the Soviet Union were to persist, the present stabilization and reform program would need to be redesigned, with a much more severe adjustment and reduction in living standards. Given the major uncertainties involved, attempting to quantify such a scenario raises particular difficulties and has therefore not been attempted. However, trade would shrink even further below present levels, resulting in a continued sharp decline in output and an extension of the period before recovery could be expected. Although the international

community would probably respond to such a situation, imports as a share of GDP would fall sharply and this would require even larger devaluations, with consequent inflationary pressures. Investment could be expected to fall to even lower levels from the already depressed levels projected.

4.19 Such a situation would impact most heavily on the industrial sector and, consequently, on internal distribution. Import-dependent areas of industry, notably energy but also processing industries such as leather tanning, would be particularly hard hit. The greatest concern would relate to the coal and power sectors, given Mongolia's harsh winter climate, and this would call for particular external efforts. While such outcomes are not projected at this stage, it is important to be aware of their potentially devastating impact in an import-dependent economy such as Mongolia's. Finally, there is one key feature of Mongolia's economy that provides a degree of resilience and comfort: the rural sector, and especially the livestock sector, offers a base that is relatively immune to the level of imports. Some migration to rural areas where basic living standards can be maintained has already been observed and, in extreme circumstances, one outcome in the near term could be a process of partial de-industrialization and a temporary return to a predominantly rural economy.

4.20 Even if the above dramatic outcome does not materialize, there remains a considerable risk that the government's own targets may not be achieved because of policy failures, either of design or implementation. Several issues were alluded to in Chapter III of this report, and bear highlighting here:

- (a) Despite significant progress in price reform and the relaxation of some restrictions on domestic and foreign trading by private business, price controls and trade restrictions remain in force in key areas such as agricultural products and basic consumer goods where a quick supply response is feasible and where the private sector would have best chance to succeed.
- (b) The privatization program is now proceeding more slowly than originally envisaged, and may result in a prolonged period of uncertainty for both private and state enterprises and an excessively large number of business failures and closures, with adverse effects on output and employment.
- (c) Exchange rate policy, which applies a highly overvalued rate to more than 80 percent of foreign trade, falls short of what would be needed to provide an adequate incentive to exports and import substitution.
- (d) With interest rates remaining below one-tenth of the current inflation rate, banks are not able to attract deposits or to discourage loan requests for unproductive uses.
- (e) The fiscal program could be made much stronger by measures such as introducing a VAT, an effective global personal income tax, and by reducing subsidies.

4.21 All these suggest that close attention will continue to be needed to these reform areas if the overall targets are to be achieved, even in the absence of further external deterioration. Taken together with the external uncertainties, the present scenario must now be considered optimistic. In the period since the program was designed in August 1991, the balance of probability has shifted towards a more conservative outcome in the next two years.

#### D. Creditworthiness

4.22 Mongolia's medium-term development prospects include its well-educated labor force, abundant agricultural and natural resources and the basic resilience of the rural economy. Although the authorities are fully committed to the reform program, Mongolia's near-term balance of payments prospects are subject to considerable risks because of the economic conditions in its main trading partner as discussed above. However, these risks are likely to become smaller over time as Mongolia receives foreign aid and direct foreign investment from new sources, which would help diversify its foreign trade away from traditional markets.

4.23 Almost all of Mongolia's external debt is owed to the Soviet Union in transferable rubles; the amount owed to countries in the convertible currency area is negligible. In the absence of a track record and given the prevailing uncertainty, Mongolia is not regarded as able to borrow from commercial sources on market terms, nor can its reasonable capital needs be met on a sustainable basis without concessional assistance. For the foreseeable future, it must therefore rely on official sources for most of its external capital requirements. Recently contracted debt as well as expected inflows of concessional aid in the coming years are projected to give rise to a debt service ratio of 12-13 percent over the medium term. Given the country's rich mineral and natural resources and its export prospects once its transformation to a market-based economy is completed, these projected debt service ratios should not cause undue strain on the balance of payments. However, this assumes that the servicing of Mongolia's debt to the Soviet Union, which is large relative to the size of its economy, remains manageable. This assumption is itself based on the agreed understanding between the two countries that the repayment of this debt should not hamper Mongolia's economic development.

MONGOLIA

COUNTRY ECONOMIC MEMORANDUM

Main Sectors and Selected Issues

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COUNTRY ECONOMIC MEMORANDUM

MONGOLIA

Main Sectors and Selected Issues

This annex consists of a preliminary review of the main sectors of Mongolia's economy and of selected issues. It draws upon the still very limited literature available on Mongolia outside the former CMEA countries, on the work undertaken--and some still underway--by several bilateral and multi-lateral agencies during the past year (notably by the Asian Development Bank, the United Nations Development Programme and the United Nations Specialized Agencies), and on data and information gathered by the first World Bank economic mission. In the circumstances, it does not purport to present a comprehensive view or detailed analysis at this stage, but rather a set of sectoral notes as background to the overall report.

Agriculture

1. Despite industrialization, agriculture continues to play an important role in the economy, much greater than its 20 percent share in GDP implies. It is a key element in the social fabric, employing 93 percent of the rural population and 40 percent of the total labor force. It accounts for about 44 percent of total exports, mostly livestock products. Agriculture has important linkages with the rest of the economy and provides more than 75 percent of raw materials and other inputs for leather and shoe factories, wool processing mills, milk and bakery plants. The major agricultural activities are animal husbandry and crop farming. About 70 percent of agricultural value added comes from animal husbandry, the rest from crop production. Agricultural GDP in Mongolia shows significant year-to-year fluctuations because of severe variations in weather conditions. However, a rising trend is discernible and annual growth averaged 2.7 percent during 1986-90.

2. Until very recently, agriculture was centrally planned with the state fully responsible for production, supply of inputs, and distribution and sales of produce. The state owned all land, most livestock and virtually all farm equipment, and production was organized by 325 state farms and large cooperatives. Each year every farm was required to submit lists of machinery, chemicals and other inputs which were then aggregated to determine the sector's input needs. State orders were set for deliveries of meat, milk, wool and wheat by individual farms and cooperatives at government guaranteed prices. The inadequacies of this system did not emerge for many years since Mongolia's CMEA partners made up shortfalls in domestic output and provided markets for its exports. The rigidities imposed by central planning did not permit the full realization of agricultural potential and gave it little chance to respond to the diversifying preferences and needs of the population. Recent events have illustrated the agricultural sector's increasing inability to provide a year-round supply of basic foodstuffs, even milk and meat.

3. Against this background, and consistent with its overall objective to move towards a market based economy, the government plans to dismantle, and

privatize the state farm and cooperative system over a two year period. In 1992, mandatory state procurement will be eliminated and all output from the newly established private farms will be sold on the open market through agricultural commodity exchanges. Agricultural cooperatives will be transformed into companies, with existing members taking up shares, and their activities limited to the provision of extension, transport and veterinary services on a fee paying basis. Current plans call for 80 percent of livestock on cooperative land to be privately owned.

4. Livestock development has traditionally been the main agricultural activity in Mongolia. Since 1959, most livestock (72 percent) have been state-owned. However, limits on private ownership were abolished in 1990, some state-owned cattle were sold at low prices or given on long-term lease to smallholders, and the share of privately held animal stock rose to 40 percent. As a result, the total herd increased to 26 million in 1991, from about 22 million in 1987. The main animals are sheep, goats, cattle, horses and camels for their wool, hair, skin, meat, hides and tallow and smaller amounts of milk and butter. The main agricultural exports are meat, leather-goods, camel wool and cashmere.

5. Animal husbandry has remained largely pastoral and is very much dependent on environmental and climatic conditions. Improvements have been limited to providing winter shelter for stock, and water supply. There are no sophisticated methods to control endemic or parasitic diseases, although veterinary boards and laboratories have been set up in all aimaks and somons. Medicines are mostly imported. Yearly losses are often as much as 1 million newborn stock and almost as many adult stock; and, shortages of medicines led to an increase in the number of deaths by at least 100,000 in 1991. Owing to lack of incentives and poor pricing, productivity has been low and the potential of the livestock subsector has not been realized. For instance, average wool output is less than 2 kg per head. At mechanized dairy farms, the average milk yield is about 2,600 liters per cow annually and 1,200 liters in simple dairy farms. Meat production remained virtually stagnant during the 1980s and barely reached 498,500 tons in 1990, resulting in shortages. Milk production declined by 32 percent in the first quarter of 1991 compared to the first quarter of 1990, reflecting the lack of sufficient fodder. Egg output has also fallen by 10 percent during the first quarter of 1991.

6. Expanding crop production and bringing additional land under cultivation has been one of the major goals of agricultural policy. Following the 1959 virgin lands policy, there have been substantial increases in the production of wheat and other cereals, potatoes and other vegetables, hay and fodder. However, these increases mask low yields owing to the soil's low natural fertility and insufficient rainfall. There are 1.3 million ha under cultivation, of which 35,500 ha with irrigation in 140 systems. The average yield for cereals is only 1.1 tons/ha. In normal years, the country produces enough wheat and potatoes to meet domestic needs, but only one-third of its vegetable, fruit and fodder requirements. About 75 percent of crop output is produced on state farms. Poor pricing policies and state orders have hindered crop development and there is little diversification. The annual average output in the late 1980s was about 800,000 tons of grains, 150,000 tons of potatoes, 45,000 tons of vegetables and 500,000 tons of fodder.

7. The existing stock of agricultural equipment, all from the CMEA countries and mostly from the Soviet Union, includes 2,600 crawler tractors, 500 heavy tractors, 8,000 light tractors, 2,500 combine harvesters, and 2,000 reapers. The collapse of CMEA trade has created severe shortages of tires, spare parts, transmission belts and batteries, rendering 40-50 percent of the existing stock of equipment inoperative and seriously affecting production. Because of reduced harvesting capability, crop output was 14 percent lower in 1990, compared to 1989. Conditions deteriorated further in 1991 and it is estimated that as much as 25 percent of the year's crop may not be harvested. This situation also threatens the 1992 harvest. In addition, stocks of fertilizers (ammonium sulphate, triple superphosphate and potassium chloride) and other agricultural chemicals (herbicides and pesticides) are virtually exhausted and there were no imports at all in 1991; it is unclear whether the USSR, the traditional supplier, will be able to deliver Mongolia's normal requirement, which averages 72,000 tons annually.

8. Despite reforms, Mongolian agriculture is still characterized by overcentralized supply of inputs, and distribution and marketing of output. Privatization of livestock has made significant progress, expanding ownership of herds and, hence, decentralization. On the other hand, progress in privatizing agricultural land and crop production, apart from some lease arrangements, has been slow. Government ownership of the Agricultural Supply Service (ASS), traditionally the sole importer, supplier, and distributor of inputs, continues. ASS has recently been unable to fulfill its role because of the collapse of CMEA trade arrangements and its distribution network is not functioning. Moreover, within the Ministry of Agriculture there is no agreement on the future role and prospects of ASS. Hence, the provision and distribution of agricultural inputs is a major problem, the old central planning structures proving to be unsuitable for the task. The distribution and marketing of agricultural products is still to a large extent carried out centrally. Despite the government's declared policy to rely on market mechanisms, state orders for major agricultural products have not been totally eliminated and the central distribution system under the control of the Ministry of Trade and Industry (MTI) is still in operation. While it may not be possible to eliminate the existing distribution system quickly or completely, the government should start considering alternatives and allow the entry of private firms.

9. Pricing policies continue to hamper the development of agriculture by distorting the incentive structure and sending wrong signals to producers. Although the share of agricultural products procured centrally has declined in recent years, state orders for all important agricultural products at fixed prices are still in effect. Increases in farmgate prices in January 1991 were insufficient to stimulate supply. Despite a 15 percent reduction in state orders and increases in retail prices of between 15 percent and 300 percent, there is currently a shortage of meat. With a national herd of 26 million and only 2 million people, this is prima facie evidence of erroneous pricing policies and the inadequacy of recent reforms. The persistence of price controls on agricultural products is undermining the supply response and remains a barrier to the privatization of agriculture, especially the state farms and the crop lands.

10. Agricultural output is subject to harsh environmental and climatic conditions. Output levels fluctuate from year to year, causing shortages of basic foodstuffs. This contributes to Mongolia's dependence on imports of food. The nature of livestock production, an extensive pastoral system, limits intensive animal husbandry. With the pastoral system, year-round supply of fodder and feed is a problem and seasonal shortages are common. Facilities for drying of hay are inadequate or nonexistent. Hay is stored in the open without weatherproof covering, which results in deterioration and, in the event of unseasonable rains as in 1990, spoilage. Cumulatively, these factors significantly limit the realization of the genetic potential of livestock and, hence, reduce productivity. Crop production is also dependent upon environmental conditions. Irrigation systems are inadequate and only about half of the cultivated land can be provided with water. The freezing of surface water in winter is another constraint and leaves no option but the use of pumped underground water. Underground sources must, nevertheless, be developed to reduce the dependence on surface water and rain and occasional drought.

11. The seasonality of agricultural production has major implications for processing and storage facilities. In general, milk production is high in summer but low in winter, while the opposite is true for meat. Crop production is also low in the winter. The dependence of agriculture on climatic conditions and its seasonality imply that Mongolia must develop processing and storage capability to ensure that supply of foodstuffs is available on a year round basis. For example, milk production reaches some 312 million liters per year but, because of lack of storage capacity, large amounts are turned into butter, contributing to shortages of milk. Likewise, meat processing and storage facilities are insufficient. The centralized system of slaughterhouses, comprising three big abattoirs and 2 meat processing factories in the three main cities, make it difficult to process herds since animals must be walked for 200-1,000 km. from rural areas which takes months. With the capacity of these facilities limited to only 63,000 tons of meat per year, animals are often processed when their weight is well below their summer maximum, leading to output losses. Cold meat storage capacity is also low at 19,500 tons.

12. There are a number of other issues that the government should consider and start developing strategies for action. With total pastoral land remaining unchanged and an increasing herd, overgrazing may emerge as an environmental problem. The government declared that pastoral lands would not be privatized, but user fees or taxes to reduce overgrazing have not yet been introduced. Veterinary services are inadequate and of poor quality, leading to endemic parasitic animal diseases which lower livestock productivity. Intensive crop farming has reduced the quality of soil and increased the cultivated area subject to erosion. With privatization, there will be a need for legal reforms to avoid common property problems. A framework to develop land tenure arrangements, leasing, taxation, rules on livestock movements, and procedures for negotiation and arbitration need to be established. In order to increase agricultural exports, improved quality standards and control measures will be needed. Exports thus far have been restricted to the Soviet Union and East Europe. Countries with a broader range of choice are unlikely to accept Mongolian products, unless their quality is improved substantially.

### Industry

13. The industrial sector accounts for one-third of national income and employs around one-fourth of the total labor force. In terms of its contribution to GDP it is the largest sector. Industrial value added gradually rose from 29 percent of GDP in 1980 to 34 percent in 1990, reflecting increased investments in electricity generation, mining, forestry products, construction materials, metallurgy, and machinery. In 1989, heavy industry accounted for about 50 percent of gross industrial output. Light industries, including leather, textiles, carpet manufacturing, shoes, detergents and printing products, account for 25 percent of gross industrial output; food industries, including meat, flour, bakery and milk products, account for 20 percent.

14. Industrial development took the form of investing in state enterprises according to annual plan targets and priorities. The government provided budgetary funds and bank credit, supported by technical and financial assistance from the CMEA countries, particularly the Soviet Union. The government fixed and controlled domestic prices and tariffs. In some cases prices were cost plus, the margin providing state revenue; in others, they were subsidized. At the end of 1990, there were more than 400 large public enterprises, most of them making losses. The private manufacturing sector started to develop very recently but still remains very small.

15. The growth of gross industrial output was rapid during the first half of the 1980s, averaging about 9 percent annually. It slowed between 1985 and 1989 but was still high, averaging 5 percent annually. However, as a result of the developing economic crisis, it stagnated in 1990 and declined substantially during the first half of 1991. Lack of foreign exchange and resulting shortages of imported raw materials and spare parts caused a sharp contraction in all subsectors, ranging from 10 percent in electricity production to 76 percent in fluorspar output. Almost all factories are well below capacity and, in some, production has stopped. The restoration of economic growth will in the first instance require the full utilization of existing productive capacity which depends, to a large extent, upon the availability of foreign exchange.

16. Several structural problems hamper the development of Mongolia's industrial sector in line with its resource base. First, the organization and production structure is a key issue. Industrial and processing facilities in Mongolia remain heavily concentrated in a few areas and in a small number of enterprises. Concentrating industries in a few locations can have advantages and disadvantages. Economies of scale, reducing transport volumes, and central administration are potential advantages that probably led to the current structure. However, these are limited in industries processing items widely available throughout Mongolia and whose output is mainly for domestic markets. Such is the case for construction materials and livestock products. Establishment of processing plants in the countryside seems to be desirable and requires the encouragement of private sector involvement. Although large size plants located near to the workforce may be able to continue to operate, new policies should foster the relocation of industries and a reduction in their size. Several existing industries require substantial technological upgrading, and for some this may not be economically viable or as good a solution as

new installations and processing methods. Small new processing industries serving, at least initially, domestic or local markets could well have the highest growth potential. For export products, transport costs will be an important consideration in selecting locations and the extent of processing of manufacturing plants.

17. Second, Mongolia's industrial sector is inefficient, characterized by capital intensive industries with outdated, inefficient technology and heavily dependent on imported inputs. The capital/output ratio steadily increased between 1940 and 1990, indicating the capital-intensive nature of investment. While this policy might once have been desirable to import technology, the present number of uncompetitive enterprises and their low productivity suggest that past investment has not been efficient. Since the productivity of key industries influences the efficiency of the whole economy, this is a source of concern. In order to compete internationally, Mongolian industries will need to improve their efficiency and cost-effectiveness.

18. The government's technology modernization program identifies as priority areas the following industries: export products based on domestic raw materials; mining; construction materials; chemical industries (e.g., phosphatic fertilizers) using domestic resources; copper products; and other metal products. However, the program raises important questions and appears inconsistent with the overall strategy of economic liberalization and privatization. For example, it calls for modernizing state-owned enterprises that are to be privatized, on the one hand and, on the other, states that the public sector should minimize its investments in industry. In addition, investing in some of those enterprises may not be economically viable. Moreover, the source of financing for new investments to upgrade technology is not clear. In the past, 70 percent of investment was externally funded but these sources are no longer available. More importantly, if state-owned enterprises are to be privatized, the government should allow their new owners to restructure them as they deem appropriate.

19. Other aspects of the program seem, in general, to be appropriate. The government correctly emphasizes the need to foster the development of export-oriented industries to generate economies of scale, given the limited size of domestic markets. It is expected that medium and large firms using domestic raw materials will develop as joint ventures, to import technology and gain access to international markets. The government has adopted a liberal policy in approving joint ventures. With such a policy, it should also be possible to reorient manufacturing towards higher value-added goods, which in turn would help to improve the terms of trade.

20. The government also has a small- and medium-sized enterprise program (SME), which seems to be very desirable given the size of domestic markets and the need for private sector development. The Ministry of National Development has formulated an initial policy which attempts to address such questions as the appropriate technology for SMEs and how technological renovation would be undertaken. Responsibility for the program lies with the Ministry of Labor, reflecting the government's interest in its employment creation potential. The government contemplates special financing and incentives.

21. Decentralization and small and medium enterprise development should reduce production and distribution costs, if transport constraints can be alleviated. Eventually, the process would also lead to lower consumer prices. Unemployment in the larger cities should encourage some to accept employment in rural industries. The realization of the above benefits, however, will require successful coordination of the SME program with other reforms and a streamlining of its present multi-ministry management to facilitate coherent and efficient implementation. An important issue that needs to be addressed is the efficient allocation of credit. While the government itself is proposing to provide funds, this seems inconsistent with the authorities' stated privatization goal. The role of the banking system in SME development should be promoted, including technical assistance to help the newly emerging commercial banks develop skills to appraise projects.

22. Another efficiency issue relates to the foreign trade tariff rates. The location of Mongolia, the current exchange rate, and the present tariff provide sufficient protection for industry to exploit existing import substitution possibilities.

23. Third, privatization and enterprise management are important issues. The privatization program which, apart from reducing the role of the government, aims at restructuring the industrial sector to increase efficiency and competition seems to have slowed significantly. The privatization process will last three years, but it is not clear how enterprises will be managed in the process. So far, enterprises have been able to cover their losses and finance their credit needs by borrowing from banks, one of the main causes of credit expansion. While not adding to the budget deficit directly, this contributes to public sector borrowing and risks crowding out the private sector. While enterprises remain in the public sector, hard budget constraints must be imposed and their access to unrestricted bank credit curtailed. The fate of loss-making or failing enterprises remains uncertain. If the government does not allow bankruptcy to take care of them, it should make every effort to ensure that they operate on a commercial basis.

24. Fourth, education of management and labor is an emerging issue. For the transition to a market economy, Mongolia does not have enough managers knowledgeable of and experienced in the functioning of the market. While it has a well educated labor force, its educational system and curricula in technical and business-related higher education require reorientation. Simultaneously, an economy-wide intensive retraining of workers and managers in new technologies and company management under competitive market conditions is needed. This will require innovative practices to blend diverse technologies, since new and old ones will have to coexist during the transition.

Energy

25. Electricity, generated with domestically-mined coal and imported diesel fuel, is the principal source of energy in Mongolia. It is also a major industrial subsector, accounting for about 11 percent of total industrial value added (equivalent to 2.5 percent of GDP in 1990) and employing about 16,000 people. As a result of the government's industrialization policy, investment in electric power has been high, about 30 percent of total industrial investment during the 1980-89 period. Consequently, electricity supply doubled between 1980 and 1988, expanding at an average annual rate of 9 percent. Despite this rapid increase, Mongolia imported electricity from the USSR equivalent to 8 percent of total consumption between 1986-90. During excess supply periods, Mongolia exports electricity to the Soviet Union, but the amount is small. Average per capita consumption was some 1,375 kWh in 1990, comparable to middle income countries, although about one-fourth of the population, mainly in the rural areas, remains without electricity. In 1990, industry accounted for about 90 percent of total consumption and residential and office use for the rest.

26. Mongolia's total installed generating capacity is 845 MW but dependable capacity is around 800 MW. Electricity is produced by two distinct systems. The Central Electricity System (CES), consisting of 5 coal-fired thermal plants with a capacity of 690 MW (3 in Ulaan Baatar, 1 in Darhan, and 1 in Erdenet), accounts for about 80 percent of total installed capacity and 87 percent of electricity generated (3,000 GWh in 1990). It is connected to the Soviet grid by a 220 kV line to Irkutsk. The CES covers 30 percent of Mongolia's territory and supplies electricity to the 3 main cities and to 6 aimaks where 50 percent of the population live. The 5 main stations are Soviet designed, use obsolete technology, and are inefficient. Their estimated gross efficiency is less than 60 percent, with high own use (almost 20 percent) and high transmission and distribution losses (almost 13 percent). Losses in the heating distribution system are also high, given extensive above-ground and poorly insulated pipelines. The CES is currently profitable despite its inefficiencies, and tariffs covered costs amply in 1990. Increases in 1991, the first since 1960, were short of the general price doubling but nevertheless brought tariffs to T0.35 for industrial use and T0.50 for residential use.

27. The decentralized electricity production and distribution system comprises diesel powered generators in 11 aimaks with an installed capacity of 119 MW and a 36 MW coal fired plant at Dornod. In 1990, this system generated about 400 GWh or 12 percent of domestic production. All the equipment is of Soviet and Czech origin. The costs of the decentralized system are higher and, while these are passed on to industrial users, residential users pay the same as CES users. The resulting subsidy is the largest in the 1991 budget, accounting for more than 50 percent of total subsidies.

28. The collapse of CMEA trade and the economic crisis have seriously affected the supply of critical spare parts and of coal, leading to energy shortages, especially during the past year. Since January 1990, forced outages have resulted in direct losses of 372 million kWh, or \$18 million valued at the Soviet electricity import price, and necessitated lower capacity

utilization. Average utilization was 61 percent in 1990 and 38 percent during the first 8 months of 1991. For the whole year, it is expected to reach 51 percent. As a result, gross generation declined 3 percent in 1990 and by about 10 percent during the first 8 months of 1991, compared to the same period last year. The decentralized system is also operating at only 50 percent capacity because of shortages of spare parts. Unless critical spare and replacement parts and diesel generators are available, electricity supply is likely to decline further in the coming winter months with serious consequences for industrial production and for the population. Action to ensure full utilization of existing capacity and elimination of electricity shortages is the critical short-term issue.

29. The most important longer-term issue is capacity. By the end of 1993, existing capacity and imports from the USSR will probably be insufficient. The Ministry of Energy estimates that electricity demand will more than double by the year 2000. In the circumstances, the development of a 600 MW mine-head power station at Baga-nuur to feed the central grid is a priority in investment plans. The 80 MW plant presently under construction at Ulaan Baatar should also be completed.

30. While coal is the lowest-cost energy source and its use is appropriate for electricity generation, the government should use the opportunity provided by the need to expand capacity to diversify Mongolia's power generation sources. The potential for hydropower, for example, should be part of energy policy. While there is a proposal to build a hydropower plant in the northwest, and to connect the Mongolian and Chinese grids, its feasibility is not yet determined.

31. Overhaul and upgrading of the existing power plants and distribution network will be needed to reduce inefficiency and pollution and to improve conservation. However, it will be important to take into account the availability of coal in determining such improvements. For instance, the third power plant in Ulaan Baatar uses coal from a nearby mine that is currently experiencing high extraction costs and whose coal type is somewhat different; plant rehabilitation may not be as cost-effective as installing new capacity elsewhere. Coal or hydropower-based plants in some western aimaks which now use diesel-based generators, if justified by load densities, might reduce costs and increase efficiency. With demand approaching capacity and given the lead time required to construct new plants, energy conservation should be high on the agenda. The need to improve energy efficiency in the industrial sector is particularly acute.

32. The greatest contribution to efficient energy use and conservation is sound pricing. Energy pricing policies need to be reviewed and adjusted to reflect full costs and to encourage conservation. Tariffs cover costs only because the price of domestic coal is low and does not reflect international prices. Electricity pricing is not based on long run marginal costs (LRMC) and does not reflect the true resource cost of electricity to users. The authorities should estimate LRMC and price electricity accordingly and, to promote conservation, introduce peak load and progressive tariffs. The government might also wish to review tariffs for the diesel-powered systems in aimaks, which have a large subsidy element.

### Mining

33. Mongolia is well endowed with mineral resources, with over 600 known deposits and more than 80 types of minerals. Large-scale mining is concentrated on copper, coal, fluorspar and molybdenum. Silver, gold, tin, tungsten, and precious stones are mined in small-scale operations. There are also 170 deposits of construction materials, such as granite and marble, of which 35 are now being extracted and 90 are in the process of development. At least one uranium mine is under exploitation in Dornod aimak. While there is significant potential for large scale development of these resources, the inadequacy of infrastructure, including power, transportation and communications, is a major constraint.

34. Meanwhile, the government has been reviewing its mineral development policy. A new Mining Law is being drafted to formalize licensing, royalties and repatriation and a Foreign Investment Law and a Petroleum Law have already been enacted to attract and support investment by foreign companies. Mining operations, however, are to remain fully or majority--owned by the state. Given the monopolistic nature of mining and energy supplies, the government proposes to continue to regulate the prices of fuels, coal and other minerals.

### Copper

35. The largest mining undertaking in Mongolia is an open pit copper mine at Erdenet. It produces 360,000 tons of copper concentrate and 3,300 tons of molybdenum concentrate annually. Until recently, it produced exclusively for the Soviet market and accounted for 40 percent of Mongolia's total export revenues. It is well equipped with modern technology and operates efficiently. The government, however, needs to address two crucial issues, one technical and the other financial: Erdenet's dependence on one source--the Soviet Union--for spares, energy and markets; and, the exchange rate to be applied to mining operations.

36. The risks of the former have been illustrated by Mongolia's recent experience. While there is no easy solution to the energy problem, one approach would be to develop additional domestic capacity, preferably hydro-or coal-based. With small shipments to Japan in 1991, market diversification has already started. Diversifying the suppliers of spares might be difficult but not impossible. The exchange rate question, as in most mineral-based economies, involves establishing a rate that is not too overvalued for non-mining activities while, at the same time, keeping a hard budget constraint on mining enterprises in order to ensure their cost effectiveness. The government has been trying this through a two-tier exchange rate, but this is not an efficient approach. It would probably depress the mining sector and create dual factor markets. On the other hand, a unified exchange rate at a level just satisfactory for mining might hamper development of other sectors. A more appropriate policy would be to accord a competitive edge to efficient non-mining domestic industries accompanied by appropriate royalties, depletion allowances and income surtax to capture excess profits of mining enterprises.

Coal

37. Coal is the main primary energy source for electricity production and the most intensely mined natural resource in Mongolia. Coal mining is also a major industrial activity accounting for about 4 percent of total industrial value added and providing employment for 4,400 people. CES power stations and the power station at Dornod are the largest consumers, accounting for 61 percent of total coal output in 1990; industry and construction accounted for 13 percent; communal and public services 10 percent; and, exports to the Soviet Union 7 percent (1990). Coal production increased steadily during the 1980s; it peaked at 8.6 million tons in 1988, but declined to 8 million tons in 1989 and 7.2 million tons in 1990. The declining trend has continued during 1991 and, by end-September, output was only 5 million tons. For the whole year, it is expected to reach only 6.5 million tons, well below historical consumption levels. This means that there will be a shortage of up to 1 million tons during the 1991/92 winter, which will seriously affect electricity generation.

38. Mongolia's total coal reserves are estimated to be 100 billion tons, one of the largest in the world. Most deposits are of relatively poor quality (2,400-5,100 kc/kg calorific value), ranging from high moisture brown coal/lignites to relatively high ash bituminous coals. The exception is the Tavan Tolgoi mine; although currently small (100,000 tons annually), it produces coking coal at the site of a huge (1 billion tons) coking coal deposit that has a 20 mtpy production potential, 10 million tons of coking coal and 10 million tons of thermal coal. All coal in Mongolia is low in sulphur, less than 1 percent.

39. There are 16 coal mines in Mongolia, excluding a new mine (Shive Ovoo) currently under construction, which is expected to start production in 1992. All mines are owned and operated by the Mongolian Coal Corporation (MCC) or Mongol Nuurs under the Ministry of Energy. The 14 open pit mines account for 95 percent of total supply, with the two largest mines at Baganuur (4 million tons annually) and Sharyn Gol (1.6 million tons annually) accounting for over 70 percent. None of the remaining 14 mines (only 2 of which are underground) produces more than 0.5 million tons annually, and the annual output of 10 local (aimak) mines averages only 10,000 tons. The 2 main mines supplying the thermal power plants are fully mechanized and the level of technology is relatively modern. Equipment, all Soviet-made and imported, is comparable to that in western open pit mines. However, productivity of capital stock and labor is low, owing to insufficient spare parts, auxiliary equipment, and bulldozers as well as shortages of explosives and other consumables. In some mines, productivity has declined owing to increasing stripping ratios, most visibly at the Sharyn Gol mine which reached around 5m<sup>3</sup> overburden per ton.

40. The breakdown of CMEA trade has seriously affected the coal sub-sector. Since late 1989, procurement and delivery of replacement equipment, spare parts, explosives, fuels, lubricants and batteries have become increasingly problematic and disrupted coal production, resulting in significant output losses. The situation worsened in 1991 and, because of increasing shortages of key imports, the availability and utilization of existing equip-

ment have been declining. Particularly affected is specialized mine transport equipment (dump trucks and bulldozers), whose availability declined by as much as 60 percent. In addition, in mid-1991, 13 of 40 (40 ton) and 6 of 25 (27-ton) dump trucks had exceeded their economically useful life and are inoperative. This is reflected in declining overburden removal, which was 26 percent lower at Sharyn Gol and 42 percent lower at Baga-Nuur than the planned amounts.

41. Production costs in the open pit mines range from T25-75 per ton, which are extremely low by international standards, reflecting low labor costs and the degree of mechanization and capitalization. Following the June 1991 devaluation, imported material and labor costs will probably increase, although not pro rata, and will remain very low by international standards. Coal prices range from T110-204 per ton, depending upon the calorific value, which is well below international levels and the opportunity cost of imported coal. However, this price range covers production costs and all open pit mines are financially viable, except for Sharyn Gol which is marginal at present prices. The Nailakh underground mine with production costs in excess of T300 per ton is not viable but, because its reserves are nearing exhaustion, will continue to be subsidized in order to minimize the socioeconomic consequences of closure.

42. Given the importance of coal to Mongolia's economy, a balanced strategy will have to be developed. Equipment and operations at existing mines need rehabilitation for continued economic exploitation. On the other hand, exploitation of new mines may need rail links and, if so, their costs will have to be included in their economic analysis.

### Transport

43. Despite rapid industrial development, Mongolia's transport infrastructure remains seriously inadequate. This hinders the flow of factors of production and distribution, the availability of commodities and the development of internal markets. It is also likely to hamper domestic and foreign private investment, once the country recovers from its present crisis. Given the size of the country and its widely-spread resources (including population), the development of transport and communications will be a challenging and difficult task. The transport sector grew relatively rapidly during the 1990s, averaging 9.5 percent annually. In 1990, it accounted for 10 percent of GDP and employed about 48,000 people.

44. Ulaan Baatar, the capital, is the main generator of traffic; the corridor north to the USSR border is the most intensively used. Darhan, the second largest city, is about half way along this corridor, at the junction with a branch to the west that serves the third largest city, Erdenet. These three cities account for about 35 percent of the population and most industrial activity. Population densities in the rest of the country are very low, averaging less than one person per km<sup>2</sup>. Outside this main corridor and its extension to the southern border with China, the transport network is rudimentary, comprising low standard roads, some navigable rivers, one rail line to the USSR in the northeast, and a number of low standard airports.

45. Personal mobility by modern means is low. Many individual trips in the countryside are on horseback; although motorized road transport is also used, no good records are available. Total inter-city travel is under 1,000 km per person annually; this compares to 550 km in China and 6,000 km in Japan. Freight intensity is high in the areas served by the main rail line, and low elsewhere. Some 75 percent of the country's freight moves by rail. Almost half comprises domestic coal, most of it to the main power plants in Ulaan Baatar. Foreign trade accounts for most of the balance of rail traffic, comprising imports of consumer and industrial goods and fuel and exports of copper concentrate and manufactured or semiprocessed animal goods. Roads carry the remaining 25 percent of freight, of which more than half is construction materials. Average freight in Mongolia is about 3,400 ton/km per person annually, compared to 1,000 in China, 3,700 in Japan, and over 15,000 in the USSR.

46. Freight transport flows in the future are likely to change as trade is increasingly routed through China, rather than the USSR, and as industrial decentralization results in smaller plants being established throughout the country to serve nearby populations, thereby reducing transport intensity. Improving power plant efficiency could greatly reduce the need for coal transport--perhaps by one-third; and, increasing the concentration of copper ore at extraction points could eventually also reduce freight volumes. Overall, however, transport intensity is likely to increase with economic growth and selective modernization is needed throughout the system.

### Railways

47. The railway has some 1,800 km of track and an additional 200 km of shunt-lines and side tracks. The gauge is the same as in the USSR, but wider than in China. Gradients up to 2 percent and many bends limit train weight and speed. Wooden sleepers are used but, because they are not chemically treated, have to be replaced every 6-7 years. Signalling and telecommunications systems are insufficient. The rolling stock comprises Soviet-made locomotives and wagons. Repairs used to be undertaken in USSR facilities but are now carried out in two ill-equipped depots in Mongolia; spare parts and fuels, imported from the USSR, are in short supply. In 1990, the railways transported 14.5 million tons and 2.5 million passengers, which is below its capacity. Domestic traffic accounts for 8 million tons, of which 80 percent is coal, mainly for the power stations. Trade with the USSR accounted for 6 million tons, exports for 2.5 million tons and imports for 3.5 million tons. Transit traffic was about 1 million tons, one-third of the level in the mid-1980s, and is expected to be about 100,000 tons in 1991. In early 1991, traffic was only about 70 percent of 1990 levels. The railway is a Mongolia-USSR joint venture with equal ownership. It was built by Soviet construction organizations and financed with USSR loans. It has regularly shown an operating profit; however, most profits were distributed to the 16,000 employees providing an average 25 percent wage supplement in the form of housing, schooling and medical allowances.

48. The Trans-Siberian route through the USSR has recently encountered problems and its costs are high. Internal problems in the USSR have resulted in shipments taking 3 months or more between Mongolia and Europe, and sometimes getting lost altogether. Freight costs \$1,800 per TEU. The route north and east to Vladivostok or Nakhodka, over 2,000 km away, also takes some 3 months. The route south across China is much shorter, some 1,000 km from the border to the port of Tianjin, but was little used until recently. Transit is hampered by the gauge differential and inadequate transshipment facilities. Wheels under passenger wagons are changed relatively quickly, but freight is reloaded manually. The lack of equipment for handling is particularly cumbersome for bulk cargos and containers and results in unpredictable waiting times. Freight costs \$680 per TEU to Tianjin.

49. Improved transshipment is essential to facilitate Mongolian exports and imports through China, the shortest land route to the sea and to Asian markets. One proposal is to build a reloading facility in Mongolia with an annual capacity of up to 1 million tons at Zameen-Uud, close to the Chinese border but in the harsh Gobi desert; another proposal envisages extending the Chinese gauge into more hospitable terrain in Mongolia; a third consists of improving the existing facility in China, through a joint-venture. The latter may be the more economical solution, but will require Mongolian investment in China.

50. The railways need a wide range of modernization projects to reduce operating costs. Examples of such projects include the following: to renovate the wagon fleet, thus lowering traction costs; to introduce automatic telephone and cargo control systems (UNCTAD has proposed instituting the ACIS wagon tracking module); to provide staff training in modern technologies and

practices, and to establish cooperative ties with other railways in nearby countries; and, to establish, probably in the private sector, small scale facilities for repairs and supplies, e.g., concrete sleepers, crushing stone, renewal and planing of wheels.

51. International documentation, insurance and claims, chartering and other practices are all new to Mongolia and will have to be learned. As a first step, the government established a national freight forwarding company, TUUSHIN, in 1990 with help from UNCTAD/ESCAP. The company deals with container shipments; so far it handles imports only, some 20 TEUs per month, but expects to begin handling exports and to build up a multimodal service. It is building 4 container stations near rail lines and will need to invest in equipment and in staff training.

#### Road transport

52. Despite its large territory, Mongolia has only 42,000 km of main roads--an average 27 m per km<sup>2</sup>--of which only 1,300 km are paved and most in poor condition. State roads, connecting the aimak centers, account for about 10,000 km. In the past, 50-60 km were added to the main network annually, half the road budget; the other half was used for road maintenance. Standards are low due to a shortage of resources and of mechanized methods, and poor initial construction. Roads are the responsibility of the State Roads Corporation and its agencies in each aimak and their funding comes partly from a tax on the sale of fuel products. Traffic volumes are light, increasing near the main cities. It is estimated that 70 percent of freight tonnage is carried by road, although only 25 percent in terms of ton km. The motorized vehicle fleet comprises 40,000 units, of which 27,000 trucks, 2,500 buses, 6,000 cars, and 4,000 agricultural vehicles, mainly tractors. There are also more than 10,000 trailers. Some 70 percent of the fleet is more than 6 years old; about half the trucks have run more than 500,000 km. Most trucks are 5-ton vehicles and fuel inefficient. Vehicle shortages have recently been aggravated by lack of spares, tires, and batteries and about 30 percent of the bus and truck fleet is currently inoperative.

53. There are five agencies responsible for inter-urban passenger and freight transport. The seasonality and directional imbalance of traffic--70 percent of freight is distributed from Ulaan Baatar and the rest goes to Ulaan Baatar--increases transport costs, especially for long distances. Each aimak has its own transport company for shorter distances and their privatization is planned in the near future. Tariffs are currently officially set; the city tariff covers only 80 percent of costs.

54. While long distance transport companies will probably remain under government ownership for the foreseeable future, single aimak transport enterprises have already been divided into smaller units to facilitate privatization. There are now about 80 companies with 200-500 vehicles each and many smaller ones, with 50-200 vehicles. In all, 70 percent of vehicles are to be privatized through the coupon system or outright sales. The taxi service in Ulaan Baatar has already been privatized. Many trucking companies have their own repair shops. Transport tariffs were not doubled together with other prices in January 1991 and this has worsened the financial performance of

transport entities. Tariffs will have to be liberalized if privatization is to be successful, and if excessive subsidies are to be avoided for non-privatized enterprises.

55. Vehicle replacement is a very high priority. This would achieve fuel savings of at least 25 percent which is extremely important because a large proportion of export earnings is for imported fuel. Vehicle imports are no longer restricted other than by lack of foreign exchange, and Mongolia should start importing more efficient types. Vehicle choice and investment should be largely in the hands of the private sector, except for long distance passenger transport companies. Improvement of vehicle repair shops is also important; many lack adequate equipment.

56. Low population densities and related low traffic volumes cannot generate adequate returns for most road upgrading; nevertheless, paving some road sections may be economically justified. The Transport Department has prepared a network development scheme that is clearly too ambitious, including the building of 1,200 km of paved roads before 1995 and a further 2,000 km between 1995 and 2000. A road master plan is being prepared with ADB assistance to identify priorities, as well as feasibility studies for 4 links: Erdenet to Darhan, 180 km; Ulaan Baatar to Baga-Nuur, 90 km; Urhangay to Kar Khorum, 80 km; and Kar Khorum to Tsetserig, 130 km. The studies are to be completed by end-1992.

57. Construction capacity should not be a constraint for road development. The law allowing foreign companies or joint ventures to operate in Mongolia will facilitate the transfer of modern technologies and provide training for existing construction workers. The road agency has little experience with bidding and will need to develop procedures to that effect. Improving road maintenance should also be economically justified. Obsolete equipment and technology need replacing, and staff need training in modern techniques. A road-user charge study should be undertaken to determine whether road users are contributing enough to cover marginal costs.

#### Air transport

58. With a vast territory and low population densities that cannot justify high standard surface networks, long distance passenger transport within Mongolia is mainly undertaken by air. The number of passengers has grown at about 5-6 percent per year over the last 15 years. In 1990, about 774,000 passengers were carried an average distance of 700 km. Air cargo has been decreasing in the last three years along with declining trade volumes (both foreign and domestic) and was less than 11,000 tons in 1990, of which almost half was luggage and mail.

59. Mongolia has an extensive domestic network linking the 21 major population centers and 160 smaller centers throughout the country. There are 5 asphalt-concrete surfaced runways. Ground equipment is up to 30 years old. The Civil Aviation Authority oversees the aviation subsector, but the airline company (MIAT) is responsible for airport management.

60. MIAT (Mongolia International Air Transport) is the sole domestic carrier. It has about 70 aircraft (45 12-seater and 16 50-seater) but less than 50 are normally operational and most more than 15 years old. MIAT's facilities are minimal and it lacks a hangar for repairs and maintenance. Staff has been increasing and is now about 1,500. International air transport is less developed: in 1990, 50,000 passengers were carried, compared with 20,000 in 1987 and only 12,500 in 1980. There are direct links only with Irkutsk, Moscow and Beijing, served by AEROFLOT and MIAT (with an aircraft leased from Aeroflot). China's CAAC introduced flights between Beijing and Ulaan Baatar in August 1991. Other international carriers are reportedly considering establishing air links with Mongolia, although Ulaan Bataar's airport ground facilities are below international standards. MIAT showed an overall operating profit of T34 million in 1990. MIAT joined ICAO in 1989 and sets international tariffs as well as ground fees in accordance with IATA's procedures. Domestic tariffs, however, do not cover aircraft replacement cost.

61. The government intends to keep civil aviation under public ownership. Its immediate concern is that MIAT is currently hampered by shortages of imported spares, and many aircraft are not operational. Beyond immediate repair needs, MIAT needs to modernize its fleet and improve ground facilities. It is evaluating the use of Fokker 100 and other aircraft for domestic routes, and the building of a hangar for repairs and maintenance. It has ordered 2 Boeing 757s, although a leasing arrangement, a joint venture, or permitting other airlines to increase service may be more appropriate in the short term. Tariff increases will also be needed.

62. Ulaan Baatar's airport will need to be upgraded to handle the expected increase in international traffic. However, an UNCTAD report indicates that the runway is not well situated and that geography limits the types of aircraft that can use it. The government is therefore considering converting a military airport at Nalaikh, some 50 km from Ulaan Baatar, to commercial use. Nalaikh would require the building of terminal facilities. Two other military airports could also be converted to civilian use.

Telecommunications

63. Telecommunications are obviously of increasing importance as Mongolia transforms itself into a market economy. The country's low population density and vast territory also make telecommunications indispensable to the integration of domestic markets. Moreover, telecommunications are key to the development of information-intensive industries such as banking, trading and tourism, all of which the government hopes to expand.

64. Telephone density in 1991 was 3.4 per hundred population (up from 2.5 per hundred in 1980), which is high compared to other countries at similar levels of development and most likely a function of Mongolia's high urbanization rate (40 percent of the lines are concentrated in Ulaan Baatar). Exchanges with varying capacities of 300-2,000 lines are located in aimak centers and some of the somons. Total exchange capacity in 1991 was 76,600 lines. Combined domestic and long-distance traffic in 1989 was 19.2 million minutes, compared to 10.9 million minutes in 1980. Exchange lines are fully utilized and the waiting list in 1990 was estimated at 53,000, of which 80 percent in Ulaan Baatar. A contract with a French supplier was recently signed to install 20,000 additional lines in Ulaan Baatar by 1992. The new lines, however, will be digital, while the existing lines are analog, and the technical issue of interconnection requires resolution. Local charges for official lines are T68 (\$1.70) per month, and for residential lines T20 (\$0.50) per month. Installation and transfer charges for official and private lines are T250 and T120, respectively.

65. Telegraph services are provided through teleprinters in post and telecommunications offices. Telex services are not available domestically. International telephone services are available to the USSR via Intersputnik, to China via an open wire system, and to Hong Kong via Asiasat. They are handled semi-automatically, and the quality of service suffers from noise, echo and long waiting times. In 1991, a transit toll exchange will be installed in Ulaan Baatar, but this will not be compatible with existing analog exchanges which have no billing devices.

66. The Mongolian Telecommunications Authority (MTA), a government agency, oversees telecommunications, posts and broadcasting. It controls the Ulaan Baatar telephone exchanges and the domestic trunk network directly, while operational authority for local exchanges rests with the aimaks. Revenues accrue to the central or aimak governments and funds for operations and investment are allocated through the budget. MTA's total revenue in 1990 was estimated at T92.3 million, of which long-distance telephone services and leased lines accounted for 73 percent, local charges 16 percent, and telegraph services 7 percent; expenditure was estimated at T39.6 million, of which 57 percent was for operation and maintenance (including depreciation) and 39 percent for wages.

67. Priority issues for telecommunications include the following:

- (a) alleviating congestion and improving the quality of both domestic and international service through increased capacity, the replacement of obsolete equipment and new technology 1/;
- (b) organizational restructuring to make the government responsible for policy formulation, a new autonomous company responsible for operating telecommunications services, and an independent agency for the regulatory aspects of telecommunications services (and broadcasting);
- (c) improving sector planning that incorporates both financing and technology. In addition, coordination is required to ensure that digital switches and digital microwave lines are planned in an integrated manner that allows direct dialing and avoids costly interfaces and problems of inter-exchange signalling and numbering;
- (d) financing for expansion and improvement of the network including a review of the appropriate level of charges including the introduction of local call charges; and
- (e) training of human resources in the telecommunications sector, particularly in areas where new technology will be introduced, business management, financial analysis and investment planning.

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1/ In this connection, the government is considering the following projects: (i) an Intelsat Standard A earth station (with Japanese assistance) to improve international communications; (ii) one earth station and the installation of 100 domsat stations using Asiasat to improve domestic communications, telecommunications and broadcasting (a \$4 million contract for this project has been signed); (iii) installation of switching equipment from the Republic of Korea.

Human Resources

68. Despite its low population density, vast territory and significant nomadic population, Mongolia has made substantial progress in health and education, with coverage extending to the rural population. Currently, most services are provided either free or at nominal cost. However, despite adequate access, there is much scope for improving the quality and cost effectiveness of services.

Education

69. The main features of Mongolia's education sector are: adult literacy of 97 percent; high enrollment ratios; compulsory free education <sup>2/</sup>; education's high share (14.2 percent) in the budget; and narrowly-focused technical, vocational and tertiary education curricula typical of centrally-planned economies.

70. The formal education system consists of: kindergarten; basic education (primary and secondary); and, post-secondary education (vocational schools, technical schools, colleges and universities). Gross enrollment rates are as follows:

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	Age group	Gross enrollment rate (%)
Kindergarten	3-6	28.5
Grades 1 - 3	7-9	100.2
Grades 4 - 8	10-14	94.2
Grades 9 - 10	15-16	45.7

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71. Primary education consists of grades 1-6, generally covering students aged 7-12. Secondary education comprises grades 7-10. Currently, "eight-year schools" and "ten-year schools" coexist, offering two and four years of secondary education respectively, in addition to primary education. In June 1991, a law providing for ten years of basic education was introduced, with the intention of converting all "eight-year schools" into "ten-year schools." Utilization rates in primary and secondary schools are high. The secondary school utilization rate was 1.52 in 1990 (289,800 places for 440,899 students). There are morning and afternoon shifts using the same classroom facilities. However, about 10 percent of students were studying in classrooms rated as being in poor condition. About 15 percent of students stay in dormi-

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2/ Kindergarten, primary and secondary education are provided free while 80 percent of post-secondary students receive scholarships. Students must pay for textbooks which are distributed at a subsidized price of T15-20 per book. About ten textbooks are used during the school year.

tories in aimak and somon centers. Dormitory facilities, however, are inadequate; there were 117 students per 100 beds, and about 9 percent of beds were in dormitories rated as being in poor condition.

72. The government recently decided to re-introduce traditional Mongolian script by 1994, replacing the Cyrillic alphabet in use since the 1940s. Courses teaching the Mongolian script to children and adults have already started. Script conversion will require the reprinting of all teaching materials, as well as the retraining of teachers, and the substantial cost implications will need to be taken into account in reviewing the financing of education.

73. Post secondary education. Mongolia's five universities 3/ had a combined enrollment of 16,900 in 1990. Enrollment has declined from peak of 26,000 in 1983. In addition, there are two teacher training colleges for primary school and kindergarten teachers. Tertiary education is to be decentralized and will be subject to a fee. University branches and technical schools in aimak capitals are planned and a few for agriculture and medicine already exist. Local governments are to be responsible for managing and financing local schools in the future.

74. In 1990, there were 31 technical schools with 18,476 students, 44 vocational schools with 29,067 students, and 26 vocational secondary schools with 20,825 students. In addition, the Ministry of Education has recently established new institutions to teach economics under a market system: the Business College and the College of Market Economy. In the past, a significant number of Mongolians received post-secondary education in the Soviet Union and Eastern Europe, but this has recently slowed to a trickle.

75. Priority issues in the education sector include:

- (a) reforming the education curricula consistent with the human resource requirements of a market economy. This applies particularly to vocational, technical, and tertiary education;
- (b) improving the quality of teacher training and educational materials. The technical content of textbooks, in particular, requires updating;
- (c) increasing the cost effectiveness of education services. While low population density results in high education costs, some savings may be possible. There may be scope for consolidating facilities or classes, especially at higher levels of education. The proposal to establish university branches at the aimak level may have to be reconsidered;

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3/ The universities are: Mongolian State University, Pedagogical University (including institutes for foreign language, in- and pre-service teacher training), Medical University, Agricultural University and Technical University.

- (d) introducing a system of sector-wide investment planning and financing, including user fees for technical, vocational, and tertiary education.

### Health

76. The health sector is characterized by: a very young population (over half is under the age of 18); a high fertility rate, owing to earlier government policy encouraging large families; free provision of medical service; and generally adequate coverage of health services. Life expectancy is quite high at 62 years for males and 66 for females, and compares favorably to other Asian nations. The population growth rate was 27.7 per 1,000 persons in 1990. Access to health services compares favorably to other Asian countries. In 1990, there were 23 physicians, 89 medical personnel and 120 hospital beds per 10,000 population. Immunization coverage of one-year olds was over 85 percent for the main diseases.

77. Health service infrastructure is relatively well developed. Feldsher units provide care in rural areas. The somon (district) level is served by a hospital with 15-20 beds, two doctors and an ambulance. At the aimak level, facilities comprise a hospital with 200 beds and ten doctors; surgery and dental care are also provided at this level. Ulaan Baatar has specialized hospitals equipped to perform operations such as heart surgery, and research. Hospital stays are free of charge; outpatients pay for their medicines. While at first glance the health sector seems adequately provided for, problems remain. These include: a wide rural/urban disparity with regard to access to service <sup>4/</sup>; possible malnutrition, rickets and other micronutrient deficiencies, particularly among children; infant and maternal mortality rates that leave scope for improvement; and, most recently, severe shortages of drugs and medicines.

78. The health budget in 1989 was equivalent to 4.3 percent of GDP (T460 million). This compares with about 5 percent for Korea and about 4 percent for China and Thailand. City and aimak hospitals accounted for 60 percent, somon hospitals 15 percent, creches 10 percent, and feldsher posts 2 percent.

79. Priority issues in health include the financial restructuring of the health care system, i.e., to move from the current system of free provision to one covered by health insurance and user fees. As part of this transition, an experiment is being undertaken in selected somons in which practitioners are given control of budgets but must pay for the cost of the hospitalizations they recommend, the intent being to encourage more careful screening. At the same time, it will be necessary to ensure continued access to health facilities for those parts of the population unable to pay for such services. Second, health and nutrition education should be emphasized since there is scope

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<sup>4/</sup> In 1981, Ulaan Baatar had 49 percent of Mongolia's physicians and an average of 42.9 physicians per 10,000 people. Darhan and Erdenet had 21.7 and 18.8 physicians per 10,000 people, respectively. Low ratios were found in Uvs Aimak (9.5) and Hovsgol Aimak (10.2).

for improvement in health through a more diversified diet and more emphasis on preventive care, areas which can be addressed without significant increase in outlays. Third, the government is considering importing technology to strengthen its domestic drug manufacturing industry and to train the necessary technical staff. The cost-effectiveness of this proposal, given Mongolia's small population and the resources required to bring domestic drug manufacturing up to accepted standards, should be carefully examined.

### Environment

80. Mongolia's renewable natural resource endowment is severely limited by its harsh climate. Its limited precipitation (averaging 220 mm per annum) is unevenly distributed, temporally and geographically, and most of it is lost to evapotranspiration and cross-boundary surface flow. Historical climatological data suggest Mongolia's climate is gradually becoming drier. Separated from the ocean's moderating influence, temperature fluctuations (diurnal and annual) are great. Because of the country's latitude and high elevation, average temperatures are very low, below freezing for a large part of the country. Winds are intense at the end of the winter.

81. Abundant water supplies exist only in certain areas in the north of the country. The rates of humus production, vegetative regeneration and growth, and livestock productivity are very low throughout the country compared to other countries in Asia. Natural ecosystems are relatively fragile, highly susceptible to degradation by human activities, and slow to recover. Desertification is a problem in the south.

82. Given Mongolia's high population growth rate and heavy industrialization during the past few decades, the sustainable rates of use or loss of renewable natural resources, including surface water, ground water, forest, soil, fishery, and rangeland resources, have already been exceeded in some areas. The situation is likely to become more widespread if current trends continue, and unless measures to conserve and manage natural resources are taken. Past policy has not paid sufficient attention to planning natural resource utilization, restoration and protection. This has led to both the loss and depletion of natural resources and the degradation of environmental quality as seen in contamination of the atmosphere, surface water and soil mainly around urban areas.

### Water Resources

83. Of fundamental importance to environmental management is the generally low average precipitation. Rainwater averages 361.1 cubic km per annum of which 90 percent--an extremely high rate compared to other parts of the world--returns to the atmosphere through evapotranspiration. Of the balance, only about 6 percent is available in the form of surface runoff (most of this flowing out of the country) and only about 3 percent infiltrates into the soil to replenish aquifers.

84. A rapid rise in water resources demand, combined with increased levels of economic activity in key watersheds, has caused a reduction in lake, river flow, and water table levels. Untreated and primary-treated domestic and industrial wastewater discharge has caused significant levels of surface water contamination. The incidence and severity of ground water contamination is unknown. River pollution has already imposed a significant cost to Ulaan Baatar which must draw its water from a course 60 km away, although the Tuula river flows through the city.

85. Addressing these issues will require: comprehensive watershed hydrology and aquifer hydrogeology research; water utilization planning; water

quality monitoring system; wastewater discharge elimination programs; and expansion of water storage, distribution, and metering infrastructure.

### Land Resources

86. The total land area of 156 million ha comprises the four biogeographic regions: high mountains; forest-steppe (interspersed forests and grasslands); steppe (grasslands); and gobi (arid lands with only a sparse vegetation). Of the total land area, 79 percent is grassland and arid grassland. Forest and shrubland are estimated to comprise 10 percent, sandy areas 3 percent, settlements, plowed farmland and infrastructure 2.7 percent, and area covered by water 1 percent. The remainder are glaciated and rocky areas. About 55 percent of the country's forest resources are considered inaccessible, being on gradients in excess of 22 degrees. Mongolian environmental experts consider most if not all, forest to be critical for watershed protection, and suggest it not be exploited. Some 126 million ha (80 percent of total land area) is devoted to agriculture of which only 1 percent (1.3 million ha) is cultivated, mainly in the north-central part of the country.

87. Overgrazing, deforestation (including loss of forests to fire and insect damage), erosion, and desertification have caused significant degradation of land resources. Crop cultivation has led to soil erosion as Mongolia's climatic conditions make high levels of soil loss associated with tilling of the soil almost inevitable. Climate change, involving a gradual reduction in annual precipitation, contributes to desertification and wind erosion. Other detrimental activities include overland vehicular traffic and improper waste disposal to mining. Given the wide range of factors contributing to land erosion, a multifaceted approach to reversing land resource degradation trends is needed, including in-depth land use planning, infrastructure development and reforestation program.

### Air Quality

88. Air pollution is caused by: soft coal-fired cooking and heating stoves of individual dwellings, soft coal-fired thermal electric power plants, industry and vehicles. The problem is intensified by stationary temperature inversions over the country during the long winter, accompanied by low winds. Measures to address this issue include: fuel and heating technology substitution in individual dwellings; upgrading of the thermal electric power plants; and controls on industrial and vehicular pollutant emissions. Mongolia does not produce CFCs or release significant amounts of ozone-depleting substances. While its per capita rate of greenhouse gas generation is higher than the world average, it is only a fraction that of Europe and North America.

### Wildlife

89. Large, relatively undisturbed wildlife areas cover a broad range of habitats. Rich wildlife and biodiversity resources exist, including: 134 species of mammals (59 exploited for commercial purposes), 415 species of birds (128 exploited), 70 species of fish (30 exploited), 9 species of reptiles, 8 species of amphibians, 15,000 species of insects. Of the several thousand species of plants, about 10 percent are considered unique to Mongolia

and many are exploited for nutritional and medicinal purposes. There are presently 13 nature reserves and parks. Among these, the Great Gobi National Park Reserve has been designated as a Biosphere Reserve under the UNESCO Man-and-Biosphere Program. An extensive program of wildlife research, and a concerted effort to develop a system of reserves based on the results of this research, is greatly needed. Given the large number and high value to the global community of biodiversity resources, the high level of input required to develop a comprehensive program to protect these resources and Mongolia's limited funding sources, Mongolia should seek internationally-funded programs aimed at protecting biological diversity.

#### Waste and Toxic Substance Management

90. All forms of wastes are codisposed in open disposal areas with minimal control or site management. Current waste and toxic substance management programs in Mongolia are inadequate to ensure the isolation of contaminants from the environment and human exposure. Development of an effective waste and toxic substance management program is urgent, for both the environment and human health.

#### Institutions and Regulations

91. In December 1990, the government adopted a strong policy aimed at protecting the environment and encouraging rational use of natural resources, under a general environmental law and five resource specific laws passed earlier.<sup>5/</sup> Responsibility for policy implementation rests with the State Committee for Environmental Control (SCEC). The Environmental Monitoring and Meteorological (EMM) program has established monitoring stations capable of basic biological, chemical and physical analysis of water, analysis of soils for the presence of metals, and the collection of meteorological data. Other programs include the development of a capacity within SCEC to receive and process Landsat images in order to analyze and quantify trends in vegetative pattern changes and the implications for natural resources.

92. NGOs such as "The Mongolian Association for the Conservation of Nature and the Environment (MACNE)," the Green Party, and the Mongolian Women's Federation are active in the environmental field. MACNE has a membership exceeding 600,000 and its goals are to include the preservation of traditional methods of natural resource use, preservation of unique environmental heritage, environmental education and training, environmental research and mass media advocacy of environmental protection.

93. The most urgent environmental and natural resource issues are:

- (a) protection and better management of the supply and quality of water resources; land resources; atmospheric quality; and biological diversity;

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<sup>5/</sup> These are the laws for: land resources; air quality protection; water; forestry and hunting; and mining and mineral laws.

- (b) environmentally sound management of wastes and toxic chemicals, including introduction of an environmental pricing policy based on "the polluter pays" principle and marketable pollution rights; and
- (c) paying more attention to environmental sustainability of projects, in particular for mining activities and energy plants.

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MONGOLIA  
COUNTRY ECONOMIC REPORT

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Table 1.1: POPULATION AND EMPLOYMENT, 1979-91  
(in thousands)

	1979	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Total population /a, /b	1,595.0	1,682.0	1,724.7	1,767.5	1,808.9	1,854.3	1,900.6	1,949.7	1,997.0	2,044.0	2,095.6	2,149.3
Males	798.9	842.7	884.1	885.5	906.2	929.0	952.2	976.7	999.5	1,020.7	1,045.9	1,072.3
Females	796.1	839.3	860.6	882.0	902.7	925.3	948.4	973.0	997.5	1,023.3	1,049.7	1,077.0
Urban	817.1	861.2	888.2	919.1	949.7	982.8	1,016.8	1,052.8	1,098.3	1,168.1	1,193.6	1,225.1
Rural	777.9	820.8	836.5	846.4	859.2	871.5	883.8	896.9	898.7	877.9	902.0	924.2
By age groups /a, /b												
Under 16	746.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	904.3	920.6	938.9
Active age	710.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	995.1	1,028.2	1,061.9
Over active age	137.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	144.6	146.8	150.5
Employed-total	501.7	516.0	524.7	534.7	548.7	552.4	567.2	586.6	622.9	637.3	680.2	..
Industry & construction	113.4	118.1	124.4	130.0	138.2	139.4	142.5	156.3	158.5	161.4	166.9	..
Agriculture	199.6	202.1	193.6	193.0	190.4	184.5	186.9	192.4	198.5	198.6	200.7	..
Other sectors	188.7	195.8	206.7	211.7	220.1	228.5	237.8	247.9	265.9	276.3	292.6	..
Of which:												
Education, Culture, Art	47.0	49.1	51.5	53.2	55.4	56.2	58.5	60.3	63.8	66.9	70.7	..
Health, Sanatoria, Sport, Tourism	30.3	31.3	32.4	38.2	34.3	35.8	36.9	39.4	43.2	44.9	48.1	..
Central government	11.1	11.6	13.0	12.7	12.4	13.4	13.8	13.1	14.0	12.0	11.0	..
Employed in socialist sector	309.7	322.6	341.3	351.7	370.2	379.4	402.0	418.3	435.2	456.6	476.5	..
Males	169.5	173.4	177.9	182.8	190.9	184.7	197.3	203.9	210.0	208.8	226.8	..
Females	141.2	149.2	163.4	168.9	179.3	194.7	204.7	214.4	226.2	247.8	249.7	..

/a At the beginning of the year.  
/b Figures for 1979 and 1989 are census data of January 5.

Source: State Statistical Office.

Table 1.2. VITAL STATISTICS, 1940-90

(Per thousand population)

	Crude birth rate	Crude death rate	Natural increase
1940	26.1	21.8	4.3
1951	13.9	9.6	4.3
1960	43.2	10.5	32.7
1970	40.2	12.3	27.9
1980	39.2	10.8	28.4
1985	38.2	10.3	27.9
1988	38.5	9.0	29.5
1989	36.4	8.4	28.0
1990	35.3	8.5	26.8

Sources: National Economy of the MPR for 70 Years (1921-1991), Anniversary Statistical Yearbook, (Several data of 1990 are preliminary), State Statistical Office of the MPR, Ulaanbaatar, 1991, Table 2.8. pp. 18-9. and Asian Development Bank.

Table 1.3: EMPLOYMENT BY SECTOR, 1970-90  
(Thousands, yearly average)

	1970	1980	1985	1986	1987	1988	1989	1990p
Total	387.4	511.2	561.6	580.9	598.4	616.1	633.2	647.5
Sector								
Material								
Agriculture	312.3	388.3	413.2	426.6	435.5	443.3	451.4	463.3
Forestry	181.9	202.7	187.0	185.8	184.8	183.6	186.0	189.4
Industry	1.2	0.9	1.2	1.2	1.2	1.6	2.1	2.1
Construction	60.0	81.6	104.6	109.9	115.6	119.2	119.6	123.4
Transport	22.5	30.7	33.9	35.5	37.2	38.9	41.7	44.6
Communications	18.0	32.3	38.7	43.4	44.6	47.4	47.0	48.0
Trade (retail and wholesale)	3.1	4.2	5.5	5.8	6.1	6.1	6.9	7.0
Other material production	25.4	35.0	41.7	44.4	45.4	46.0	47.5	48.0
Other material production	0.2	0.9	0.6	0.6	0.6	0.5	0.6	0.8
Nonmaterial								
Housing and municipal services	75.1	122.9	148.4	154.3	162.9	172.8	181.8	184.2
Science, research and development	8.0	14.3	20.0	20.9	23.3	24.3	26.4	28.9
Education, culture and arts	3.7	9.0	10.3	10.7	11.3	12.9	14.1	14.1
Health care, social security, sports	30.4	49.2	58.7	60.4	63.1	70.5	74.6	75.5
Banking, finance, credit, insurance	20.2	32.0	37.3	39.7	42.2	42.9	44.7	46.7
Government	1.1	1.9	2.1	2.4	2.5	2.6	2.9	3.1
Other nonmaterial	8.1	11.5	13.9	13.9	13.9	12.8	12.3	10.9
Other nonmaterial	3.6	5.0	6.1	6.3	6.6	6.8	6.8	5.0

p = provisional.

Source: State Statistical Office.

Table 1.4: EMPLOYMENT BY ENTERPRISE TYPE, 1989

(End of year)

	Actual (Thousands)	Percent of total
Total labor force	928.0	100.0
Of working age	905.0	97.5
Below working age	2.7	0.3
Over working age	16.3	1.8
Foreigners	4.0	0.4
Total employed	764.1	100.0
In material sector	549.1	71.9
Of which:		
State enterprises a)	339.1	
Cooperatives a)	188.3	
Private part-time a)	7.9	
Unregistered forms	n.a.	
Private enterprises	n.a.	
In nonmaterial sector	215.0	28.1
Of which:		
State enterprises a)	209.7	
Cooperatives a)	4.5	
Private enterprises	n.a.	

a) Average 1989.

Source: State Statistical Office.

Table 1.5: EMPLOYMENT IN THE STATE SECTOR, 1989

(thousands)

	Total Number of Employees	of which Workers
Agriculture	44.2	33.2
Forestry	2.1	1.0
Industry	107.4	83.5
Construction	36.4	27.5
Transport	42.8	34.2
Communications	6.9	5.0
Wholesale and retail trade	47.4	25.5
Other branches of material production	0.6	0.1
Housing and municipal services	25.7	n.a.
Science, research and development	14.1	n.a.
Education, culture and arts	72.5	n.a.
Public health, social insurance, sport and tourism	43.4	n.a.
Finance, credit, insurance	2.9	n.a.
Administration	12.3	n.a.
Other branches of nonproductive sphere	6.8	n.a.
<b>Total</b>	<b>465.5</b>	<b>n.a.</b>

Source: State Statistical Office.

Table 2.1 NATIONAL ACCOUNT ESTIMATES AT CURRENT AND CONSTANT PRICES, 1984-90  
(Millions of tugriks)

	1984	1985	1986	1987	1988	1989	1990
<b>1. CURRENT PRICES</b>							
Agriculture	1,801.6	1,853.9	1,663.7	1,568.8	1,688.0	1,831.6	1,820.0
Industry /a	2,678.1	2,767.1	2,974.6	3,245.9	3,482.6	3,680.6	3,549.6
Services	2,914.6	3,078.6	2,992.7	3,230.7	3,505.0	3,455.9	3,627.0
GDP at factor cost	6,854.0	7,199.6	7,631.0	8,045.4	8,670.6	8,968.0	8,998.6
Indirect Taxes	2,669.9	2,786.9	2,295.1	2,281.1	2,217.9	2,406.2	2,087.6
Subsidies (-)	558.2	668.6	616.1	616.9	687.6	648.3	670.1
GDP at market prices	8,996.7	9,371.9	9,810.0	9,709.6	10,800.9	10,730.9	10,514.1
Imports of goods and nonfactor services	4,781.4	5,219.3	5,990.3	5,447.3	5,554.6	6,053.2	5,246.8
Exports of goods and nonfactor services	2,300.0	2,388.8	2,623.5	2,617.9	2,668.7	2,496.5	2,410.3
Resource Gap	2,481.4	2,850.5	3,366.8	2,829.4	2,886.0	3,556.7	2,836.5
Public Consumption	1,869.0	1,961.1	2,272.5	2,383.7	2,474.6	2,491.5	2,562.4
Private Consumption	5,045.8	4,787.6	4,220.5	5,718.0	6,377.8	3,854.8	7,645.9
Total Consumption	6,914.8	6,748.7	6,493.0	8,101.7	8,852.4	6,346.3	10,208.3
Government Investment	..	..	..	..	..	441.8	412.5
Public Enterprise and Private Investment	..	..	..	..	..	4,365.1	2,967.3
Change in Stocks	280.5	839.9	1,421.3	-114.9	-203.4	134.4	-237.5
Total Investment	4,562.3	5,473.7	6,183.8	4,437.3	4,334.5	4,941.3	3,142.3
<b>2. CONSTANT 1990 PRICES</b>							
GDP at market prices	8,279.0	8,664.4	9,380.8	9,603.9	10,304.7	10,735.5	10,514.1
Imports of goods and nonfactor services	6,479.9	7,138.3	7,030.7	6,576.2	6,508.3	5,578.1	5,246.8
Exports of goods and nonfactor services	2,795.5	2,689.7	2,988.8	2,886.7	2,886.4	2,671.5	2,410.3
Resource Gap	3,684.4	4,448.5	4,041.8	3,689.5	3,671.9	2,906.6	2,836.5
Public Consumption	2,045.7	2,275.1	2,648.2	2,726.7	2,760.7	2,452.8	2,562.4
Private Consumption	5,522.8	5,554.1	4,918.8	6,540.9	7,115.2	6,748.2	7,645.9
Total Consumption	7,568.4	7,829.2	7,566.5	9,267.6	9,875.9	9,201.0	10,208.3
Government Investment	..	..	..	..	..	397.1	412.5
Public Enterprise and Private Investment b/	..	..	..	..	..	4,044.0	2,729.9
Total Investment	4,395.0	5,293.7	6,866.1	4,225.8	4,100.7	4,441.1	3,142.3

/a Includes construction.  
/b Includes change in stocks.

Sources: State Statistical Office and World Bank estimates.

Table 2.2: COMPOSITION OF GROSS DOMESTIC PRODUCT AT CURRENT FACTOR COST, 1980-1.0  
(Percentages)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total GDP at factor cost	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
of which:											
Agriculture	18.6	19.9	20.9	21.2	19.9	18.8	21.8	19.5	19.4	20.4	20.2
Industry	29.2	29.0	29.8	30.9	31.9	32.8	32.8	33.5	33.0	34.1	33.8
Construction	7.1	6.6	6.0	5.6	5.7	5.7	6.2	6.8	7.2	7.0	5.7
Transport	13.6	13.7	13.3	12.9	13.3	13.8	13.5	13.1	12.7	11.6	11.3
Communications	1.3	1.5	1.5	1.6	1.7	1.7	1.7	1.7	1.8	1.8	1.9
Trade and catering	9.7	9.3	9.9	9.7	9.3	9.1	8.3	6.6	7.1	7.1	9.1
Other material sphere	2.0	1.9	1.8	1.7	1.7	1.6	1.8	1.7	1.5	1.6	1.4
Non-material services	18.7	18.3	16.9	16.3	16.5	16.6	17.0	17.1	17.4	16.4	16.5

Source: World Bank staff estimates based on data from the State Statistical Office.

Table 2.3: SOURCES AND USES OF NET MATERIAL PRODUCT, CURRENT PRICES, 1970-90

(in millions of Tugrika)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Sources</b>													
Agriculture	3,135.2	4,511.7	5,576.9	6,150.6	6,825.7	7,325.3	7,878.1	7,636.5	7,247.6	7,478.7	7,639.9	8,646.0	8,327.5
Industry	708.0	1,012.3	838.3	1,007.7	1,219.5	1,329.1	1,250.2	1,237.7	1,520.7	1,405.5	1,510.0	1,722.9	1,686.9
Construction	708.9	1,112.3	1,634.6	1,806.8	2,110.5	2,358.2	2,388.6	2,498.3	2,442.8	2,519.5	2,639.1	2,919.8	2,915.1
Distribution & warehousing	182.3	245.7	342.1	342.3	346.1	352.6	367.5	382.0	423.1	503.8	563.1	617.2	482.3
Other sectors	1,144.3	1,632.1	2,024.5	2,210.9	2,307.9	2,400.4	2,436.4	2,516.3	1,865.2	2,036.2	2,129.8	2,327.4	2,230.5
	306.7	509.3	737.4	782.9	841.6	894.0	940.4	1,007.2	995.8	1,013.7	1,047.9	1,058.7	982.7
<b>Uses</b>													
Personal consumption	3,386.9	4,415.8	5,414.6	6,028.6	6,613.7	7,164.7	7,162.5	7,420.1	7,083.2	7,098.4	7,492.1	8,521.8	7,889.4
Public consumption	1,950.6	2,712.3	3,500.5	3,647.1	3,856.4	4,068.1	4,262.5	4,429.5	4,618.7	4,844.4	5,066.7	5,348.3	5,746.1
Accumulation	420.3	728.4	1,128.6	1,388.5	1,446.0	1,543.2	1,632.3	1,739.5	1,923.5	1,997.0	2,147.9	2,174.8	2,040.3
Fixed investment	1,156.0	2,081.0	2,615.3	3,640.5	3,829.3	3,857.8	3,618.8	4,140.8	4,105.5	3,214.3	3,115.3	3,590.0	2,233.9
Change in stocks	1,143.7	1,662.4	2,882.5	2,358.4	2,642.6	2,544.4	4,298.5	4,759.0	2,505.8	3,213.3	2,824.9	3,195.5	606.6
Changes in incomplete projects	195.3	484.3	169.1	331.1	533.9	645.1	392.4	655.7	581.6	(114.9)	(203.4)	134.4	205.6
Net exports	(183.0)	(65.7)	(436.3)	901.0	452.8	668.3	(1,072.1)	(1,273.9)	1,018.1	115.9	493.8	280.1	1,271.7
Exports /a	(150.0)	(1,105.9)	(1,829.8)	(2,647.5)	(2,318.0)	(2,304.4)	(2,351.1)	(2,839.7)	(3,569.5)	(2,957.3)	(2,837.8)	(2,591.3)	(2,200.9)
Imports /b	459.2	784.5	1,343.2	1,568.4	1,923.6	2,082.1	2,343.5	2,237.2	2,508.6	2,670.4	2,616.7	2,309.2	2,238.9
Statistical discrepancy /c	609.2	1,890.4	3,173.0	4,230.9	4,241.6	4,386.5	4,694.6	5,126.9	6,078.1	5,627.7	5,454.5	4,900.5	4,439.8
	(251.7)	95.9	162.3	122.0	212.0	180.6	215.6	216.4	164.4	380.3	397.8	124.2	458.1

/a Exports measured at domestic prices.

/b Imports include turnkey projects.

/c Includes production losses.

Source: State Statistical Office.

Table 2.4: SOURCES OF NET MATERIAL PRODUCT, CONSTANT (1986) PRICES, 1970-90

(in millions of Tugriks)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Sources	2,726.1	3,774.1	4,939.8	5,353.3	5,802.1	6,157.7	6,484.0	6,776.7	7,153.5	7,400.7	7,712.6	8,461.9	8,147.9
Agriculture	903.0	1,083.1	1,094.9	1,111.9	1,268.9	1,280.7	1,222.4	1,248.1	1,426.6	1,335.7	1,367.1	1,556.3	1,525.6
Industry	534.8	967.2	1,575.2	1,714.3	1,897.9	2,085.6	2,267.7	2,390.0	2,442.8	2,511.3	2,604.6	2,902.3	2,892.8
Construction	182.3	245.7	342.1	342.3	346.1	352.6	367.5	382.0	423.1	503.8	553.1	617.2	454.4
Distribution & warehousing	829.6	1,023.0	1,365.0	1,493.3	1,545.8	1,649.5	1,737.6	1,770.8	1,865.2	2,036.2	2,129.9	2,327.4	2,230.5
Other sectors	276.4	455.1	652.6	691.5	743.4	789.1	828.8	885.8	995.8	1,013.7	1,047.9	1,056.7	994.6

Source: State Statistical Office.

Table 2.6 COMPOSITION OF NET MATERIAL PRODUCT AND GROSS DOMESTIC PRODUCT, 1980-90  
(Millions of tugriks)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>A. Net material product (A1+A2)</b>	5,573.9	6,150.6	6,825.7	7,325.3	7,378.1	7,636.5	7,247.6	7,478.7	7,883.9	8,646.0	8,327.5
<b>A1. Primary income of the population</b>	2,123.8	2,186.0	2,330.7	2,498.9	2,539.6	2,641.5	2,806.6	2,884.1	2,989.7	3,201.2	3,269.0
a. Wages and salaries of employees in non-material sphere	692.2	737.0	758.0	788.4	810.1	847.8	880.6	923.5	989.4	1,044.5	1,077.9
b. Income from personal and subsidiary plots of the population	262.7	277.6	289.3	311.5	329.1	353.9	371.3	410.4	440.9	449.2	483.7
c. Employers contributions to social security in material sphere	155.5	164.1	169.5	178.5	187.6	198.2	209.0	219.5	231.6	242.1	246.1
cl. non-material sphere	118.1	118.7	123.8	134.4	140.4	148.2	162.8	167.0	170.2	180.2	185.7
d. Business travel expenses	42.4	45.4	45.7	44.1	47.2	50.0	46.2	52.5	61.4	61.9	60.4
material sphere	20.2	21.3	30.9	37.9	42.9	42.1	44.3	46.1	53.0	50.2	49.6
non-material sphere	20.2	21.3	30.9	37.9	42.9	42.1	44.3	46.1	53.0	50.2	49.6
n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>B1. Compensation of employees (A1+a-b+c-d)</b>	2,888.6	2,788.2	2,938.0	3,114.4	3,165.3	3,291.0	3,480.6	3,570.6	3,716.8	3,988.4	4,053.7
<b>A2. Primary income of the enterprises</b>	3,453.1	3,964.6	4,495.0	4,826.4	4,838.5	4,995.0	4,441.0	4,594.6	4,900.2	5,444.8	5,058.5
a. Operating surplus and taxes of non-budgetary units in non-material sphere	100.0	120.0	142.3	150.0	165.0	177.5	200.1	227.7	247.5	223.2	189.7
f. Purchase of non-material services in material sphere	59.8	79.3	92.1	98.1	100.9	112.0	103.3	111.6	93.3	84.0	80.7
g. Expenditure in connection with the provision of cultural etc. facilities in material sphere	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
h. Losses in stocks	730.8	771.8	805.1	830.5	853.3	895.0	782.0	805.3	850.3	1,261.0	1,298.8
<b>B2. Operating surplus including net indirect taxes (A2+a-b-cl-f-g-h)</b>	2,912.1	3,392.4	3,905.6	4,228.9	4,238.0	4,371.2	3,984.3	4,146.8	4,474.8	4,592.0	4,171.7
<b>B3. Consumption of fixed capital /1</b>	1,154.2	1,245.7	1,361.7	1,427.1	1,592.4	1,709.7	1,845.1	1,990.4	2,109.4	2,150.5	2,288.7
<b>B. Gross domestic product (B1+B2+B3)</b>	6,754.9	7,426.3	8,205.3	8,768.4	8,995.7	9,371.9	9,310.0	9,709.8	10,301.0	10,730.9	10,614.1

/1 Including undepreciated value of scrapped fixed assets.

Source: State Statistical Office.

Table 2.7 COMPOSITION OF NATIONAL PRODUCT BY BRANCHES  
(Million tugriks)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>TOTAL MATERIAL SECTORS</b>											
National product	10,915.4	11,952.7	13,084.9	14,081.6	14,624.7	15,561.3	16,911.0	17,646.1	18,360.5	19,261.7	18,195.8
Material input	5,338.5	5,802.1	6,269.2	6,756.3	7,246.6	7,924.8	8,663.4	9,167.4	10,470.6	10,615.7	9,866.3
of which: depreciation	388.1	1,058.8	1,154.5	1,214.5	1,367.5	1,460.9	1,567.4	1,697.0	1,771.1	1,838.0	1,973.7
National income (NI)	5,578.9	6,150.6	6,825.7	7,325.3	7,378.1	7,638.5	7,247.6	7,478.7	7,869.9	8,446.0	8,327.5
of which:											
Wages and salaries	1,959.3	2,018.8	2,138.7	2,297.2	2,356.0	2,464.9	2,617.0	2,753.7	2,842.8	3,041.1	3,149.7
Other income	212.8	231.2	365.9	384.7	495.5	461.1	125.9	150.9	178.9	345.7	379.4
Turnover tax	1,980.4	2,183.7	2,245.6	2,362.9	2,428.7	2,438.7	1,936.6	1,916.6	1,997.9	2,108.6	2,016.3
Profits/losses	1,301.3	1,588.2	1,951.7	2,136.1	1,957.5	2,126.6	2,405.3	2,490.5	2,800.0	2,972.4	2,538.4
Social security contributions	113.1	118.7	123.8	134.4	140.4	148.2	162.8	167.0	170.2	180.2	185.7
Memo items: NI - Turnover tax	3,586.5	3,968.9	4,580.1	4,962.4	4,943.4	5,200.8	5,311.0	5,562.1	5,982.0	6,539.4	6,311.2
NI + depreciation - Turnover tax	4,572.6	5,023.7	5,734.6	6,178.9	6,316.9	6,661.7	6,878.4	7,269.1	7,763.1	8,372.4	8,284.9
<b>Industry</b>											
National product	4,638.2	5,162.8	5,775.1	6,316.1	6,704.9	7,213.6	8,195.2	8,542.2	8,797.8	9,243.7	8,887.4
Material input	3,001.6	3,358.0	3,664.5	3,957.9	4,321.3	4,720.3	5,752.4	6,022.7	6,158.7	6,323.9	5,972.3
of which: depreciation	449.6	451.4	498.1	529.4	649.1	688.9	702.0	782.7	822.1	906.9	994.8
National income (NI)	1,634.6	1,808.8	2,110.6	2,368.2	2,383.6	2,493.3	2,442.8	2,519.5	2,639.1	2,919.8	2,915.1
of which:											
Wages and salaries	483.4	490.9	519.8	569.2	606.9	644.6	685.2	745.5	717.5	819.2	819.4
Other income	53.5	67.5	83.6	115.0	88.7	76.9	84.1	61.3	58.0	50.8	39.1
Turnover tax	445.8	473.3	554.2	608.0	620.4	585.4	428.0	372.1	360.7	412.3	554.1
Profits/losses	610.0	730.4	905.9	1,016.1	1,012.2	1,147.7	1,203.6	1,275.7	1,435.5	1,561.6	1,427.4
Social security contributions	42.1	44.7	47.1	51.9	55.4	58.8	61.9	64.9	67.4	75.9	75.1
Memo items: NI - Turnover tax	1,169.0	1,333.5	1,558.4	1,752.2	1,763.2	1,927.9	2,014.8	2,147.4	2,278.4	2,507.5	2,361.0
NI + depreciation - Turnover tax	1,638.6	1,784.9	2,064.5	2,281.6	2,412.3	2,616.8	2,716.8	2,936.1	3,100.5	3,414.4	3,355.6
<b>Construction</b>											
National product	1,148.2	1,201.7	1,253.7	1,310.7	1,321.5	1,478.1	1,768.9	1,869.1	2,082.7	2,222.6	1,793.3
Material input	806.1	859.4	907.6	958.1	954.0	1,093.1	1,345.8	1,365.3	1,519.6	1,605.4	1,331.0
of which: depreciation	57.6	60.5	65.8	63.5	67.4	70.3	88.8	92.8	111.9	80.5	98.8
National income (NI)	342.1	342.3	346.1	352.6	367.5	382.0	423.1	503.8	563.1	617.2	462.3
of which:											
Wages and salaries	212.7	201.0	211.2	226.9	231.0	249.0	247.4	271.2	295.2	303.9	298.6
Other income	29.6	23.6	25.1	29.3	25.6	22.8	18.9	21.3	30.0	28.2	31.1
Turnover tax	—	—	—	—	—	—	—	—	—	—	—
Profits/losses	83.4	101.6	93.8	79.1	92.4	89.7	129.3	185.6	212.5	256.4	105.0
Social security contributions	16.4	16.1	16.0	17.3	16.5	20.5	27.5	25.7	25.4	22.7	27.4
Memo items: NI - Turnover tax	342.1	342.3	346.1	352.6	367.5	382.0	423.1	503.8	563.1	617.2	462.3
NI + depreciation - Turnover tax	393.7	402.8	411.9	416.1	434.9	462.3	511.9	596.6	675.0	697.7	551.1

(Continued)

Table 2.7 COMPOSITION OF NATIONAL PRODUCT BY BRANCHES (continued)  
(Million dengriska)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Agriculture</b>											
National product	1,624.2	1,790.6	2,041.5	2,222.9	2,225.7	2,279.9	2,720.8	2,760.3	2,847.8	2,967.3	2,858.4
Material input	785.9	782.9	822.0	902.8	976.5	1,042.2	1,200.1	1,344.8	1,337.8	1,244.4	1,171.5
of which: depreciation	204.8	216.5	221.7	241.8	253.4	263.9	285.2	301.9	314.5	323.5	321.3
National income (NI)	838.3	1,007.7	1,219.5	1,320.1	1,250.2	1,237.7	1,520.7	1,405.5	1,510.0	1,722.9	1,688.9
of which:											
Wages and salaries	865.1	997.6	962.5	1,035.1	1,054.0	1,080.0	1,174.1	1,188.5	1,252.2	1,315.4	1,373.1
Other income	(116.2)	(95.5)	(59.6)	(66.8)	62.1	64.3	(71.3)	(103.3)	(57.0)	17.3	(11.5)
Turnover tax											
Profits/losses	71.6	186.7	286.1	328.8	111.6	70.1	392.5	294.9	288.9	364.8	287.6
Social security contributions	17.8	18.9	20.5	23.0	22.5	23.3	25.4	25.4	25.9	25.4	27.7
Memo items: NI - Turnover tax	838.3	1,007.7	1,219.5	1,320.1	1,250.2	1,237.7	1,520.7	1,405.5	1,510.0	1,722.9	1,688.9
NI + depreciation - Turnover tax	1,043.1	1,224.2	1,441.2	1,561.9	1,503.6	1,501.6	1,805.9	1,707.4	1,824.5	2,046.4	2,008.2
<b>Transport</b>											
National product	1,127.6	1,199.3	1,284.8	1,367.3	1,452.8	1,566.4	1,763.7	1,829.2	1,865.5	1,933.0	1,997.6
Material input	565.0	604.7	650.6	697.2	743.7	795.7	1,042.9	1,078.4	1,079.2	1,058.7	981.8
of which: depreciation	216.5	232.2	236.9	299.1	316.5	345.0	385.5	401.1	403.7	392.3	420.9
National income (NI)	562.6	694.6	694.2	670.1	709.1	770.7	740.8	750.3	788.3	774.3	703.7
of which:											
Wages and salaries	217.6	236.7	247.5	251.5	266.9	274.9	284.4	285.8	283.2	281.3	281.0
Other income	23.5	16.4	16.8	26.7	23.9	18.2	25.3	22.3	44.0	37.8	16.2
Turnover tax	17.4	17.5	14.6	15.1	15.4	17.1	7.4	9.0	---	---	---
Profits/losses	284.6	303.4	333.9	354.6	388.8	438.7	388.6	406.3	433.5	429.4	380.7
Social security contributions	19.5	20.6	21.4	22.2	23.1	23.8	25.1	26.9	25.6	25.8	25.8
Memo items: NI - Turnover tax	545.2	577.1	619.6	655.0	692.7	753.6	733.4	741.8	786.3	774.3	703.7
NI + depreciation - Turnover tax	761.7	839.8	916.5	954.1	1,009.2	1,098.6	1,118.9	1,142.9	1,190.0	1,166.6	1,124.6
<b>Communications</b>											
National product	97.4	118.1	132.9	146.3	158.8	172.7	196.0	207.5	219.8	235.2	236.9
Material input	56.0	43.6	49.5	51.7	54.5	63.2	91.6	97.2	100.2	105.7	99.3
of which: depreciation	16.0	20.6	25.1	26.6	27.7	34.7	42.0	44.4	46.4	51.4	53.2
National income (NI)	61.4	74.3	83.4	96.6	104.3	109.5	104.4	110.3	119.6	129.5	137.6
of which:											
Wages and salaries	19.0	21.0	22.6	23.5	24.2	25.3	26.8	26.2	29.6	31.5	33.6
Other income	1.5	2.1	2.1	2.3	1.5	1.8	1.4	1.4	1.4	1.8	3.5
Turnover tax	4.7	5.0	5.4	5.6	6.1	6.6	7.1	7.5	---	---	---
Profits/losses	34.4	44.2	51.2	63.0	70.1	73.4	66.5	70.5	65.8	93.2	97.3
Social security contributions	1.8	2.0	2.1	2.2	2.4	2.4	2.6	2.7	2.8	3.0	3.2
Memo items: NI - Turnover tax	56.7	69.3	78.0	91.0	98.2	102.9	97.3	102.8	119.6	129.5	137.6
NI + depreciation - Turnover tax	71.7	89.9	103.1	117.6	125.9	137.6	139.3	147.2	166.0	180.9	190.8

(Continued)

Table 2.7 COMPOSITION OF NATIONAL PRODUCT BY BRANCHES (continued)  
(Million tugriks)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Trade and catering											
National product	2,153.4	2,348.6	2,457.9	2,572.3	2,614.2	2,708.0	2,078.9	2,270.5	2,374.4	2,571.7	2,515.7
Material input	128.9	137.9	150.0	171.9	177.8	191.7	208.7	234.3	244.6	244.3	235.2
of which: depreciation	42.3	45.6	46.7	54.0	53.3	57.9	63.8	68.0	72.0	77.7	82.9
National income (NI)	2,024.5	2,210.9	2,307.9	2,400.4	2,436.4	2,516.3	1,865.2	2,036.2	2,129.8	2,327.4	2,280.5
of which:											
Wages and salaries	158.0	164.8	168.3	184.7	176.0	183.6	191.4	221.7	246.8	264.8	309.3
Other income	114.9	108.2	182.5	168.9	176.0	162.3	(62.9)	11.2	(15.8)	83.6	202.3
Turnover tax	1,522.7	1,687.9	1,671.4	1,786.2	1,785.8	1,846.6	1,494.1	1,528.0	1,537.2	1,694.3	1,462.2
Profits/losses	214.8	233.9	288.7	293.1	280.5	304.8	212.7	254.4	338.9	257.7	280.5
Social security contributions	15.3	16.1	16.4	17.5	18.1	19.0	19.9	20.9	22.7	27.0	26.2
Memo items: NI - Turnover tax	501.8	523.0	636.5	664.2	650.6	669.7	371.1	508.2	592.6	633.1	818.3
NI + depreciation - Turnover tax	544.1	568.6	683.2	718.2	703.9	727.6	434.9	576.2	664.6	710.8	901.2
Other material sphere											
National product	128.4	131.4	139.0	144.0	146.8	145.6	172.5	177.3	172.5	188.2	204.6
Material input	15.0	17.4	15.0	16.7	19.8	18.6	21.9	24.7	30.5	33.9	63.2
of which: depreciation	0.3	--	0.2	0.1	0.1	0.2	0.1	0.1	0.5	0.7	2.0
National income (NI)	113.4	114.0	124.0	127.3	127.0	127.0	150.6	152.6	142.0	154.9	141.4
of which:											
Wages and salaries	4.7	6.8	6.2	6.3	7.0	7.6	7.7	12.8	18.4	19.0	24.5
Other income	106.0	108.9	116.4	119.3	117.7	116.8	140.4	136.7	118.3	128.2	98.7
Turnover tax	--	--	--	--	--	--	--	--	--	--	--
Profits/losses	2.5	(2.0)	2.1	1.4	1.9	2.2	2.1	2.6	4.9	9.3	7.9
Social security contributions	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.3
Memo items: NI - Turnover tax	113.4	114.0	124.0	127.3	127.0	127.0	150.6	152.6	142.0	154.9	141.4
NI + depreciation - Turnover tax	119.7	114.0	124.2	127.4	127.1	127.2	150.7	152.7	142.5	155.6	146.4
NON-MATERIAL SPHERE											
National product	--	--	--	--	--	--	2,856.5	3,023.5	3,271.2	--	--
Material input	--	--	--	--	--	--	1,706.9	1,790.3	1,942.4	--	--
of which: depreciation	168.1	188.9	207.2	212.6	224.9	248.8	277.7	298.4	338.3	317.5	315.0
National income (NI)	884.1	937.9	964.8	982.2	1,032.0	1,079.2	1,149.6	1,233.2	1,328.6	1,363.1	1,353.0
of which:											
Wages and salaries	692.2	737.0	758.0	785.4	810.1	847.3	880.6	923.5	989.4	1,044.5	1,077.9
Other income	--	--	--	--	--	--	--	--	--	--	--
Turnover tax	3.6	3.6	3.9	3.9	4.2	4.4	22.7	29.5	30.5	33.5	28.0
Profits/losses	145.9	161.8	157.2	157.8	170.5	177.5	200.1	227.7	247.5	223.2	168.7
Social security contributions	42.4	45.4	45.7	44.1	47.2	50.0	46.2	52.5	61.4	61.9	60.4
Memo items: NI - Turnover tax	880.5	934.2	960.9	988.3	1,027.8	1,074.8	1,126.9	1,203.7	1,286.3	1,329.6	1,327.0
NI + depreciation - Turnover tax	1,048.6	1,123.1	1,168.1	1,200.9	1,252.7	1,323.6	1,404.6	1,497.1	1,636.6	1,647.1	1,642.0

(Continued)

Table 2.7 COMPOSITION OF NATIONAL PRODUCT BY BRANCHES (concluded)  
(Million tugriks)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
TOTAL MATERIAL and NON-MATERIAL SECTORS											
National product	..	..	..	..	..	..	..	..	..	..	..
Material input	1,154.2	1,245.7	1,361.7	1,427.1	1,592.4	1,709.7	1,846.1	1,990.4	2,109.4	2,160.5	2,288.7
of which: depreciation	6,461.0	7,088.5	7,780.5	8,317.5	8,410.1	8,715.7	8,397.2	8,711.9	9,218.7	10,008.1	9,680.5
National income (NI)	2,651.5	2,755.8	2,886.7	3,083.6	3,166.1	3,312.2	3,497.6	3,677.2	3,832.3	4,185.6	4,227.6
of which:	212.8	231.2	265.9	294.7	295.5	461.1	125.9	160.9	178.9	245.7	379.4
Wages and salaries	1,994.0	2,187.5	2,249.5	2,366.8	2,432.9	2,440.1	1,959.3	1,946.1	1,928.4	2,140.1	2,042.3
Other income	1,447.2	1,750.0	2,108.9	2,293.9	2,128.0	2,304.1	2,605.4	2,718.2	3,047.5	3,195.6	2,785.1
Turnover tax	155.5	184.1	169.5	178.5	187.6	198.2	209.0	219.5	231.6	242.1	246.1
Profits/losses	4,467.0	4,901.1	5,541.0	5,950.7	5,977.2	6,275.8	6,437.9	6,765.8	7,290.3	7,869.0	7,638.2
Social security contributions	5,621.2	6,146.8	6,902.7	7,377.8	7,569.6	7,965.3	8,283.0	8,756.2	9,399.7	10,019.5	9,928.9
Memo items: NI - Turnover tax	7,615.2	8,334.2	9,152.2	9,744.8	10,002.5	10,425.4	10,242.3	10,702.3	11,328.1	12,159.6	11,969.2
NI + depreciation - Turnover tax (GDPfc)	890.3	907.9	946.9	976.2	1,006.8	1,053.5	932.3	992.7	1,027.1	1,428.7	1,455.1
National income + depreciation	6,754.9	7,426.3	8,205.3	8,768.4	8,995.7	9,371.9	9,310.0	9,708.6	10,301.0	10,780.9	10,514.1
Subsidies total	(1,037.4)	(1,073.9)	(1,098.9)	(1,131.5)	(1,168.3)	(1,216.6)	(1,257.9)	(1,358.9)	(1,287.9)	(1,186.0)	(1,218.8)
NI+depreciation-subsidies (GDP)	5,717.5	6,352.4	7,106.4	7,636.9	7,827.4	8,155.3	8,052.1	8,350.7	9,013.1	9,544.9	9,295.3
Net factor income from abroad											
Gross National Product											

Sources: State Statistical Office and The World Bank.

Table 3.1 THE CONSOLIDATED BALANCE OF PAYMENTS, 1980-89  
(Billions of dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Trade balance	-274.4	-331.0	-370.4	-451.0	-342.2	-436.6	-587.3	-542.1	-628.7	-743.8	-318.4
Merchandise exports fob	402.6	438.0	518.6	556.7	596.2	556.9	740.8	816.9	828.1	795.8	468.1
of which barter	388.1	428.2	500.3	543.0	586.0	536.8	704.2	772.9	774.2	720.9	427.7
Merchandise imports cif	-876.9	-889.0	-1007.7	-1007.7	-988.5	-1003.4	-1326.1	-1359.0	-1457.8	-1639.6	-786.5
of which barter	-658.6	-751.7	-888.3	-935.3	-917.4	-980.8	-1288.9	-1312.3	-1410.7	-1470.8	-673.6
Turnkey projects 1/	-185.1	-470.8	-463.5	-354.6	-370.3	-362.3	-510.7	-468.4	-391.9	-374.0	-284.5
Services balance	-31.2	-5.2	-12.4	-19.1	-27.4	-14.4	37.6	20.1	-12.2	-116.6	-68.1
Receipts	40.8	39.6	49.5	56.2	53.6	71.7	84.3	89.1	94.5	43.9	59.1
Shipments	9.0	11.0	7.6	9.7	11.3	15.6	22.9	24.1	29.0	21.3	22.3
Travel	1.9	3.3	3.6	3.6	3.6	3.2	3.5	4.7	4.8	4.4	5.0
Interest income	0.2	0.2	0.2	—	0.1	0.1	0.1	0.2	0.2	7.5	5.1
Others	29.7	24.2	36.2	42.9	38.6	52.8	57.8	60.1	60.6	10.6	20.8
Expenditures	-72.1	-43.9	-61.9	-75.4	-81.0	-86.2	-46.7	-89.0	-106.8	-160.5	-121.2
Shipments	-16.0	-16.7	-17.2	-17.2	-13.6	-13.9	-17.3	-22.5	-24.9	-21.5	-14.6
Travel	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.5	-0.4	-1.2
Interest payments	34.5	11.1	20.6	31.1	39.1	45.1	1.8	11.5	34.4	58.4	48.7
Others	-21.4	-16.0	-24.4	-26.9	-28.1	-27.0	-27.3	-34.6	-46.9	-82.2	-56.8
Unrequited transfers	146.5	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3	-0.3	3.9	7.4
Private	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3	-0.3	—	—
Official	146.6	—	—	—	—	—	—	—	—	3.9	7.4
Current account before off. transfers	-490.8	-807.1	-846.4	-824.8	-740.0	-813.4	-1060.6	-990.7	-1033.1	-1234.5	-651.0
Capital account	344.1	607.1	850.0	821.7	756.2	844.2	1080.4	1024.9	1037.9	1236.6	590.5
Direct foreign investment	—	—	—	—	—	—	—	—	—	—	—
Medium- and long-term capital	418.1	896.7	859.2	740.5	746.0	763.9	1051.0	1113.2	1102.7	1228.2	516.8
Disbursements	437.0	845.6	900.9	781.2	786.0	791.7	1087.1	1130.1	1120.0	1250.5	537.1
Repayments	-19.0	-88.9	-41.6	-40.7	-39.1	-37.8	-16.1	-16.9	-17.3	-22.3	-20.3
Short-term capital 2/	—	0.7	7.7	0.9	-0.2	3.6	30.6	-20.0	-76.5	-33.3	68.8
Net errors and omissions	-73.9	-0.3	-17.0	80.3	10.4	86.7	-21.2	-68.4	11.7	41.7	6.8
Overall balance	-0.1	0.0	3.5	-3.1	16.1	30.8	-0.2	34.2	4.8	6.0	-53.1
Financing	0.1	0.0	-3.5	3.1	-16.1	-30.8	0.2	-24.2	-4.8	-6.0	53.1
Net change in reserves	0.1	0.0	-3.5	3.1	-16.1	-30.8	0.2	-24.2	-4.8	-6.0	53.1
Memorandum items:											
Net official reserves end year	-0.1	-0.1	3.4	0.3	16.5	47.3	57.3	91.5	96.3	102.3	49.2
In weeks of total imports	0.0	0.0	0.2	0.0	0.9	2.4	2.2	3.5	3.4	3.5	3.3
In weeks of non-barter imports	-0.3	-0.4	8.6	0.7	40.7	108.4	87.0	102.0	106.3	77.3	22.7

1/ Includes both goods and services; data are not available for disaggregation.

2/ Includes changes in the balances of nonconvertible currency deposits held by nonresidents, net borrowing from IBEC and other clearing accounts as reported by the State Bank.

Sources: Government of Mongolia, IMF and World Bank staff estimates.

Table 3.2a THE BALANCE OF PAYMENTS WITH THE CMEA AREA, 1980-90  
(Millions of transferable rubles)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Current account after official transfers	-224.5	-579.9	-619.2	-610.7	-602.8	-696.6	-776.6	-667.6	-690.7	-852.0	-622.1
Trade balance	-176.6	-233.9	-268.5	-328.7	-280.2	-371.0	-422.0	-351.1	-414.3	-508.7	-258.6
Merchandise exports fob	263.5	308.2	365.1	403.6	451.2	448.6	504.7	503.1	503.9	487.1	449.9
Merchandise imports cif	-430.2	-540.1	-633.7	-732.3	-731.5	-819.5	-926.7	-854.2	-918.2	-993.8	-708.5
Equipment 1/	-83.3	-80.3	-129.1	-112.1	-99.3	-106.0	-126.7	-144.0	-202.8	-385.7	-126.2
Other	-346.9	-459.8	-504.5	-620.3	-632.2	-713.6	-800.0	-710.2	-715.4	-608.1	-582.3
Turnkey projects 2/	-120.9	-338.2	-338.2	-263.6	-295.2	-302.7	-365.8	-304.9	-255.1	-252.7	-278.2
Services balance	-22.6	-7.7	-12.4	-18.4	-27.2	-21.9	12.3	-1.4	-21.1	-92.6	-85.3
Receipts	22.4	22.3	30.5	35.8	24.8	47.0	44.0	41.8	45.2	9.3	20.5
Shipments	5.0	7.1	5.4	5.3	5.3	5.7	6.4	6.5	10.0	5.1	4.7
Travel	0.5	0.7	0.7	0.8	1.0	0.8	0.8	0.9	0.9	0.6	0.6
Interest income	0.1	0.1	0.1	—	—	0.0	—	—	—	—	—
Others	16.8	14.5	24.4	28.5	28.4	40.5	36.6	34.4	34.3	3.6	16.2
Expenditures	-48.0	-30.0	-42.9	-63.9	-62.0	-68.8	-31.7	-43.2	-66.3	-101.9	-105.8
Shipments	-10.4	-12.0	-12.0	-12.7	-10.7	-11.4	-12.3	-14.6	-16.1	-14.4	-14.5
Travel	-0.1	-0.1	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.3	-0.3	-0.6
Interest payments	-22.5	-7.9	-15.0	-23.1	-31.2	-37.7	-1.3	-7.5	-22.4	-38.1	-51.2
Others	-12.0	-10.0	-15.7	-18.0	-20.0	-19.7	-17.9	-20.9	-27.5	-48.1	-39.5
Unrequited transfers	95.7	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	0.0	0.0
Private	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	0.0	0.0
Official	95.7	—	—	—	—	—	—	—	—	—	—
Capital account	224.5	580.2	619.8	611.5	603.9	696.5	775.6	657.4	690.6	852.0	622.2
Medium- and long-term capital	273.1	579.6	627.0	550.4	593.5	628.6	765.1	726.5	720.2	832.7	550.2
Disbursements	285.5	607.6	657.4	580.6	624.6	680.2	762.6	734.1	727.9	843.8	566.4
Trade loans	81.3	189.0	190.0	205.0	230.2	251.5	270.1	286.2	270.0	205.4	161.0
Turnkey projects	120.9	338.2	338.2	263.6	295.2	302.7	365.8	304.9	255.1	252.7	278.2
Equipment 1/	83.3	80.3	129.1	112.1	99.3	108.0	126.7	144.0	202.8	385.7	126.2
Repayments	-12.4	-28.0	-30.4	-30.3	-31.2	-31.6	-7.5	-7.6	-7.7	-11.1	-15.2
Short-term capital 3/	..	0.5	5.6	0.7	-0.2	3.0	21.9	-13.0	-49.6	-22.5	70.3
Net errors and omissions	-48.6	0.2	-12.8	60.4	10.6	64.9	-1.4	-56.1	20.2	41.8	1.7
Overall balance	0.0	0.3	0.5	0.7	1.1	0.9	0.0	-0.2	-0.1	0.0	0.1
Financing	0.0	-0.3	-0.5	-0.7	-1.1	-0.9	0.0	0.2	0.1	0.0	-0.1
Change in reserves	0.0	-0.3	-0.5	-0.7	-1.1	-0.9	0.0	0.2	0.1	0.0	-0.1

1/ Imports of equipment constituting technical assistance financed by the USSR.

2/ Includes both goods and services; data are not available for disaggregation.

3/ Includes changes in the balances of nonconvertible currency deposits held by nonresidents, net borrowing from IBEC and other clearing accounts as reported by the State Bank.

Sources: Government of Mongolia and IMF staff estimates.

Table 3.2b THE BALANCE OF PAYMENTS WITH COUNTRIES OF BILATERAL CLEARING ARRANGEMENTS, 1980-90  
(Millions of dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Current account after official transfers	-0.5	-0.4	-1.0	1.2	1.5	1.9	15.8	-3.0	8.4	5.9	-5.8
Trade balance	-1.7	-1.6	-1.1	-1.2	-3.1	-6.6	2.0	-16.7	-4.8	-3.1	-16.4
Merchandise exports fob	7.7	5.5	9.5	8.7	9.9	7.0	18.4	12.5	20.8	22.3	16.3
Merchandise imports 1/	-9.4	-7.1	-10.6	-9.8	-13.0	-13.5	-16.4	-28.2	-25.8	-25.4	-32.7
Services balance	1.3	1.2	0.2	2.4	4.6	8.5	13.8	13.7	13.2	9.0	10.6
Receipts	1.6	1.3	0.4	2.6	4.8	8.8	14.0	14.0	13.5	13.0	16.6
Shipments	1.3	1.2	0.2	2.5	4.6	8.8	13.8	13.8	13.1	12.8	16.3
Travel	0.0	--	--	0.0	--	--	--	--	--	--	--
Interest income	--	--	--	--	--	--	--	--	--	--	--
Others	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.4	0.2	0.3
Expenditures	-0.2	-0.1	-0.2	-0.2	-0.2	-0.3	-0.2	-0.3	-0.3	-4.0	-6.0
Shipments	--	--	-0.1	-0.1	-0.1	-0.2	-0.1	--	--	--	--
Travel	--	--	--	0.0	0.0	--	--	--	--	--	--
Interest payments	--	--	--	--	--	--	--	--	--	--	--
Others	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3	-0.3	-4.0	-6.0
Unrequited transfers	--	--	--	--	--	--	--	--	--	--	--
Private	--	--	--	--	--	--	--	--	--	--	--
Official	--	--	--	--	--	--	--	--	--	--	--
Capital account	0.5	0.4	1.0	-1.2	-1.5	-1.9	-15.7	3.0	-8.4	-5.9	5.8
Medium- and long-term capital	--	--	--	--	--	--	--	--	--	--	--
Disbursements	--	--	--	--	--	--	-5.6	-5.2	-5.5	-5.9	-5.8
Repayments 2/	--	--	--	--	--	--	-5.6	-5.2	-5.5	-5.9	-5.8
Short-term capital	--	--	--	--	--	--	--	--	--	--	--
Net errors and omissions	0.5	0.4	1.0	-1.2	-1.5	-1.9	-10.1	8.2	-2.9	--	11.6
Overall balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net change in foreign exchange reserves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Arrangements cover trade with the People's Republic of China, the Democratic People's Republic of Korea and Yugoslavia.

1/ Imports on cif as well as fob basis.

2/ Repayments to the People's Republic of China of debts contracted in the 1980s.

Sources: Government of Mongolia and International Monetary Fund.

Table 3.2c THE BALANCE OF PAYMENTS WITH CONVERTIBLE CURRENCY AREA, 1980-90  
(Millions of dollars)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Current account after official transfers	-0.1	0.4	3.1	-4.3	14.5	17.1	6.5	22.6	19.6	24.5	-45.3
Trade balance	-2.2	-3.9	-1.3	-7.5	12.3	13.9	-0.1	14.0	12.6	9.2	-56.1
Merchandise exports fob	6.7	6.3	8.7	5.0	20.3	23.1	17.7	31.5	34.1	52.6	24.1
Merchandise imports 1/	-8.9	-10.2	-10.0	-12.5	-8.0	-9.2	-17.8	-17.5	-21.5	-41.6	-76.5
Grants in kind	--	--	--	--	--	--	--	--	--	-1.8	-3.7
Services balance	2.1	4.3	4.4	3.2	2.2	3.2	6.7	8.6	7.0	11.4	2.4
Receipts	5.1	6.3	7.3	6.8	5.2	6.7	8.9	10.9	11.6	17.1	17.0
Shipments	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.5	1.0	1.5
Travel	1.1	2.3	2.6	2.6	2.3	2.2	2.4	3.3	3.4	3.5	4.4
Interest income	0.1	0.1	0.1	--	--	0.1	0.1	0.2	0.2	7.5	5.1
Others	3.8	3.8	4.6	3.2	2.9	4.3	6.2	7.1	7.5	5.1	6.0
Expenditures	-2.9	-2.0	-2.9	-2.6	-3.1	-3.6	-2.2	-2.3	-4.6	-5.7	-14.6
Shipments	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	0.0	-0.1	-0.2	-0.2	-0.8
Travel	--	--	--	--	--	--	--	--	--	--	-0.6
Interest payments	--	--	--	--	--	--	--	--	--	--	--
Others	-2.9	-2.0	-2.7	-2.6	-3.0	-3.4	-2.2	-2.2	-4.4	-5.5	-13.2
Unrequited transfers	--	--	--	--	--	--	--	--	--	3.9	7.4
Private	--	--	--	--	--	--	--	--	--	--	--
Official	--	--	--	--	--	--	--	--	--	3.9	7.4
Capital account	--	-0.9	-0.3	0.2	0.3	12.6	-6.8	11.9	-14.7	-18.5	-6.9
Medium- and long-term capital	--	--	--	--	--	--	--	--	--	--	--
Disbursements	--	--	--	--	1.6	1.6	2.3	2.3	1.7	1.7	-0.5
Repayments	--	--	--	--	1.6	1.6	2.3	2.3	1.7	1.7	-0.5
Short-term capital	--	--	--	--	--	--	--	--	--	--	--
Net errors and omissions 2/	--	-0.9	-0.3	0.2	-1.3	11.0	-9.1	9.6	-16.4	-20.2	-6.4
Overall balance	-0.1	-0.5	2.8	-4.1	14.8	29.7	-0.3	34.5	4.9	6.0	-53.2
Financing	0.1	0.5	-2.8	4.1	-14.8	-29.7	0.3	-34.5	-4.9	-6.0	53.2
Net change in foreign exchange reserves	0.1	0.5	-2.8	4.1	-14.8	-29.7	0.3	-34.5	-4.9	-6.0	53.2
Memorandum item:											
Net official reserves end year	14.9	14.4	17.1	13.1	27.8	57.5	57.3	91.8	96.7	102.7	49.5

1/ Imports on cif as well as fob basis.

2/ Includes valuation adjustment.

Sources: Government of Mongolia and IMF staff estimates.

Table 3.3: FOREIGN TRADE BY MARKETS, 1980-90

(In millions of transferable rubles)

	1980	1985	1986	1987	1988	1989	1990
Exports	269.9	461.7	479.8	481.0	495.2	488.4	442.7
Socialist countries	265.7	448.7	468.9	461.4	466.6	450.2	417.2
Nonsocialist countries	4.2	18.0	15.9	19.6	28.6	38.2	25.5
Imports	867.0	784.0	768.6	740.1	746.1	645.4	619.0
Socialist countries	259.5	475.3	498.0	490.5	496.8	486.0	567.0
Nonsocialist countries	107.5	258.7	265.6	249.6	249.6	159.4	52.0
Trade balance	-97.1	-272.3	-288.8	-259.1	-250.9	-162.0	-176.3
Socialist countries	6.2	-81.6	-84.1	-29.1	-27.7	-85.8	-149.8
Nonsocialist countries	-103.3	-240.7	-249.7	-230.0	-223.2	-126.2	-26.5

Source: State Statistical Office.

Table 3.4: COMPOSITION OF EXPORTS TO AND IMPORTS FROM SOCIALIST COUNTRIES, 1970-90  
(in percent of total at current prices; CMEA classification)

	1970	1975	1980	1985	1986	1987	1988	1989	1990
Exports	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Foodstuffs	9.6	21.4	19.0	9.4	11.0	10.6	8.1	3.7	6.6
Consumer goods	5.9	9.1	9.6	16.8	15.4	15.8	15.7	17.5	20.0
Fuels, mineral and metals	5.4	6.5	26.4	42.2	40.1	39.7	41.7	42.8	49.7
Chemicals	0.0	0.1	-	-	-	-	0.1	-	0.6
Building materials	0.9	0.3	0.4	0.7	4.0	4.5	3.4	4.0	3.9
Agricultural goods	19.5	27.4	13.4	6.1	9.4	7.6	8.1	6.5	5.3
Other	58.7	35.2	31.2	24.8	20.1	21.8	22.9	20.5	13.9
Imports	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuels, mineral and metals	12.8	10.3	24.1	28.7	28.3	30.8	33.5	27.3	27.2
Consumer goods	36.3	33.4	20.9	17.2	19.1	18.4	18.5	21.9	21.6
Chemicals	5.1	5.2	6.3	5.9	5.5	6.1	5.6	6.3	5.3
Agricultural goods	-	-	-	-	-	0.1	0.2	0.1	0.0
Engineering goods	25.9	35.8	33.1	36.3	36.1	32.2	30.2	29.6	31.1
Other	19.9	15.3	15.6	11.9	11.0	12.4	12.0	14.8	14.8

Source: State Statistical Office.

Table 3.5.: COMPOSITION OF EXPORTS TO AND IMPORTS FROM NONSOCIALIST COUNTRIES, 1970-90  
(in percent of total at current prices: CMEA classification)

	1970	1975	1980	1985	1986	1987	1988	1989	1990
Exports	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuels, minerals and metals	-	-	-	-	-	-	-	-	7.9
Foodstuffs	-	-	-	0.0	1.8	0.5	-	-	0.1
Raw materials	100.0	100.0	97.8	97.7	93.8	93.5	94.2	94.2	55.9
Consumer goods	-	-	2.2	2.3	4.4	6.0	5.8	5.5	35.5
Other	-	-	-	-	-	-	-	0.3	0.6
Imports	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Raw materials	...	1.1	1.3	30.3	24.1	21.2	21.3	19.3	9.3
Chemicals	55.5	29.2	14.0	17.1	14.0	12.4	12.3	13.9	14.0
Consumer goods	33.3	47.3	33.4	5.3	9.6	5.3	5.1	20.3	24.8
Foodstuffs	-	0.5	0.3	3.9	16.3	13.3	11.6	8.2	10.6
Other	11.2	21.9	51.0	43.4	36.0	47.8	49.7	38.3	41.3

Source: State Statistical Office.

Table 3.6a: COMPOSITION OF EXPORTS BY END-USE, 1980-90  
(in millions of transferable rubles)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Total</b>	289.9	314.0	376.4	408.6	453.9	481.7	479.8	481.0	495.2	483.4	442.7
CMEA	280.4	303.7	363.6	396.7	426.6	438.0	451.7	451.1	455.8	436.7	402.6
Non-CMEA	9.5	10.3	12.8	11.9	27.3	25.7	28.1	29.9	39.4	46.7	40.2
<b>Capital goods</b>	0.7	0.7	0.5	0.7	0.7	0.7	0.2	0.1	0.5	0.1	-
CMEA	0.7	0.7	0.5	0.7	0.7	0.7	0.2	0.1	0.5	0.1	-
Non-CMEA	-	-	-	-	-	-	-	-	-	-	-
<b>Fuel, minerals and metals</b>	71.3	107.9	147.0	160.2	187.4	195.0	192.4	189.3	206.5	206.7	213.0
CMEA	71.1	107.6	146.6	159.5	187.0	194.1	191.3	188.2	205.2	206.7	208.5
Non-CMEA	0.2	0.3	0.4	0.7	0.4	0.9	1.1	1.1	1.3	-	4.5
<b>Chemical fertilizers and rubber</b>	-	-	-	0.0	-	0.1	-	-	0.3	-	2.6
CMEA	-	-	-	0.0	-	0.1	-	-	0.3	-	0.6
Non-CMEA	-	-	-	-	-	-	-	-	-	-	2.0
<b>Building materials and elements</b>	1.1	1.6	1.9	3.4	4.6	3.0	19.2	21.9	17.0	19.5	17.1
CMEA	1.1	1.6	1.9	3.4	4.6	3.0	17.6	21.9	17.0	19.5	17.1
Non-CMEA	-	-	-	-	-	-	1.6	-	-	-	-
<b>Animals (live)</b>	-	-	-	0.4	-	-	-	-	-	-	-
CMEA	-	-	-	0.4	-	-	-	-	-	-	-
Non-CMEA	-	-	-	-	-	-	-	-	-	-	-
<b>Raw materials for food industry</b>	36.3	30.0	31.3	34.8	39.3	28.3	45.1	36.7	39.9	31.4	23.4
CMEA	36.3	30.0	31.1	34.6	38.5	27.7	44.0	35.2	39.2	30.6	22.9
Non-CMEA	-	-	0.2	0.2	0.8	0.6	1.1	1.5	0.7	0.8	0.5
<b>Other raw materials</b>	83.4	86.3	99.7	104.5	107.2	113.5	96.3	106.0	113.0	99.1	68.6
CMEA	74.6	77.4	88.2	94.8	82.3	90.9	78.1	84.6	80.3	58.8	48.0
Non-CMEA	8.8	8.9	11.5	9.7	24.9	22.6	18.2	21.4	32.7	40.3	20.6
<b>Food</b>	51.4	53.5	49.5	49.5	52.1	43.4	52.6	51.0	40.1	42.1	29.2
CMEA	51.3	53.0	49.3	49.3	52.1	43.2	47.7	47.4	38.2	40.3	27.7
Non-CMEA	0.1	0.5	0.2	0.2	-	0.2	4.9	3.6	1.9	1.8	1.5
<b>Other consumer goods</b>	25.7	34.0	46.5	55.1	62.6	77.7	74.0	76.0	77.9	84.5	88.8
CMEA	25.3	33.4	46.0	54.0	61.4	76.3	72.8	73.7	75.1	80.7	77.7
Non-CMEA	0.4	0.6	0.5	1.1	1.2	1.4	1.2	2.3	2.8	3.8	11.1

Source: State Statistical Office.

Table 3.6b: COMPOSITION OF IMPORTS BY END-USE, 1980-90  
(in millions of transferable rubles)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Total</b>	367.0	471.5	529.9	621.9	653.4	734.0	763.6	740.1	746.1	645.4	619.0
CMEA	355.4	459.3	514.4	605.7	636.6	715.4	738.7	707.7	713.7	597.1	542.6
Non-CMEA	11.6	12.2	15.5	16.2	16.8	18.6	24.9	32.4	32.4	48.3	76.4
<b>Capital goods</b>	121.4	164.7	187.7	221.0	223.4	266.1	275.7	288.6	225.5	191.3	192.4
CMEA	117.9	162.3	184.7	216.7	220.0	261.7	270.2	282.1	218.4	179.9	172.2
Non-CMEA	3.5	2.4	3.0	4.3	3.4	4.4	5.5	6.5	7.1	11.4	20.2
<b>Fuel, minerals and metals</b>	88.3	115.2	152.2	183.7	195.5	210.5	216.5	227.8	250.0	176.4	168.2
CMEA	88.3	115.2	152.2	183.6	195.5	210.5	216.5	227.8	250.0	176.4	168.2
Non-CMEA	-	-	-	0.1	-	-	-	-	-	-	-
<b>Chemical fertilizers and rubber</b>	23.1	23.7	30.2	28.2	36.7	43.1	41.5	45.4	41.7	40.4	32.5
CMEA	22.3	21.9	28.0	25.7	34.5	41.3	39.3	43.5	39.6	36.0	25.0
Non-CMEA	0.8	1.8	2.2	2.5	2.2	1.8	2.2	1.9	2.1	4.4	7.5
<b>Building materials and elements</b>	6.8	7.8	7.4	6.9	10.1	10.6	9.7	14.4	10.7	14.8	11.9
CMEA	6.8	7.8	7.4	6.9	9.8	10.5	9.6	13.2	8.8	13.0	7.3
Non-CMEA	-	-	-	-	0.3	0.1	0.1	1.2	1.9	1.8	4.6
<b>Animals (live)</b>	-	-	-	-	-	-	0.5	0.8	1.4	0.6	0.1
CMEA	-	-	-	-	-	-	0.5	0.8	1.4	0.6	0.1
Non-CMEA	-	-	-	-	-	-	-	-	-	-	-
<b>Raw materials for food industry</b>	10.6	23.1	9.6	10.1	7.7	10.5	7.9	9.9	0.7	5.3	1.6
CMEA	10.6	23.1	9.6	10.1	7.7	10.5	7.9	8.9	0.7	5.3	0.8
Non-CMEA	-	-	-	-	-	-	-	1.0	-	-	0.8
<b>Other raw materials</b>	8.8	9.5	10.7	11.8	15.0	20.7	17.9	18.8	24.8	25.9	23.7
CMEA	8.7	9.3	10.1	11.6	12.4	17.0	13.5	16.2	19.1	18.1	16.0
Non-CMEA	0.1	0.2	0.6	0.2	2.6	3.7	4.4	2.6	5.7	7.8	7.7
<b>Food</b>	31.0	35.8	38.7	42.5	42.0	46.0	48.3	48.0	53.5	49.4	54.7
CMEA	30.1	35.0	36.8	40.6	39.5	43.7	44.4	43.4	49.6	45.0	47.0
Non-CMEA	0.9	0.8	1.9	1.9	2.5	2.3	3.9	4.6	3.9	4.4	7.7
<b>Other consumer goods</b>	77.0	91.7	98.4	117.7	123.0	126.5	145.6	136.4	137.8	141.3	133.9
CMEA	70.7	84.7	85.6	110.5	117.2	120.2	136.8	121.8	126.1	122.8	106.0
Non-CMEA	6.3	7.0	7.8	7.2	5.8	6.3	8.8	14.6	11.7	18.5	27.9

Sources: State Statistical Office and The World Bank.

Table 3.7: ORIGIN OF IMPORTS AND DESTINATION OF EXPORTS, 1970-90  
(in percent of total at current prices)

	1970	1975	1980	1985	1986	1987	1988	1989	1990
Exports	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Socialist countries	98.2	99.3	98.4	96.1	96.7	95.9	94.3	93.1	94.4
Of which: CMEA	93.5	96.4	96.5	94.4	94.2	93.8	92.0	90.3	90.9
Nonsocialist countries	1.8	0.7	1.6	3.9	3.3	4.1	5.7	6.9	5.6
Industrial countries	-	-	-	-	-	3.8	5.4	6.7	5.5
Of which: Germany	-	0.0	0.4	0.2	0.2	0.2	0.2	0.2	2.0
Japan	-	-	-	-	-	-	-	-	1.2
Developing countries	-	-	-	-	-	0.3	0.2	0.2	0.1
Imports	100.0	-	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Socialist countries	99.2	-	98.5	99.0	98.3	98.3	97.9	95.6	92.0
Of which: CMEA	96.9	-	96.8	97.5	96.7	95.6	95.7	92.5	87.7
Nonsocialist countries	0.8	-	1.5	1.0	1.7	1.7	2.1	4.4	8.0
Industrial countries	-	-	-	-	-	1.6	2.1	4.1	7.6
Of which: Germany	-	-	0.4	0.3	0.3	0.4	0.4	0.4	4.1
Japan	-	-	-	-	-	-	-	-	1.1
Developing countries	-	-	-	-	-	0.1	0.0	0.3	0.4

Source: State Statistical Office.

Table 3.9: EXPORT AND IMPORT VALUES, VOLUMES AND DEFLATORS, 1980-90

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
(In millions of transferable rubles; index of deflators 1980=100) /b											
Exports (Current prices) /a	269.9	314.0	370.4	408.6	453.9	461.7	479.8	481.0	495.2	483.4	442.7
Centrally planned	265.7	308.0	370.4	406.1	438.8	443.7	463.9	461.4	468.6	450.1	427.0
Other	4.2	6.0	6.0	2.5	20.1	18.0	15.9	19.6	26.6	33.3	15.7
Exports (1980 prices)	269.9	295.6	324.3	369.3	388.2	366.7	409.7	395.7	388.8	363.2	330.4
Centrally planned	265.7	290.6	320.6	367.3	364.5	354.1	393.4	380.5	368.4	341.0	318.6
Other	4.2	5.0	3.8	2.0	18.7	14.6	16.3	15.2	20.4	25.2	11.8
Export price deflator	100	106	116	111	118	125	117	122	127	132	134
Centrally planned	100	106	116	111	119	125	118	121	127	132	134
Other	100	120	158	125	107	123	99	129	180	132	138
Imports (Current prices) /a	367.0	471.5	529.9	621.9	653.4	734.0	763.6	740.1	746.1	646.1	619.0
Centrally planned	361.6	464.3	522.6	612.5	648.8	726.4	750.8	727.8	730.3	617.7	582.6
Other	5.4	7.2	7.3	9.4	6.6	7.6	12.8	12.3	15.8	28.4	36.4
Imports (1980 prices)	367.0	439.8	428.1	487.9	457.7	504.2	496.6	484.5	459.7	394.0	370.6
Centrally planned	361.6	432.6	420.8	478.6	451.1	496.6	483.9	455.4	447.5	372.3	343.0
Other	5.4	7.2	7.3	9.3	6.6	7.6	12.7	9.1	12.2	21.7	27.6
Import price deflator	100	107	124	127	143	146	154	159	162	164	167
Centrally planned	100	107	124	128	143	146	155	160	163	166	170
Other	100	100	100	101	100	100	101	135	130	131	132
Terms of trade	100	99	94	97	83	86	76	76	78	80	80
Centrally planned	100	99	93	86	83	86	76	76	78	60	79
Other	100	120	158	124	107	123	97	95	101	101	101
(Annual percentage change) /c											
Export prices	1.7	6.2	9.3	-4.7	7.1	5.7	-6.5	3.6	4.8	3.6	1.5
Centrally planned	1.7	6.0	9.0	-4.3	7.6	5.3	-6.9	2.8	4.9	3.8	1.5
Other	5.9	20.0	31.6	-20.8	-14.0	14.7	-20.9	32.2	1.1	1.3	0.7
Import prices	10.0	7.2	15.5	3.0	12.0	2.0	5.6	3.6	1.9	1.0	1.9
Centrally planned	10.4	7.3	15.7	3.0	12.0	2.0	6.1	3.0	2.1	1.7	2.4
Other	-18.0	0.0	0.0	1.1	-1.1	0.0	0.8	34.1	-4.2	1.1	0.8
Terms of trade	-7.5	-0.9	-5.4	-7.4	-4.4	3.7	-11.5	0.2	2.9	2.6	-0.3
Centrally planned	-7.9	-1.2	-5.8	-7.2	-3.9	3.2	-11.3	-0.2	2.7	2.1	-0.8
Other	29.1	20.0	31.6	-21.7	-19.1	14.7	-21.5	-1.4	5.5	0.3	-0.1

/a Centrally planned economies include CMEA members, Yugoslavia, China, and the Democratic People's Republic of Korea, while "other" refers to countries in the convertible currency area; components may not add to totals because of rounding.

/b Trade under bilateral clearing arrangements and with the convertible currency area is converted into transferable rubles at the official rate of exchange.

/c For 1980, the rates of growth are averages for the previous five years.

Sources: Ministry of Trade and Industry, International Monetary Fund and The World Bank.

Table 3.9: INDICES OF EXPORT AND IMPORT PRICES, 1970-90

(In transferable rubles)

	Exports	Imports	Terms of trade
		(1970 = 100)	
1970	100.0	100.0	100.0
1976	169.3	119.7	141.4
1977	169.5	143.6	118.0
1978	172.9	156.0	110.8
1979	173.2	165.3	104.8
		(1980 = 100)	
1980	100.0	100.0	100.0
1981	106.2	107.2	99.1
1982	116.1	123.8	93.8
1983	110.6	127.5	86.7
1984	118.4	141.8	83.5
1985	125.2	145.6	86.0
1986	117.1	153.8	76.1
1987	121.6	159.3	76.3
1988	127.3	162.5	78.3
1989	132.0	164.0	80.5
1990	134.0	167.0	80.2

Sources: State Statistical Office and International Monetary Fund.

Table 3.10.: EXPORT COMMODITIES, 1970-90

	1970	1975	1980	1985	1990
Copper concentrate ('000 tons)	n.a.	n.a.	n.a.	n.a.	347.5
Fluorspar ('000 tons)	n.a.	n.a.	n.a.	n.a.	116.6
Coal ('000 tons)	-	-	-	225.0	490.2
Cement ('000 tons)	23.6	33.9	6.8	-	95.4
Timber ('000 cubic meters)	42.3	127.7	87.7	58.7	19.9
Sawn wood ('000 cubic meters)	10.9	59.8	125.9	136.1	42.5
Scoured wool ('000 tons)	8.0	9.3	8.9	5.7	2.8
Sheep and lamb wool ('000 tons)	2.1	1.9	1.9	2.0	0.5
Camel wool ('000 tons)	3.2	2.9	3.0	2.6	1.9
Goat down ('000 tons)	0.9	1.1	1.2	0.6	0.4
Horse mane ('000 ton)	0.9	0.6	0.7	0.6	0.5
Horse skins ('000 tons)	12.1	121.0	65.0	58.0	105.2
Sheep skins ('000 pieces)	5.1	64.0	261.0	280.2	130.0
Goat skins ('000 pieces)	4.2	72.0	315.1	526.2	113.2
Goat leather ('000 pieces)	224.6	341.6	175.0	236.6	172.0
Chevrette ('000 pieces)	394.6	517.2	123.1	411.0	24.1
Leather clothes (mln Tugrik)	14.2	30.2	54.7	88.4	87.0
Skin goods (mln Tugrik)	-	9.9	17.8	44.4	51.6
Carpets (million square meters)	-	0.3	0.4	1.5	1.7
Woolen fabrics ('000 m)	230.3	205.3	31.9	34.6	-
Woolen blankets ('000 pieces)	37.6	143.0	330.8	313.9	336.4
Goat down goods ('000 pieces)	-	-	38.9	236.5	275.7
Camel woolen goods ('000 pieces)	-	-	6.2	16.1	23.2
Marmot skins ('000 pieces)	907.8	715.2	520.0	578.8	73.0
Wheat ('000 tons)	1.5	-	-	6.2	-
Vodka ('000 liters)	-	-	130.0	350.0	186.4
Meat ('000 tons)	20.9	35.7	45.9	36.8	24.3
Livestock ('000 tons)	51.0	50.2	36.1	24.7	20.8
Horses ('000 head)	67.5	61.8	76.3	63.1	42.3

Source: State Statistical Office.

Table 3.11: IMPORT COMMODITIES, 1970-90

	1970	1975	1980	1985	1990
Machines, equipment & transport					
vehicles (mln Tugrik)	125.3	304.9	539.6	1,182.7	855.0
Energy generating equipment (mln Tugrik)	4.9	11.1	23.1	49.8	48.4
Diesel generators (pieces)	10	19	3	11	5
Cranes (pieces)	53	55	64	102	31
Excavators (pieces)	27	29	191	121	76
Tractors & self-propelled mechanisms (pieces)	493	490	383	375	390
Trucks (pieces)	288	1071	1186	1670	927
Buses (pieces)	63	139	214	224	246
Cars (pieces)	388	356	625	557	300
Fuel, raw materials, metals (mln Tugrik)	61.8	88.0	392.4	935.6	746.8
Gas oil ('000 tons)	74.3	129.2	213.3	312.2	364.3
Gasoline ('000 tons)	151.0	191.9	284.5	315.2	341.2
Fuel oil ('000 tons)	6.4	7.8	38.9	67.8	63.4
Lubricants ('000 tons)	17.4	26.3	22.8	22.8	20.9
Chemical products, fertilizers, rubber (mln Tugrik)	24.9	44.9	102.7	191.6	144.3
Nitrogenous fertilizers ('000 tons)	1.9	7.7	28.6	22.1	9.1
Phosphatic fertilizers ('000 tons)	0.6	1.5	22.8	13.8	19.9
Building/construction materials (mln Tugrik)	8.4	22.2	30.2	47.1	52.9
Cement ('000 tons)	18.7	28.1	36.4	107.4	38.5
Window glass ('000 square meters)	293.5	669.0	759.7	657.0	477.4
Nonfood raw materials & reprocessing products (mln Tugrik)	9.8	12.4	39.1	92.0	105.8
Paper ('000 tons)	4.4	6.3	9.4	9.6	8.5
Food, raw materials (mln Tugrik)	1.3	25.8	47.1	46.7	7.1
Wheat ('000 tons)	-	20.1	31.3	17.1	-
Foodstuffs (mln Tugrik)	61.3	62.7	137.8	204.4	243.0
Oil ('000 tons)	0.7	-	1.5	2.1	2.1
Sugar ('000 tons)	14.7	19.9	36.1	34.2	47.6
Fresh fruits ('000 tons)	1.3	2.5	3.1	1.4	3.5
Industrial consumer goods (mln Tugrik)	152.4	284.0	342.2	562.2	595.1
Cotton fabrics (mln Tugrik)	13.6	41.3	51.3	56.3	57.1
Woolen fabrics (mln m)	0.7	1.3	1.3	1.6	0.9
Silk (mln Tugrik)	4.4	5.1	5.5	7.0	3.8
Ready-made garments (mln Tugrik)	20.7	62.2	51.1	92.9	53.6
Knitted garments (mln Tugrik)	13.3	34.7	10.2	12.0	22.6
Furniture (mln Tugrik)	8.0	4.0	8.0	15.1	3.0
Sewing machines ('000 pieces)	-	3.2	5.0	10.0	7.0
Refrigerators ('000 pieces)	0.4	2.8	4.0	17.3	1.0
Washing machines ('000 pieces)	2.0	4.0	3.7	5.0	5.7
Television sets ('000 pieces)	5.1	2.0	0.4	10.1	19.1

Sources: State Statistical Office and The World Bank.

Table 3.12. EXPORTS BY COUNTRY OF DESTINATION, 1960-90

(Million Tugriks at current prices)

	1960	1970	1980	1985	1990
<b>Total exports</b>	<b>289.6</b>	<b>337.6</b>	<b>1,199.5</b>	<b>2,052.0</b>	<b>1,967.4</b>
Bulgaria	4.9	13.5	26.7	39.1	49.9
Viet Nam	-	-	3.1	4.9	0.8
German Democratic Republic	10.8	17.2	39.1	68.4	-
USSR	219.8	230.9	951.9	1,580.3	1,540.7
Cuba	-	0.6	2.7	3.6	3.8
Poland	7.4	13.4	25.8	56.4	33.2
Romania	1.1	7.2	17.8	47.1	30.2
Hungary	6.2	9.1	23.1	44.0	41.1
Czechoslovakia	22.3	24.4	67.1	93.8	89.1
People's Republic of China	13.1	6.9	11.6	8.0	33.7
Yugoslavia	0.2	0.5	4.0	9.8	8.3
United States	-	-	0.4	0.4	2.7
Austria	-	0.4	-	0.9	0.1
Germany, Federal Republic of	-	-	4.4	4.0	40.7
United Kingdom	-	3.3	8.4	8.4	9.0
Netherlands	-	-	0.9	20.4	4.5
Italy	-	-	0.9	2.7	16.4
France	-	-	1.3	0.9	8.2
Switzerland	0.7	0.5	-	19.6	3.5
Japan	0.2	1.4	2.2	22.7	22.7
India	-	-	-	-	0.1
Others	2.9	8.3	8.1	16.6	28.7

Source: State Statistical Office.

Table 3.13. ORIGIN OF IMPORTS BY COUNTRY, 1960-90

(Million Tugriks at current prices)

	1960	1970	1980	1985	1990
Total imports	387.1	482.8	1,631.2	3,262.2	2,751.1
Bulgaria	3.8	9.4	25.7	32.5	50.7
Viet Nam	-	-	5.3	7.9	6.8
German Democratic Republic	16.2	18.5	36.9	79.2	-
USSR	235.5	390.3	1,399.2	2,833.9	2,132.4
Cuba	-	-	2.6	2.6	1.2
Poland	10.3	10.3	17.8	45.4	39.2
Romania	1.0	9.3	16.0	53.8	18.6
Hungary	5.9	10.0	19.1	38.2	61.2
Czechoslovakia	20.8	19.8	57.0	86.2	101.1
People's Republic of China	87.7	3.9	10.6	14.7	66.3
Yugoslavia	0.3	-	7.1	18.7	26.0
Austria	-	-	6.2	9.3	29.7
Germany, Federal Republic of	-	-	5.8	9.3	111.5
United Kingdom	0.1	0.7	2.7	2.2	7.3
Netherlands	-	-	-	-	0.3
Italy	-	-	-	0.4	10.8
France	-	-	0.5	1.3	7.1
Switzerland	0.8	1.6	5.8	4.0	17.5
Japan	-	1.7	1.8	5.3	29.1
Singapore	-	-	-	-	2.0
Others	4.7	7.3	11.1	17.3	32.3

Source: State Statistical Office.

Table 4.1: LONG-TERM EXTERNAL DEBT BY CREDITOR COUNTRIES, 1981-90  
(In millions of transferable rubles)

	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Debt outstanding (end of year) /a	4,025.2	4,651.6	5,213.7	5,806.9	6,434.3	7,199.5	7,940.5	8,622.7	9,855.0	10,445.5
<b>CMEA countries</b>										
USSR	3,921.3	4,542.2	5,097.8	5,669.9	6,263.5	7,035.4	7,773.9	8,451.0	9,685.4	10,288.1
Czechoslovakia	31.7	33.5	36.5	38.0	38.6	38.6	40.0	39.9	38.9	40.2
Germany /b	12.7	12.2	13.5	13.7	16.1	15.7	16.6	18.9	19.4	19.4
Bulgaria	13.6	15.3	16.5	16.7	18.4	17.5	15.8	13.7	11.6	9.6
Romania	6.6	6.9	6.5	5.9	5.3	4.6	3.8	3.0	2.3	2.9
Hungary	29.3	31.6	32.9	33.7	34.9	34.6	34.2	34.2	35.5	34.4
Poland	9.5	9.9	10.0	9.0	8.3	7.9	10.8	15.6	17.9	19.7
People's Republic of China	...	...	...	...	49.2	45.2	41.8	38.2	34.8	31.2
International Investment Bank (Moscow)	---	---	---	---	---	---	3.6	8.2	8.2	---
<b>Disbursement by category of loan</b>										
Total	607.5	657.3	580.6	624.7	660.1	762.6	734.1	727.9	651.7	865.4
Trade loans	189.0	190.0	205.0	230.2	251.5	270.1	285.2	270.0	205.4	461.0
Technical assistance loans	418.5	467.3	375.6	394.5	408.6	492.5	448.9	457.9	446.3	404.4
Turnkey projects	338.2	338.2	263.6	295.2	302.7	365.8	304.9	255.1	269.4	278.2
Equipment	80.3	129.1	112.0	99.3	105.9	126.7	144.0	202.8	176.9	126.2
<b>Service payments on long-term debt</b>										
Interest (CMEA)	7.9	15.3	23.1	31.0	37.6	1.3	7.5	22.3	38.1	51.1
Principal	28.0	30.4	30.3	31.2	31.6	11.5	11.0	11.3	11.1	15.1
CMEA	28.0	30.4	30.3	31.2	31.6	7.5	7.6	7.7	7.7	11.6
People's Republic of China	...	...	...	...	...	4.0	3.4	3.6	3.4	3.5

/a Mongolia's long-term debt until 1990 was owed exclusively to the CMEA countries and China. Short-term imbalances sometimes arise in bilateral clearing accounts with other countries. Such imbalances are cleared in the early months of the subsequent year.

/b Former German Democratic Republic.

/c Debt to People's Republic of China contracted during the 1960s.

Sources: Ministry of Finance and Mongolbank.

Table 4.2 INTERNATIONAL RESERVES, 1986-90  
(Millions of dollars; end of year)

	1986	1987	1988	1989	1990
Net reserves	57.8	91.7	98.8	102.5	49.2
Gross reserves	72.2	148.5	149.2	278.9	177.8
of which: foreign exchange	58.5	128.4	130.8	260.1	122.6
gold 1/	18.7	20.1	18.9	18.8	54.7
Liabilities	14.9	56.8	52.6	176.4	128.1

Note: 1/ Gold was valued for 1986-89 and 1990 at about \$185 per troy ounce and world price of \$365 per troy ounce respectively.

Source: Mongolbank.

Table 4.3 EXCHANGE RATES, 1980-91

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
<b>Commercial rates:</b>												
Tugrik/dollar (period average)	2.90	3.19	3.24	3.30	3.54	3.71	3.18	2.69	2.69	3.00	4.67	25.86
Tugrik/dollar (end of year)	2.98	3.11	3.31	3.41	3.79	3.40	3.06	2.84	3.00	3.00	5.33	40.00
Tugrik/transferrable ruble (period average and end of year)	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44	4.44
<b>Noncommercial rates:</b>												
Tugrik/dollar (period average)	..	..	..	..	..	..	..	..	20.00	20.00	20.00	40.00
Tugrik/dollar (end of year)	..	..	..	..	..	..	..	..	20.00	20.00	20.00	40.00
Tugrik/transferrable ruble (end of year)	..	..	..	..	..	6.69	6.69	6.69	6.69	6.69	6.69	..
<b>Barter rate:</b>												
Tugrik/dollar (end of year)	..	..	..	..	..	..	..	..	..	..	..	7.10

Source: Mongolbank.

Table 5.1 SUMMARY OPERATIONS OF STATE BUDGET, 1980-91  
(Millions of tugriks)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 Budget
Total revenue	3452.6	3720.2	4182.3	4477.7	4680.4	4918.0	4360.4	4540.4	4680.7	5243.3	5328.8	7204.9
Tax	3125.3	3397.7	3818.3	4120.0	4296.8	4486.3	3989.5	4073.6	4242.0	4766.6	4892.4	5888.0
Non-tax	327.3	322.5	364.0	357.7	383.6	431.7	420.9	466.8	438.7	477.7	936.4	527.2
Total expenditure	3988.6	4146.5	4622.2	4991.5	5244.5	5580.6	6005.4	6359.6	6690.6	7009.0	6744.6	8621.2
Current /a	3397.0	3572.1	3980.2	4195.6	4467.8	4626.1	4874.0	5067.0	5175.8	5378.5	5468.5	7621.2
Capital /b	651.6	573.5	642.0	795.9	776.8	955.5	1131.4	1292.6	1514.8	1629.5	1276.1	1000.0
Overall balance	-536.0	-425.4	-439.9	-513.8	-564.2	-642.6	-1645.0	-1819.2	-2009.9	-1764.7	-1415.8	-1416.3
Financing	536.0	425.4	439.9	513.8	564.2	642.6	1645.0	1819.2	2009.9	1764.7	1415.8	..
Foreign	565.6	524.8	512.5	543.8	612.0	682.7	1699.7	1852.3	2015.7	1603.9	1513.3	..
Disbursements	620.7	649.1	647.0	678.3	750.5	823.0	1760.5	1901.3	2068.8	1658.3	1567.7	..
Commodity lending	240.0	306.7	222.2	244.4	311.1	360.0	1200.0	1266.7	1200.0	912.9	768.9	..
Investment lending	380.7	342.4	424.8	433.9	439.4	463.0	550.5	634.6	868.8	745.4	798.8	..
Amortization /a	55.1	124.3	134.5	134.5	138.5	140.3	50.8	49.0	51.1	54.4	54.4	..
Domestic	-29.6	-99.4	-72.6	-30.0	-47.8	-40.1	-64.7	-33.1	-5.8	160.8	-97.6	..
Compensation account /c	488.3	654.2	815.9	929.8	1022.6	1063.8	--	--	--	--	--	--
Soviet aid	424.4	583.3	622.2	686.7	711.1	756.8	--	--	--	--	--	--
Export price differential	63.9	120.9	193.7	263.1	311.5	308.2	--	--	--	--	--	--

/a The disaggregation of debt service between interest and amortization is partially estimated.

/b Excludes geological feasibility studies, some equipment, classified as current expenditure.

/c Includes the Soviet loans and grants channeled through the compensation account and remittances from export price differentials on goods shipped to the USSR through 1986.

Sources: Government of Mongolia, IMF and World Bank staff estimates.

Table 5.2 STATE BUDGET REVENUES, 1980-91  
(Millions of tugriks)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991 Budget
Total revenue	3452.6	3720.2	4182.2	4477.7	4680.4	4918.0	4860.4	4640.4	4680.7	5243.3	5328.8	7204.9
Of which: Local government	1061.9	1063.6	1163.6	1257.9	1393.0	1380.4	1451.3	1502.2	2033.0	2549.5	1823.5	2613.8
Tax revenue	3125.3	3397.7	3818.3	4120.0	4298.8	4486.3	3939.5	4073.6	4242.0	4765.6	4392.4	5888.0
Turnover taxes	2092.9	2277.4	2465.3	2633.2	2699.9	2735.9	2281.3	2269.2	2246.0	2410.8	2314.4	3269.0
Import price differential	1601.2	1686.7	1629.6	1667.9	1669.5	1744.1	1547.1	1570.0	1570.9	1739.1	1570.7	2484.2
Domestic turnover taxes /a	591.7	691.3	835.7	985.3	1030.4	991.8	714.2	699.2	675.1	671.7	743.7	784.8
Profit taxes	988.6	1056.9	1291.9	1425.5	1533.2	1698.0	1608.2	1736.2	1921.1	2276.0	2011.5	2542.1
Production taxes	30.9	29.0	25.1	24.0	24.1	22.6	26.7	21.9	26.4	24.6	16.2	10.2
Taxes on individuals	32.9	34.4	36.0	37.3	39.6	41.8	44.3	46.3	48.5	54.2	50.3	66.7
Nontax revenue	327.3	322.5	364.0	357.7	383.6	431.7	420.9	466.8	438.7	477.7	936.4	527.2
From state enterprises	13.8	24.2	27.9	32.6	31.5	28.5	32.0	32.9	33.4	32.4	30.5	365.1
From cooperatives	42.2	42.4	49.3	47.6	46.5	41.3	47.3	53.6	48.8	56.1	31.8	107.6
Social security premia	158.5	169.3	176.7	195.5	199.6	206.0	218.6	229.0	242.1	253.0	243.3	--
Other	112.6	86.6	110.1	91.6	107.0	155.8	123.0	151.3	114.4	137.2	631.3	54.5
Duty taxes	--	--	--	--	--	--	--	--	--	--	--	789.7

/a Including, from 1986, taxes arising from the differential in export contract prices.

Sources: Government of Mongolia, IMF and World Bank staff estimates.

Table 5.3 STATE BUDGET EXPENDITURES, 1960-91  
(Millions of tugriks)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1991 Budget
Total expenditures	3985.6	4145.6	4622.2	4991.5	5244.6	5580.6	6005.4	6359.6	6690.6	7008.0	6744.6	8621.2
Of which: Local government	1521.5	1541.8	1625.0	1727.3	1868.0	1969.8	2416.9	2805.5	3143.9	3437.7	3365.7	3979.9
Current expenditures	3337.0	3572.1	3960.2	4196.6	4467.8	4626.1	4874.0	5067.0	5176.6	5378.5	5468.5	7621.2
Of which: Wages and salaries	680.2	736.7	747.4	797.6	843.9	898.8	901.2	903.2	953.8	975.6	904.3	2199.2
National developments	1204.3	1261.4	1589.4	1659.1	1816.4	1843.8	1924.0	1968.1	1910.1	2087.6	2101.2	1121.3
Interest payments /a	105.6	40.2	77.7	113.4	138.6	167.5	5.8	33.3	99.6	169.2	229.1	0.0
Export subsidies	342.7	386.9	479.3	528.0	558.2	563.6	483.0	459.7	401.6	482.3	333.6	--
Other	756.0	824.3	986.4	1017.7	1119.6	1112.7	1436.2	1476.1	1414.7	1486.1	1538.5	1121.3
Social and cultural	1494.9	1612.2	1728.7	1819.3	1903.5	1999.4	2095.3	2228.6	2371.6	2445.7	2612.1	4521.3
Free food and medicine	157.1	171.7	192.2	229.8	247.6	244.1	248.6	245.9	269.9	297.1	294.7	534.5
Social security payments	129.1	136.6	138.8	146.2	154.3	174.3	177.4	207.4	241.0	220.6	235.9	..
Pensions	298.6	313.2	339.5	368.3	380.5	401.8	425.4	456.1	481.7	508.6	557.3	..
Material expenditure	453.6	500.2	553.9	514.3	528.2	555.7	610.9	672.5	676.1	698.3	802.9	1729.2
Other	461.5	490.5	515.3	570.7	592.9	628.5	636.0	646.7	702.9	720.9	721.3	1329.4
Administration and defense	581.5	631.5	641.5	664.5	691.6	712.6	790.2	792.5	833.2	777.0	680.6	1236.4
Other	56.3	77.0	55.6	52.7	56.3	69.3	64.5	77.8	74.9	68.2	74.6	746.2
Investments /b	651.6	573.5	662.0	795.9	776.8	935.5	1131.4	1292.6	1514.8	1629.5	1276.1	1000.0
Material sectors	225.1	168.6	197.3	252.1	252.9	313.4	473.9	530.1	698.6	785.5	863.6	584.1
Nonmaterial sectors	426.5	404.9	464.7	543.8	523.9	617.1	657.5	762.5	816.2	844.0	412.5	416.9

/a Partially estimated from debt-service data.

/b Excludes geological feasibility studies, some equipment, classified as current expenditure.

Sources: Government of Mongolia, IMF and World Bank staff estimates.

Table 6.4.: TRANSFERS TO PUBLIC ENTERPRISES AND SUBSIDIES, 1988-91

(Millions of Tugriks)

	1988	1987	1986	1985	1990	1991 Budget
<b>Total transfers and subsidies</b>	<b>1,698.9</b>	<b>1,656.0</b>	<b>1,618.2</b>	<b>1,754.9</b>	<b>1,698.4</b>	<b>1,092.6</b>
<b>Agriculture</b>	<b>497.9</b>	<b>515.6</b>	<b>457.2</b>	<b>502.0</b>	<b>528.4</b>	<b>30.0</b>
Price incentives to increase production	186.9	122.4	159.1	148.8	118.4	30.0
Farmgate price subsidy	57.1	102.8	100.1	102.9	-	-
Transportation of fodder for winter	151.1	148.1	149.0	140.1	179.8	-
Crop cultivation in state farms	-	-	-	-	156.0	-
Current assets shortfall compensation	98.6	100.2	7.0	79.5	70.0	-
Compensation for anticipated losses /a	15.7	30.5	26.5	29.2	1.2	-
Other subsidies	11.5	16.8	15.5	6.5	8.5	-
<b>Industry</b>	<b>240.8</b>	<b>268.3</b>	<b>303.3</b>	<b>339.7</b>	<b>447.2</b>	<b>609.8</b>
Electric and heating energy production /b	53.8	75.2	84.4	97.2	165.5	437.8
Clothing, shoes, boots etc for children	69.7	85.5	96.2	108.8	107.5	135.3
Subsidized cow milk supply in Ulaanbaatar	23.8	22.4	29.1	38.7	36.2	36.7
Bread production	-	-	-	8.8	8.8	-
Meat storage	12.8	20.0	30.8	33.2	43.0	-
Wood transport to processing factories	6.1	6.3	20.0	20.7	16.0	-
Coal mines	30.1	35.3	29.0	29.2	40.5	-
Sheep wool boots	-	-	-	-	13.5	-
Newspaper printing /c	-	-	-	-	3.8	-
Compensation for anticipated losses /a	27.7	10.9	3.2	2.3	3.9	-
Current assets shortfall compensation	13.4	3.5	5.9	-	2.7	-
Glass production	3.6	4.2	4.7	5.8	4.3	-
<b>Construction</b>	<b>51.8</b>	<b>25.4</b>	<b>18.0</b>	<b>15.8</b>	<b>17.8</b>	<b>18.0</b>
Subsidy to the Mapping Office	14.3	15.0	15.3	15.8	16.8	18.0
Current assets shortfall compensation	29.9	2.5	1.4	-	1.0	-
Compensation for anticipated losses /a	7.6	7.9	1.3	-	-	-
<b>Transport</b>	<b>28.6</b>	<b>29.7</b>	<b>33.4</b>	<b>23.2</b>	<b>31.6</b>	<b>25.3</b>
Public transport /d	27.0	29.3	29.7	23.2	31.6	25.3
Current assets shortfall compensation	0.5	0.3	-	-	-	-
Compensation for anticipated losses /a	1.1	0.1	3.7	-	-	-
<b>Trade</b>	<b>594.2</b>	<b>526.1</b>	<b>469.0</b>	<b>477.6</b>	<b>347.0</b>	<b>-</b>
Export subsidies	483.0	459.7	401.8	432.3	333.6	-
Export quality premia (incentives)	55.7	32.1	34.1	22.6	5.7	-
Current assets shortfall compensation	21.0	-	-	-	-	-
Petroleum price difference compensation	20.8	20.2	22.3	5.8	-	-
Other subsidies	13.7	14.1	10.8	16.9	7.7	-
<b>Housing</b>	<b>69.5</b>	<b>72.6</b>	<b>117.9</b>	<b>172.9</b>	<b>101.8</b>	<b>71.2</b>
Private sector home building	-	-	-	3.3	6.1	31.2
Compensation for increase in interest rates	69.5	72.6	117.9	169.6	95.7	40.0
<b>Other services</b>	<b>211.1</b>	<b>223.1</b>	<b>219.4</b>	<b>223.7</b>	<b>224.6</b>	<b>338.3</b>
Geologic research	138.2	145.5	134.2	135.8	144.7	200.0
Veterinary services	72.9	77.6	85.2	87.9	79.9	138.3

/a Compensation for anticipated losses during a transitional period.

/b For electric energy production by diesel generators in aimaks not connected to the central energy system. In some aimaks production of heating energy is also subsidized.

/c Compensation for price differentials.

/d Auto- and trolleybus services in Ulaan Baatar.

Sources: Ministry of Finance and The World Bank.

**Table 6.1 MONETARY SURVEY, 1986-91**  
(Millions of tugriks, end of year)

	1986	1987	1988	1989	1990	1991 Projection
<b>Net foreign reserves</b>	171.9	275.1	289.8	307.5	270.2	1160.0
<b>Other foreign assets, net 1/</b>	-529.9	-472.2	-250.9	-41.2	-364.1	-1340.5
<b>Net domestic assets</b>	5520.3	5433.0	4735.3	4821.2	6460.7	8736.5
<b>Domestic credit</b>	5520.3	5433.0	5766.1	5903.1	6573.9	11468.7
Government	-2385.3	-2431.6	-2209.0	-2050.0	-1454.2	-1409.8
Public enterprises	7608.5	7558.7	7606.2	7562.4	7549.7	11026.5
Private	297.1	305.9	388.9	390.7	478.4	1850.0
of which: cooperatives	..	..	353.1	324.7	351.2	1000.0
Other items, net	-962.4	-861.4	-1060.6	-1081.9	-113.2	-2730.2
<b>Liabilities (M2)</b>	4199.9	4374.5	4774.2	5087.5	6366.8	8556.0
<b>Money</b>	2736.1	2835.3	3021.7	3509.6	4658.8	5900.0
Currency in circulation	439.9	490.0	526.1	581.1	642.7	1900.0
Current accounts	2296.2	2345.3	2495.6	2928.5	4016.1	4000.0
<b>Quasi-money</b>	1463.8	1539.2	1752.5	1577.9	1708.0	2656.0

Note: Data for 1990 presented according to new classification system; to the extent possible, figures for 1988-89 have been revised accordingly.

1/ Includes net balances held at IBEC, net borrowing from IBEC, and borrowing in rubles from the Foreign Trade Bank in Moscow, and capital subscriptions to IBRD and AsDB.

Sources: Mongolbank, IMF and World Bank staff estimates.

**Table 7.1. GROSS OUTPUT IN AGRICULTURE, 1990**  
(Thousand tugriks)

	Current prices					Constant (1986) prices				
	Gross output	Net input + depreciation	Net material product	of which		Gross output	Net input + depreciation	Net material product	of which	
				Wages	Profit				Wages	Profit
<b>Agricultural Production Cooperatives</b>	1,251,408.7	501,781.0	749,627.7	509,048.7	240,579.0	1,174,741.6	470,376.2	704,365.4		
Livestock	1,079,989.1	377,464.9	702,524.2	466,318.7	236,205.5	1,023,234.4	360,500.9	662,733.5		
Crop farming	171,419.6	124,316.1	47,103.5	42,730.0	4,373.5	151,507.2	109,875.3	41,631.9		
<b>State Farms</b>	885,678.0	650,179.3	235,498.7	222,909.3	12,589.4	725,265.4	539,532.6	195,732.9		
Livestock	342,420.1	214,363.3	128,050.3	100,217.0	27,833.3	228,636.6	139,625.1	97,111.5		
Crop farming	543,257.9	435,809.5	107,448.4	122,692.3	(16,248.9)	498,628.8	400,007.4	98,621.4		
<b>Intercooperative organizations A a/</b>	4,938.3	2,861.3	2,077.0	1,977.4	99.6	4,114.5	2,280.9	1,833.6		
Livestock	3,486.8	1,863.0	1,623.8	1,431.5	192.3	3,553.6	1,895.1	1,658.6		
Crop farming	1,451.5	998.3	453.2	545.9	(92.7)	560.9	385.8	175.1		
<b>Intercooperative organizations B b/</b>	16,017.2	10,037.3	5,979.9	4,041.3	1,938.6	12,465.8	7,880.2	4,905.6		
Livestock	5,119.3	3,263.7	1,855.6	1,338.4	517.2	4,526.4	2,925.5	1,600.9		
Crop farming	10,897.9	6,773.6	4,124.3	2,702.9	1,421.4	7,939.4	4,934.7	3,004.7		
<b>Scientific institutions</b>	12,509.4	6,631.6	5,627.8	4,191.2	1,636.6	8,148.0	4,345.2	3,602.8		
Livestock	2,961.9	1,616.2	1,145.7	1,201.3	(55.6)	1,863.7	1,137.6	716.1		
Crop farming	9,547.5	4,886.4	4,682.1	2,989.9	1,692.2	6,294.3	3,207.6	3,086.7		
<b>State-owned enterprises</b>	53,744.1	0.0	53,744.1	0.0	53,744.1	43,882.4	357.2	43,525.2		
Livestock	33,948.5	0.0	33,948.5	0.0	33,948.5	28,208.2	357.2	27,851.0		
Crop farming	19,795.6	0.0	19,795.6	0.0	19,795.6	15,674.2	(0.0)	16,874.2		
<b>Households</b>	634,692.8	0.0	634,692.8	634,599.5	93.3	583,623.8	1,850.5	581,773.3		
Livestock	615,321.3	0.0	615,321.3	615,228.0	93.3	564,052.9	1,860.6	562,202.4		
Crop farming	19,371.5	0.0	19,371.5	19,371.5	0.0	19,670.9	0.0	19,670.9		
<b>TOTAL</b>	2,858,988.5	1,171,540.5	1,687,448.0	1,376,767.4	310,680.6	2,562,241.4	1,026,602.6	1,525,638.8		
Livestock	2,083,247.0	696,777.6	1,484,469.4	1,185,734.9	298,734.9	1,862,065.8	508,191.9	1,343,873.9		
Crop farming	775,741.5	572,762.9	202,978.6	191,032.5	11,946.1	700,175.6	518,410.7	181,764.9		

a/ There is one intercooperative organization type A in each aimak. Main activities are in construction and transport.  
b/ Activities of intercooperative organizations type B are mainly in crop production.

Source: State Statistical Office.

Table 7.2: AGRICULTURAL PRODUCTION, FIXED (1986) PRICES, 1970-90  
(in millions of Tugrik)

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Total gross agricultural production</b>	1,622.6	1,995.0	1,746.1	1,959.4	2,176.9	2,209.7	2,140.0	2,464.5	2,552.5	2,468.7	2,586.2	2,650.7	2,551.8
<b>Crop production</b>	258.0	458.8	319.5	397.8	576.9	797.7	701.9	816.2	816.5	749.1	761.0	602.0	700.2
<b>Of which:</b>													
Grains	185.5	314.6	168.5	209.4	335.8	530.9	391.9	523.2	436.8	346.9	410.9	422.6	362.1
Fodder and rootcrops	37.7	78.1	82.0	105.5	120.9	129.3	145.7	144.5	202.6	202.8	187.8	68.1	77.6
Potatoes	17.5	34.1	31.6	33.9	63.0	81.7	105.6	95.4	111.3	119.0	86.5	130.5	109.8
Vegetables	16.0	27.0	35.1	36.2	48.4	47.8	46.1	49.4	56.1	62.8	73.1	78.0	59.3
Fruits	0.9	1.8	1.6	1.2	2.2	1.7	1.3	1.2	1.9	1.1	1.1	1.2	2.2
<b>Animal production</b>	1,364.6	1,536.2	1,426.6	1,561.6	1,600.0	1,412.0	1,438.1	1,648.3	1,736.0	1,719.6	1,775.2	1,848.7	1,851.6
<b>Of which:</b>													
<b>Livestock for slaughter</b>	630.0	1,086.5	1,112.7	1,160.0	1,146.7	1,132.7	1,147.8	1,178.8	1,058.0	1,039.9	1,007.2	1,074.4	1,121.9
<b>Of which:</b>													
Cattle	238.2	275.3	348.5	339.1	317.8	330.6	330.8	330.3	365.5	352.5	355.6	353.2	321.0
Smaller cattle	412.0	571.2	524.4	574.9	596.4	560.9	573.0	526.8	557.1	547.7	510.2	553.3	594.3
Pigs	3.0	6.2	11.3	15.3	14.2	15.3	20.3	23.9	26.1	32.8	40.7	59.4	85.0
Poultry	0.6	1.0	1.5	1.5	1.5	1.3	1.6	1.7	1.9	2.0	2.5	2.2	1.9
Milk	129.5	130.4	129.0	130.9	137.6	127.5	148.0	162.7	298.8	302.0	303.4	322.4	315.4
Eggs	2.8	9.1	10.5	9.4	9.3	10.8	11.4	12.7	13.3	14.1	15.2	17.6	-
<b>Material inputs</b>	384.5	615.8	741.2	777.5	828.0	812.0	907.6	1,116.4	1,125.9	1,188.0	1,168.6	1,094.4	1,026.2
<b>Of which:</b>													
Crop production	30.2	129.2	346.6	388.3	441.2	437.9	520.3	508.4	535.2	567.8	559.3	573.0	518.5
Animal production	354.3	486.6	394.6	409.2	386.8	374.1	387.3	613.0	590.7	585.2	609.3	521.4	507.7
<b>Net material product</b>	1,072.4	1,050.4	1,004.9	1,181.9	1,349.1	1,347.2	1,232.4	1,346.1	1,426.6	1,335.7	1,367.1	1,556.3	1,525.6
<b>Of which:</b>													
Crop production	(227.8)	(329.6)	(27.1)	23.5	135.7	309.3	181.6	312.8	281.3	181.3	201.2	1,327.3	181.7
Animal production	1,300.2	1,380.0	1,032.0	1,152.4	1,213.4	1,037.9	1,050.8	1,035.3	1,145.3	1,154.4	1,165.9	229.0	1,343.9

Source: State Statistical Office.

Table 7.3: PRODUCTION AND AVERAGE YIELD OF MAJOR AGRICULTURAL CROPS, 1970-90

	1970	1975	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
	Production (thousand tons)												
Wheat	288.1	413.0	229.3	296.5	440.1	647.6	460.4	688.5	663.7	543.3	672.2	686.9	596.2
Maize /a	6.6	44.3	15.7	36.6	55.6	35.4	24.6	1.3	9.5	-	-	-	-
Barley	10.1	67.5	35.2	32.8	67.6	88.8	87.4	132.4	146.0	102.0	150.2	196.5	88.9
Oats	26.3	52.4	19.4	13.0	34.0	57.2	36.3	52.6	49.3	37.8	37.4	38.2	30.2
Sunflower seed /a	-	48.4	23.9	76.4	90.5	141.9	196.0	306.2	249.3	204.2	146.5	222.7	246.3
Potatoes	20.8	40.7	37.9	40.4	75.1	97.5	126.0	113.9	132.8	147.6	103.0	155.5	131.1
	Average yield (tons/ha)												
Wheat	6.3	13.1	5.6	7.2	10.2	14.6	10.0	14.3	14.2	11.6	10.5	13.0	11.2
Maize /a	27.0	76.0	41.2	69.8	87.8	84.5	124.5	6.4	23.3	-	-	-	-
Barley	6.7	12.5	3.8	4.2	12.0	11.9	10.2	13.9	14.6	10.2	9.9	10.9	10.1
Oats	5.1	8.9	4.0	2.7	10.2	10.8	6.9	12.0	10.0	8.1	8.8	10.3	10.4
Sunflower seed /a	-	12.4	37.4	90.3	96.6	133.3	132.7	202.8	130.5	120.3	87.8	102.3	126.3
Potatoes	72.5	94.4	50.9	86.1	99.7	102.1	130.0	110.1	119.1	118.6	78.3	123.2	107.7

/a For the years 1987-90, sunflower seeds and maize figures are combined.

Source: State Statistical Office.

**Table 7.4: NET PRODUCT OF AGRICULTURE, 1960-90**  
(millions of Tugriks)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1980
Current prices											
Total	838.2	1,007.7	1,219.5	1,320.2	1,250.2	1,237.8	1,520.7	1,405.5	1,510.0	1,722.9	1,898.9
State farms	(35.6)	20.9	84.5	223.5	138.7	165.8	221.9	148.6	203.3	231.7	241.3
Cooperatives	532.9	622.9	739.9	684.4	651.2	563.6	729.3	670.2	664.5	805.8	787.7
Personal plots and private farms	341.1	363.9	395.1	432.3	460.3	508.4	569.5	586.7	642.1	685.4	687.9
1986 Constant prices											
Total	1,004.9	1,181.9	1,348.9	1,347.7	1,232.4	1,348.1	1,426.6	1,385.7	1,367.1	1,556.3	1,525.6
State farms	(44.7)	15.8	89.8	270.4	150.9	227.2	195.0	182.1	173.5	196.3	189.5
Cooperatives	681.3	749.6	808.5	628.9	605.5	640.2	681.9	637.5	622.2	765.3	710.8
Personal plots and private farms	388.3	416.5	452.6	453.4	476.0	480.7	549.7	516.1	571.4	604.7	626.3

Source: State Statistical Office.

Table 7.5 IMPLICIT PRODUCER PRICE INDICES IN AGRICULTURE, 1990  
(1986=1)

	Gross output	Net input + depreciation	Net material product
Agricultural Production Cooperatives	1.085	1.067	1.064
Livestock	1.055	1.047	1.060
Crop farming	1.131	1.131	1.131
State Farms	1.221	1.205	1.268
Livestock	1.511	1.536	1.470
Crop farming	1.090	1.090	1.090
Intercooperative organizations A /a	1.200	1.254	1.133
Livestock	0.981	0.983	0.979
Crop farming	2.588	2.588	2.588
Intercooperative organizations B /b	1.285	1.277	1.298
Livestock	1.131	1.116	1.159
Crop farming	1.373	1.373	1.373
Scientific institutions	1.535	1.538	1.533
Livestock	1.598	1.598	1.600
Crop farming	1.517	1.517	1.517
State-owned enterprises	1.225	0.000	1.235
Livestock	1.203	0.000	1.219
Crop farming	1.263	0.000	1.263
Households	1.088	0.000	1.091
Livestock	1.091	0.000	1.094
Crop farming	0.990	0.000	0.990
TOTAL	1.120	1.141	1.106
Livestock	1.125	1.178	1.105
Crop farming	1.108	1.105	1.117

a/ There is one intercooperative organization type A in each aimak.

Main activities are in construction and transport.

b/ Activities of intercooperative organizations type B are mainly in crop production.

Source: State Statistical Office.

Table 7.6a GROSS OUTPUT IN THE LIVESTOCK SECTOR, 1990  
(Tons unless stated otherwise)

	Total	Agricultural production cooperatives	State farms	Intercooperative organizations A a/ B b/	Scientific institutions	State-owned enterprises	Households
<b>Meat - Total</b>	512,078	322,389	41,145	821	298	10,136	136,319
Camel	23,245	18,875	178	64	4	113	4,002
Horse	61,892	33,566	3,083	49	4	1,232	23,423
Cattle	192,920	57,168	14,731	173	226	2,099	57,828
Sheep	224,217	166,971	18,192	419	70	4,361	33,588
Goat	17,390	44,088	1,177	94	53	367	11,506
Pig	13,148	1,670	3,519	17	8	1,945	5,958
Poultry	358	49	263	6	5	20	14
Others	8	5	3	-	-	-	-
<b>Milk - Total</b>	315,653	115,649	58,683	646	180	4,130	135,505
Camel	1,027	771	3	-	-	-	253
Horse	26,071	8,449	955	30	15	590	16,027
Cattle	260,208	88,057	57,209	549	149	3,540	109,887
Sheep	15,262	10,441	423	59	8	-	4,310
Goat	13,084	7,931	93	9	17	-	5,028
<b>Wool - Total</b>	26,109	18,036	2,263	51	15	296	7,414
Sheep	21,059	13,340	2,108	44	8	215	6,353
Camel	2,431	2,068	21	0	1	7	335
Goat hair	847	554	11	1	0	5	276
Goat cashmere	1,464	935	28	2	6	15	479
Horse, yak and cattle cashmere	1,350	672	66	4	1	39	569
Horse, yak and cattle hair	918	468	31	1	0	15	402
<b>Poultry eggs ('000 pieces)</b>	38,007	1,436	35,700	-	2	617	117
<b>Poultry feathers (kg)</b>	7,705	1,120	6,585	-	-	-	-
<b>Honey</b>	40	14	4	-	22	-	-
<b>Deer antlers (kg)</b>	2,364	-	2,364	-	-	-	-
<b>Fur skins - Total ('000 pieces)</b>	72	21	50	-	-	1	1
Karakul ('000 pieces)	34	17	16	-	-	-	-
<b>Black fox (piece)</b>	3,571	-	3,571	-	-	-	-
<b>Marsh beaver (piece)</b>	1,210	-	1,210	-	-	-	-
<b>Other livestock products</b>	1,271	296	215	-	-	-	760

a/ There is one intercooperative organization type A in each aimak. Main activities are in construction and transport.  
b/ Activities of intercooperative organizations type B are mainly in crop production.

Source: State Statistical Office.

Table 7.6b GROSS OUTPUT IN THE LIVESTOCK SECTOR, 1990

(Million tugriks at current prices)

	Total	Agricultural production cooperatives	State farms	Intercooperative organizations A a/ B b/	Scientific institutions	State-owned enterprises	Households
<b>Meat - Total</b>	1,234.5	715.8	142.6	1.7	2.1	34.7	336.8
Camel	34.0	28.2	0.4	0.1	0.0	0.3	4.9
Horse	57.5	51.2	5.7	0.1	0.0	1.7	38.7
Cattle	350.2	145.1	43.4	0.4	0.7	6.5	153.7
Sheep	542.4	393.8	57.3	0.9	1.2	12.4	76.7
Goat	109.3	84.1	2.2	0.1	0.1	0.5	22.1
Pig	98.4	12.2	32.0	0.1	0.1	13.2	40.6
Poultry	2.6	0.8	1.5	0.0	0.0	0.1	0.1
Others	0.3	0.3	0.0	-	-	-	-
<b>Milk - Total</b>	380.6	94.7	115.0	0.7	1.6	5.3	163.2
Camel	1.1	0.8	0.0	-	-	-	0.3
Horse	25.6	8.7	1.1	0.0	0.0	0.8	14.8
Cattle	334.1	73.1	113.4	0.7	1.6	4.4	140.8
Sheep	10.2	6.6	0.4	0.0	0.0	-	3.1
Goat	9.7	5.5	0.1	0.0	0.0	-	4.1
<b>Wool - Total</b>	345.0	230.4	32.0	0.3	0.3	2.5	78.4
Sheep	154.6	92.3	28.3	0.3	0.2	1.3	32.2
Camel	55.3	46.5	0.5	0.0	0.0	0.1	8.2
Goat hair	1.2	0.7	0.0	0.0	0.0	0.0	0.5
Goat cashmere	127.2	87.8	2.9	0.1	0.1	1.0	34.5
Horse, yak and cattle cashmere	3.5	1.7	0.2	0.0	0.0	0.1	1.5
Horse, yak and cattle hair	3.2	1.5	0.1	0.0	0.0	0.1	1.5
<b>Poultry eggs</b>	22.8	1.4	20.8	-	0.1	0.5	0.1
<b>Poultry feathers</b>	0.2	0.0	0.2	-	-	-	-
<b>Honey</b>	1.6	0.4	0.1	-	0.0	-	-
<b>Deer antlers</b>	2.7	-	2.7	-	-	-	-
<b>Fur skins - Total</b>	14.0	1.6	12.3	-	-	0.0	0.0
Karakul	4.7	1.5	3.2	-	-	-	-
Black fox	2.1	-	2.1	-	-	-	-
Marsh beaver	0.4	-	0.4	-	-	-	-
<b>Increase in principal livestock c/</b>	21.6	31.2	12.9	0.7	1.0	-	26.0
<b>Increase in other livestock</b>	-25.2	-1.3	-0.5	-	-	-9.1	-14.4
<b>Other animal production</b>	25.4	5.9	4.3	-	-	-	15.2
<b>Total Livestock Production</b>	2,083.2	1,080.0	342.4	3.5	5.1	33.9	615.3

a/ There is one intercooperative organization type A in each aimak. Main activities are in construction and transport.

b/ Activities of intercooperative organizations type B are mainly in crop production.

c/ Camel, horse, cattle, sheep and goat.

Source: State Statistical Office.

Table 7.6c GROSS OUTPUT IN THE LIVESTOCK SECTOR, 1980  
(Million tugriks at constant 1988 prices)

	Total	Agricultural production cooperatives	State farms	Intercooperative organizations A a/ B b/	Scientific institutions	State-owned enterprises	Households
<b>Meat - Total</b>	1,121.9	688.9	108.6	1.8	0.7	29.9	311.7
Camel	28.9	23.5	0.2	0.1	0.0	0.1	5.0
Horse	85.9	46.9	4.3	0.1	0.0	1.7	32.7
Cattle	321.0	138.7	35.7	0.4	0.5	5.1	140.3
Sheep	493.7	367.7	40.1	0.9	1.4	9.6	74.0
Goat	105.6	81.1	2.2	0.2	0.1	0.7	21.2
Pig	66.0	10.8	22.8	0.1	0.2	12.6	38.5
Poultry	1.9	0.3	1.4	0.0	0.0	0.1	0.1
Others	0.0	0.0	0.0	-	-	-	-
<b>Milk - Total</b>	315.5	112.2	61.8	0.6	0.2	4.2	135.5
Camel	0.8	0.6	0.0	-	-	-	0.2
Horse	21.1	6.9	0.8	0.0	0.0	0.5	13.0
Cattle	276.1	93.4	60.7	0.6	0.2	3.5	116.6
Sheep	9.4	6.4	0.3	0.0	0.0	-	2.7
Goat	6.1	4.9	0.1	0.0	0.0	-	3.1
<b>Wool - Total</b>	304.6	203.3	17.5	0.4	0.4	2.8	79.9
Sheep	149.2	94.3	14.9	0.3	0.1	1.5	37.9
Camel	50.3	42.8	0.4	0.0	0.0	0.1	6.9
Goat hair	2.2	1.4	0.0	0.0	0.0	0.0	0.7
Goat cashmere	95.6	61.0	1.8	0.1	0.4	1.0	31.3
Horse, yak and cattle cashmere	3.4	1.7	0.2	0.0	0.0	0.1	1.4
Horse, yak and cattle hair	4.0	2.0	0.1	0.0	0.0	0.1	1.7
<b>Poultry eggs</b>	18.8	0.7	17.5	-	0.1	0.3	0.1
<b>Poultry feathers</b>	0.1	0.0	0.1	-	-	-	-
<b>Honey</b>	1.0	0.4	0.1	-	0.6	-	-
<b>Deer antlers</b>	1.4	-	1.4	-	-	-	-
<b>Fur skins - Total</b>	7.1	2.0	5.0	-	-	0.0	0.0
Karakul	3.8	2.0	1.8	-	-	-	-
Black fox	0.7	-	0.7	-	-	-	-
Marsh beaver	0.4	-	0.4	-	-	-	-
<b>Increase in principal livestock c/</b>	81.6	31.2	12.9	0.7	1.0	-	36.0
<b>Increase in other livestock</b>	-25.2	-1.3	-0.5	-	-	-9.1	-14.4
<b>Other animal production</b>	25.4	5.9	4.3	-	-	-	15.2
<b>Total Livestock Production</b>	1,852.1	1,023.2	226.6	3.6	1.9	28.2	584.1

a/ There is one intercooperative organization type A in each aimak. Main activities are in construction and transport.  
 b/ Activities of intercooperative organizations type B are mainly in crop production.  
 c/ Camel, horse, cattle, sheep and goat.  
 Source: State Statistical Office.

Table 7.6d IMPLICIT PRODUCER PRICES IN THE LIVESTOCK SECTOR, 1990  
(Tugrik/kg unless stated otherwise)

	Total	Agricultural production cooperatives	State farms	Intercooperative organizations A a/ B b/	Scientific institutions	State- owned enterprises	House- holds
<b>Meat - Total</b>	2.41	2.22	3.47	2.13	2.46	3.42	2.47
Camel	1.46	1.50	1.99	1.70	5.38	2.30	1.23
Horse	1.69	1.53	1.86	1.56	1.12	1.38	1.65
Cattle	2.65	2.54	2.95	2.45	3.11	3.08	2.66
Sheep	2.42	2.36	3.15	2.06	2.34	2.84	2.28
Goat	1.90	1.91	1.90	1.16	1.16	1.43	1.82
Pig	7.48	7.32	9.11	7.70	7.62	6.81	6.81
Poultry	7.20	16.43	5.62	7.73	12.56	6.00	6.00
<b>Milk - Total</b>	1.21	0.62	1.96	1.12	1.17	1.28	1.20
Camel	1.11	1.06	2.24	-	-	-	1.25
Horse	0.98	1.03	1.16	0.68	1.45	1.44	0.92
Cattle	1.28	0.83	1.98	1.19	1.19	1.25	1.28
Sheep	0.67	0.63	0.86	0.74	0.96	-	0.73
Goat	0.75	0.69	1.04	0.80	0.97	-	0.83
<b>Wool - Total</b>	12.27	12.77	14.15	6.65	64.36	8.58	10.58
Sheep	7.33	6.92	13.43	5.76	3.98	6.09	6.02
Camel	22.75	22.49	22.21	17.00	-	18.60	24.49
Goat hair	1.40	1.21	1.69	2.57	4.00	0.59	1.78
Goat cashmere	86.69	93.93	103.19	49.93	160.31	64.87	72.04
Horse, yak and cattle cashmere	2.58	2.50	3.44	1.28	3.00	1.88	2.63
Horse, yak and cattle hair	3.46	3.14	4.77	2.27	2.33	3.66	3.77
Poultry egg (Tugrik/piece)	0.60	0.94	0.58	-	1.13	0.80	0.80
Poultry feathers	29.93	7.23	33.79	-	-	-	-
Honey	39.82	29.07	36.14	-	47.20	-	-
<b>Fur skins - Total (Tugrik/piece)</b>	194.30	77.81	248.46	-	-	16.00	16.02
Karakul (Tugrik/piece)	140.08	86.24	197.91	-	-	-	-
Black fox (Tugrik/piece)	574.63	-	574.63	-	-	-	-
Marsh beaver (Turik/piece)	300.00	-	300.00	-	-	-	-
Other livestock products	64.21	105.17	59.83	-	-	-	47.34

a/ There is one intercooperative organization type A in each aimak. Main activities are in construction and transport.  
b/ Activities of intercooperative organizations type B are mainly in crop production.

Source: World Bank staff calculations based on data from the State Statistical Office.

Table 7.6e IMPLICIT PRODUCER PRICE INDICES IN THE LIVESTOCK SECTOR, 1990

(1986=1)

	Total	Agricultural production cooperatives	State farms	Intercooperative organizations A a/ B b/	Scientific institutions	State-owned enterprises	Households
<b>Meat - Total</b>	1.100	1.070	1.937	0.971	1.098	1.160	1.080
Camel	1.174	1.203	1.596	1.363	4.321	1.849	0.989
Horse	1.137	1.093	1.385	1.118	0.802	0.987	1.183
Cattle	1.091	1.047	1.214	1.009	1.283	1.270	1.086
Sheep	1.088	1.071	1.431	0.982	1.063	1.290	1.037
Goat	1.085	1.086	1.031	0.630	0.633	0.777	1.044
Pig	1.157	1.132	1.408	1.191	1.163	1.053	1.053
Poultry	1.361	3.081	1.054	1.448	2.355	1.126	1.126
<b>Milk - Total</b>	1.207	0.844	1.860	1.112	1.177	1.247	1.204
Camel	1.460	1.383	2.934	-	-	-	1.639
Horse	1.204	1.265	1.436	0.837	1.792	1.772	1.137
Cattle	1.210	0.782	1.868	1.117	1.120	1.180	1.208
Sheep	1.082	1.027	1.386	1.192	1.534	-	1.180
Goat	1.209	1.121	1.681	1.295	1.576	-	1.180
<b>Wool - Total</b>	1.132	1.133	1.822	0.794	2.193	0.901	0.981
Sheep	1.036	0.978	1.899	0.815	0.562	0.861	0.851
Camel	1.100	1.068	1.074	0.822	0.161	0.389	1.184
Goat hair	0.548	0.474	0.621	1.005	1.564	0.231	0.688
Goat cashmere	1.331	1.438	1.580	0.765	2.465	0.993	1.103
Horse, yak and cattle cashmere	1.025	0.994	1.366	0.608	1.192	0.741	1.047
Horse, yak and cattle hair	0.802	0.724	1.102	0.525	0.539	0.845	0.869
<b>Poultry eggs</b>	1.228	1.925	1.189	-	2.296	1.629	1.629
<b>Poultry feathers</b>	2.993	0.723	3.379	-	-	-	-
<b>Honey</b>	1.584	1.142	1.419	-	1.854	-	-
<b>Deer antlers</b>	1.989	-	1.989	-	-	-	-
<b>Fur skins - Total</b>	1.984	0.793	2.443	-	-	1.000	1.001
Karakul	1.229	0.757	1.736	-	-	-	-
<b>Black fox</b>	2.993	-	2.993	-	-	-	-
<b>Marsh beaver</b>	1.000	-	1.000	-	-	-	-
<b>Increase in principal livestock c/</b>	1.000	1.000	1.000	1.000	-	-	1.000
<b>Increase in other livestock</b>	1.000	1.000	1.000	-	-	1.000	1.000
<b>Other livestock products</b>	1.000	1.000	1.000	-	-	-	1.000
<b>Total Livestock Production</b>	1.125	1.055	1.511	0.981	1.598	1.203	1.091

a/ There is one intercooperative organization type A in each aimak. Main activities are in construction and transport.

b/ Activities of intercooperative organizations type B are mainly in crop production.

c/ Camel, horse, cattle, sheep and goat.

Source: World Bank staff calculations based on data from the State Statistical Office.

Table 8.1: INDUSTRIAL PRODUCTION, FIXED (1986) PRICES, 1970-90  
(in thousands of Tugrika)

	1970	1975	1980	1985	1986	1987	1988	1989	1990
Power	162,583.2	247,908.9	410,986.2	724,128.4	796,523.4	830,314.7	890,299.1	919,822.1	914,987.2
Fuel	74,647.3	101,538.9	163,394.1	242,990.8	283,399.2	289,488.4	320,406.6	299,912.7	266,813.4
Nonferrous ores	6,908.5	11,892.0	370,580.6	890,565.0	922,172.0	930,559.4	941,392.0	901,484.6	909,011.6
Iron	59,338.9	94,714.4	150,482.4	240,307.5	249,322.0	277,046.5	280,346.4	280,946.3	238,229.9
Chemicals	39,049.5	97,490.1	164,993.7	213,565.8	247,474.6	266,849.4	317,515.1	326,654.8	309,428.9
Construction materials	121,009.6	199,987.9	306,176.2	503,848.7	716,276.5	799,946.0	835,879.5	834,469.2	803,702.2
Wood	230,878.7	323,176.2	449,510.3	523,308.5	543,349.2	539,146.6	536,212.8	543,589.9	447,170.1
Glass	7,355.2	13,002.6	13,364.4	23,659.2	24,335.6	26,390.9	29,710.4	32,829.2	27,067.0
Textiles	169,090.8	270,746.9	342,818.8	778,638.7	825,118.5	846,095.9	839,123.2	948,670.3	852,881.6
Clothing	100,997.1	194,949.7	296,127.0	330,666.2	349,122.5	337,682.4	342,620.5	384,828.7	349,183.5
Leather	289,441.7	363,771.1	477,212.5	649,399.1	646,740.8	703,390.3	727,532.2	756,132.5	790,362.9
Print	25,225.2	34,675.2	50,251.4	51,858.7	59,921.5	63,391.1	65,998.9	68,717.0	59,440.4
Food	560,073.8	842,574.2	975,354.2	1,340,829.5	1,380,835.7	1,405,209.3	1,437,806.2	1,476,800.0	1,353,337.8
Other	12,516.3	48,850.0	38,630.9	79,858.8	86,338.2	99,078.3	103,744.2	100,656.0	106,553.4
Statistical discrepancy	(30,106.6)	(12,486.3)	8,417.8	(616.4)	--	--	--	--	--
Total	1,818,560.2	2,821,988.8	4,217,260.5	6,592,408.5	7,109,922.7	7,414,588.9	7,669,687.1	7,876,511.3	7,423,927.9

Source: State Statistical Office.

Table 8.2: NET INDUSTRIAL PRODUCTION, CURRENT PRICES, 1980-90  
(in thousands of Tugrites)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Power	189,687.1	216,917.7	254,735.2	277,113.8	259,088.1	338,359.0	280,859.7	294,095.3	274,968.5	294,616.8	n.a.
Fuel	63,117.8	77,387.0	99,970.8	86,397.0	67,067.5	92,866.8	84,699.6	103,558.4	119,044.7	84,694.8	n.a.
Nonferrous ores	98,555.5	130,989.1	298,528.1	358,384.0	390,857.8	406,924.0	402,327.4	426,272.5	398,592.9	411,405.0	n.a.
Iron	61,136.2	60,181.6	64,737.9	70,785.2	64,984.3	82,224.9	83,308.4	93,785.3	96,531.4	101,193.4	n.a.
Chemicals	66,361.2	64,371.8	62,965.0	69,170.4	71,103.7	68,159.0	81,255.2	92,141.7	107,157.0	127,132.0	n.a.
Construction materials	79,776.9	83,952.8	101,911.8	117,307.9	108,562.6	113,493.3	168,425.5	187,412.1	197,785.0	208,637.0	n.a.
Wood	135,746.9	137,101.7	136,514.7	166,834.5	153,724.9	170,618.8	161,286.7	158,068.5	155,694.0	169,488.8	n.a.
Glass	3,742.2	6,456.8	7,398.3	8,520.4	8,686.2	9,944.3	9,322.6	9,285.8	13,992.6	16,676.2	n.a.
Textiles	82,999.9	94,363.7	101,689.3	144,487.6	154,889.5	178,064.3	251,335.7	283,218.0	292,475.8	334,099.2	n.a.
Clothing	99,875.7	103,255.7	106,113.2	109,186.9	111,759.8	117,889.5	107,670.7	109,485.7	116,786.8	154,973.1	n.a.
Leather	139,447.9	154,868.9	140,942.7	176,595.9	161,011.8	158,768.3	184,282.3	197,908.3	234,766.3	301,169.5	n.a.
Print	42,706.5	44,833.3	46,332.9	47,823.3	51,863.7	50,672.2	35,355.1	36,540.3	38,780.5	43,094.6	n.a.
Food	537,609.3	614,165.9	651,269.9	704,296.0	727,977.7	679,956.5	566,699.2	502,239.4	505,908.8	629,396.6	n.a.
Other	15,951.6	17,918.5	27,484.0	25,971.6	30,108.0	25,411.5	28,598.4	25,417.0	29,435.7	43,190.6	n.a.
<b>Total</b>	<b>1,634,614.7</b>	<b>1,806,764.5</b>	<b>2,110,593.8</b>	<b>2,358,229.5</b>	<b>2,383,615.6</b>	<b>2,403,342.4</b>	<b>2,442,806.5</b>	<b>2,619,418.3</b>	<b>2,581,270.0</b>	<b>2,919,782.6</b>	<b>2,915,100.0</b>

Source: State Statistical Office.

Table B.3. ENERGY SECTOR STATISTICS, 1980-90

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>1. Electric Power Subsector</b>											
Fixed assets (Tugrik million)	1,627	1,753	1,858	1,945	2,468	3,071	3,756	4,227	4,483	4,631	5,243
As percentage of total industry (%)	28.8	23.8	23.2	23.0	30.4	27.5	30.3	31.7	32.9	30.9	35.1
Gross output (Tugrik million)	410	453	445	493	601	724	798	830	890	920	925
As percentage of total industry (%)	8.8	8.8	7.7	7.8	9.0	10.0	9.7	9.7	10.1	10.0	10.4
Number of employees	4,900	5,400	5,900	6,200	6,800	7,000	7,600	8,200	9,800	8,400	8,930
Public sector (MW)	430	430	430	422	522	650	656	668	772	852	932
Self-producers (MW)	40	44	45	44	47	47	49	50	51	52	52
<b>Total Installed Capacity (MW)</b>	<b>470</b>	<b>474</b>	<b>475</b>	<b>466</b>	<b>569</b>	<b>697</b>	<b>705</b>	<b>718</b>	<b>823</b>	<b>904</b>	<b>984</b>
Coal-fired generation (GWh)	1,311	1,321	1,271	1,450	1,937	2,480	2,617	2,992	3,185	3,090	3,058
Oil-fired generation (GWh)	255	242	247	318	307	363	353	369	359	460	398
<b>Total Generation (GWh)</b>	<b>1,566</b>	<b>1,563</b>	<b>1,518</b>	<b>1,768</b>	<b>2,244</b>	<b>2,843</b>	<b>3,170</b>	<b>3,361</b>	<b>3,544</b>	<b>3,570</b>	<b>3,456</b>
Electricity imports (GWh)	263	478	774	694	417	153	87	70	75	158	228
<b>Total Electricity Supply (GWh)</b>	<b>1,829</b>	<b>2,041</b>	<b>2,292</b>	<b>2,462</b>	<b>2,661</b>	<b>2,996</b>	<b>3,257</b>	<b>3,431</b>	<b>3,619</b>	<b>3,728</b>	<b>3,684</b>
Industry and construction (GWh)	873	1,052	1,175	1,221	1,263	1,633	1,799	1,837	1,671	1,911	1,803
Transport and communications (GWh)	69	81	84	88	89	145	161	178	182	185	174
Agriculture (GWh)	98	98	91	98	112	85	91	102	103	123	116
Communal housing & public services (GWh)	325	375	433	445	484	327	343	351	358	370	349
Other sectors (GWh)	75	85	108	172	190	190	205	206	267	293	290
<b>Total Energy Consumption (GWh)</b>	<b>1,497</b>	<b>1,638</b>	<b>1,891</b>	<b>2,024</b>	<b>2,138</b>	<b>2,380</b>	<b>2,599</b>	<b>2,674</b>	<b>2,781</b>	<b>2,882</b>	<b>2,732</b>
(Annual growth rate (%))	-	15.4	14.1	7.0	5.6	11.3	9.2	2.9	4.0	3.6	-5.2
Electricity consumption per capita (kWh)	865	973	1,083	1,132	1,187	1,268	1,350	1,355	1,376	1,392	1,287
Electricity consumption per employee (kWh)	293	307	321	328	314	340	342	326	284	343	306
Electricity exports (GWh)	-	-	-	-	2	53	38	28	53	-77	-78
Transmission and distribution losses (GWh)	125	110	123	134	155	174	181	248	278	280	323
As percentage of total supply (%)	6.8	5.4	5.4	5.4	5.8	5.8	5.6	7.2	7.7	7.5	8.7
Own use of power station (GWh)	287	273	278	304	388	443	477	509	560	568	583
As percentage of total supply (%)	14.6	13.4	12.1	12.3	14.5	14.8	14.6	14.6	15.6	15.2	15.2
Industrial and public tariff (Tugrik/kWh)	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Residential tariff (Tugrik/kWh)	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35	0.35
Diesel for industrial sector (Tugrik/kWh)	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48	0.48
<b>2. Coal Subsector</b>											
Fixed assets (Tugrik million)	405	413	429	453	561	670	908	1,008	1,077	1,189	1,208
As percentage of total industry (%)	6.4	5.5	5.4	5.4	5.8	7.6	7.6	7.6	7.9	7.9	8.1
Gross output (Tugrik million)	163	160	184	187	203	243	263	290	320	300	287
As percentage of total industry (%)	3.5	3.1	3.2	3.0	3.0	3.4	3.2	3.4	3.6	3.2	3.0
Number of employees	3,300	3,300	3,300	3,400	4,300	3,900	3,700	4,100	4,300	4,100	4,370
Coal production ('000 tons)	4,376	4,303	4,921	4,975	5,425	6,518	6,982	7,762	8,608	8,040	7,156
Coal imports ('000 tons)	2	34	1	2	12	0	0	0	73	77	73
Change in stocks ('000 tons) /a	-52	244	59	73	395	-129	50	48	-38	-94	-90
<b>Total Coal Supply ('000 tons)</b>	<b>4,316</b>	<b>4,581</b>	<b>4,980</b>	<b>5,050</b>	<b>5,832</b>	<b>6,387</b>	<b>7,012</b>	<b>7,810</b>	<b>8,641</b>	<b>8,023</b>	<b>7,159</b>

(Continued)

Table B.3. ENERGY SECTOR STATISTICS, 1980-90 (concluded)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Thermal power stations ('000 tons)	2,184	2,211	2,353	2,520	3,408	3,679	3,904	4,243	4,542	4,311	4,324
Industry and construction ('000 tons)	712	810	793	818	766	1,232	912	1,329	1,137	1,066	948
Agriculture ('000 tons)	322	348	349	353	381	401	485	517	429	202	208
Communal housing & public services ('000 tons)	871	775	772	740	866	702	784	439	737	1,248	723
Other sectors ('000 tons)	427	437	441	420	251	148	647	680	751	420	426
<b>Total Coal Consumption ('000 tons)</b>	<b>4,316</b>	<b>4,581</b>	<b>4,708</b>	<b>4,849</b>	<b>5,532</b>	<b>6,162</b>	<b>6,712</b>	<b>7,208</b>	<b>7,596</b>	<b>7,247</b>	<b>6,627</b>
(Annual growth rate (%))	-	6.1	2.8	3.0	14.1	11.4	8.9	7.4	5.4	-4.6	-8.6
Coal exports ('000 tons)	0	0	259	201	300	225	300	600	1,045	776	512
Coal price (Tugrik/ton)	34.1	34.3	35.3	35.1	35.0	35.8	36.0	36.4	37.0	37.6	n.a.
<b>3. Oil Subsector</b>											
Motor gasoline ('000 tons)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	370	360	364
Aviation fuel ('000 tons)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	39	34	40
Diesel oil ('000 tons)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	347	344	350
Residential fuel oil ('000 tons)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	58	60	60
Others ('000 tons)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	47	42	38
<b>Total Oil Imports ('000 tons)</b>	<b>n.a.</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	<b>861</b>	<b>840</b>	<b>868</b>
Motor gasoline price (Tugrik/liter)	0.90	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.25	1.25	1.25
Diesel oil price (Tugrik/liter)	0.54	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.12	1.13	1.13
Residential fuel oil price (Tugrik/liter)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	0.60	0.60	0.60
<b>4. Heating Subsector</b>											
Central region (Tcal)	3,419	3,652	3,808	4,028	4,374	4,702	5,070	5,166	5,046	5,460	5,555
Rural areas (Tcal)	85	58	58	60	101	109	149	331	980	982	1,545
<b>Total Heating Supply (Tcal)</b>	<b>3,474</b>	<b>3,710</b>	<b>3,866</b>	<b>4,088</b>	<b>4,475</b>	<b>4,811</b>	<b>5,219</b>	<b>5,497</b>	<b>6,026</b>	<b>6,442</b>	<b>7,110</b>
<b>5. Macroeconomic indicators</b>											
Population (yearly average, thousand)	1,801	1,703	1,748	1,788	1,832	1,877	1,925	1,973	2,021	2,070	2,122
Industrial fixed assets (Tugrik million)	6,306	7,480	7,990	8,448	11,404	11,180	12,395	13,327	13,626	14,989	14,981
Gross industrial output (Tugrik million)	4,650	5,169	5,775	6,316	6,705	7,214	8,195	8,542	9,798	9,244	8,807

/s A minus sign indicates an increase in stocks.

Sources: Ministry of Energy, State Statistical Office, The World Bank.

**Table 8.4. ELECTRICITY PRODUCTION AND CONSUMPTION, 1970-90**  
**(GWh)**

	1970	1975	1980	1985	1990
<b>Production</b>	<b>548.3</b>	<b>917.9</b>	<b>1,666</b>	<b>2,848</b>	<b>3,466</b>
<b>Imports</b>	<b>--</b>	<b>--</b>	<b>263</b>	<b>153</b>	<b>228</b>
<b>Losses</b>	<b>50.5</b>	<b>65.0</b>	<b>125</b>	<b>174</b>	<b>323</b>
<b>Domestic consumption</b>	<b>354.7</b>	<b>622.8</b>	<b>1,437</b>	<b>2,380</b>	<b>2,782</b>
<b>Of which:</b>					
<b>Industry</b>	<b>204.7</b>	<b>334.1</b>	<b>673</b>	<b>1,033</b>	<b>1,803</b>
<b>Agriculture</b>	<b>20.9</b>	<b>34.5</b>	<b>98</b>	<b>65</b>	<b>116</b>
<b>Households</b>	<b>109.3</b>	<b>149.7</b>	<b>325</b>	<b>327</b>	<b>349</b>

**Sources: State Statistical Office and Ministry of Energy.**

**Table 8.5: COAL BALANCE SHEET, 1975-90**

(Thousand tons)

	1975	1980	1985	1990
<b>Sources</b>	<b>3,018.1</b>	<b>5,107</b>	<b>6,537</b>	<b>7,413</b>
Stocks at the beginning of the year	285.3	729	21	184
Production	2,726.2	4,376	6,516	7,156
Imports	1.6	2	0	73
<b>Uses</b>	<b>3,013.1</b>	<b>5,107</b>	<b>6,537</b>	<b>7,413</b>
For electric power stations	1,762.6	2,184	3,679	4,824
<b>Consumption</b>	<b>989.9</b>	<b>2,132</b>	<b>2,483</b>	<b>2,303</b>
Industry	391.5	712	1,232	948
Agriculture	76.7	322	401	206
Households	210.5	671	702	723
Other	311.2	427	148	426
Losses	15.0	0	0	0
Exports	-	0	225	512
Stocks at the end of the year	245.5	791	150	274

Sources: State Statistical Office and Ministry of Energy.

Table 8.6: ELECTRICITY GENERATION AND CONSUMPTION IN THE CENTRAL ENERGY SYSTEM, 1980-90

(GWh)

Year	Gross generation (A)	Station use (B)	As per-centage of		Net generation (D=A-B)	Electricity imports (E)	Electricity exports (F)	Total supply (G=D+E-F)	Transmission and distribution losses (H)	As per-centage of	
			gross generation (C=B/A)	gross generation (C=B/A)						total supply (I=H/G)	Electricity consumption (J=G-H)
1980	1,311	258	19.7	1,053	263	-	1,316	112	8.5	1,204	
1981	1,320	260	19.7	1,060	505	-	1,565	97	6.2	1,468	
1982	1,271	270	21.2	1,001	760	-	1,761	110	6.2	1,651	
1983	1,479	294	19.9	1,185	679	-	1,864	123	6.6	1,741	
1984	1,958	378	19.3	1,580	410	4	1,986	146	7.4	1,840	
1985	2,480	430	17.3	2,050	169	53	2,166	169	7.8	1,997	
1986	2,830	460	16.3	2,370	87	38	2,419	234	9.7	2,185	
1987	2,991	494	16.5	2,497	72	32	2,537	195	7.7	2,342	
1988	3,169	525	16.6	2,644	75	58	2,661	234	8.8	2,427	
1989	3,090	519	16.8	2,571	158	77	2,652	242	9.1	2,410	
1990	2,966	538	18.1	2,428	228	76	2,580	323	12.5	2,257	

Source: Ministry of Energy.

Table 8.7: ELECTRICITY CONSUMPTION IN THE CENTRAL ENERGY SYSTEM

A. By Consumer Category

Consumer category	Electricity consumption			
	1989		1990	
	GWh	%	GWh	%
Residential	109.3	4.5	95.8	4.3
Industrial	2,103.3	87.3	2,009.4	89.0
Public	197.2	8.2	151.5	6.7
Total	2,409.8	100.0	2,256.7	100.0

B. By Region

District (aimak)	Main popula- tion centers	1990 consumption	
		(GWh)	(%)
Central	Ulaan Baatar	880.7	39.0
Bulgan Arhangay Ovorhangay	Erdenet, Bulgan Tsetserleg Arvayhaar	770.3	34.1
Selenge	Darhan, Suhbaatar	364.7	16.2
Dornogovi	Baganur, Sayanshand	241.0	10.7
Total		2,256.7	100.0

Source: Ministry of Energy.

Table 8.8: POWER STATIONS IN THE CENTRAL ENERGY SYSTEM, 1990

Power station	Unit no.	Installed capacity (MW)	Dependable capacity (MW)	Commissioning date
Ulaan	1	6		Dec 1961
Baatar	2	6		Dec 1961
No. 2	3	12		Dec 1969
		---		
		24	18	
Ulaan	1	12		Aug 1973
Baatar	2	12		Dec 1973
No. 3	3	12		Jun 1974
	4	12		Dec 1975
	5	25		Dec 1977
	6	25		Oct 1978
	7	25		Dec 1978
	8	25		Jun 1979
		---		
		148	125	
Ulaan	1	80		Oct 1983
Baatar	2	100		Nov 1984
No. 4	3	100		Dec 1985
	4	100		Dec 1986
	5	80		Feb 1990
	6	80		/a
		---		
		540	480	
Darhan	1	12		Oct 1965
	2	12		Oct 1965
	3	12		Oct 1965
	4	12		Jan 1966
		---		
		48	36	
Erdenet	1	12		Sep 1987
	2	8		Dec 1988
	3	8		Sep 1988
		---		
		28	20	
<b>Total</b>		<b>788</b>	<b>679</b>	
		---	---	

/a Under construction; scheduled for commissioning in late 1991.

Source: Ministry of Energy.

Table 8.9: INCOME STATEMENT OF THE CENTRAL ENERGY SYSTEM, 1988-91

(Million tugrik)

	1988	1989	1990	1991	/a
Revenues from electricity	508.7	479.3	452.8	190.7	
Revenues from heat	296.5	311.1	318.1	163.5	
Other revenues	0.0	0.0	8.1	3.2	
<b>Total Revenues</b>	<b>805.2</b>	<b>790.4</b>	<b>779.0</b>	<b>357.4</b>	
Coal	197.4	183.8	185.0	89.2	
Fuel oil	21.3	19.2	30.2	17.6	
Own use of electricity	9.8	9.0	9.4	4.3	
Electricity imports	16.2	26.4	31.9	2.0	
Water	13.7	13.9	14.4	6.0	
Maintenance materials	5.6	3.5	5.8	2.0	
Salaries and wages	32.1	27.4	33.4	21.0	
Technical personnel	37.6	28.8	34.3	14.5	
Administration	9.4	7.5	7.7	3.1	
Insurance	3.0	2.6	3.2	2.7	
Depreciation	219.5	210.6	215.9	61.9	
Bank charges	52.7	0.0	49.9	0.0	
<b>Total Costs</b>	<b>618.3</b>	<b>532.7</b>	<b>621.1</b>	<b>224.3</b>	
Operating profit	186.9	257.7	157.9	133.1	
Other profit	2.3	2.6	2.4	1.9	
<b>Total Profit</b>	<b>189.2</b>	<b>260.3</b>	<b>160.3</b>	<b>135.0</b>	

/a First quarter.

Source: Ministry of Energy.

Table 8.10: OPERATIONAL STATISTICS OF THE NO. 4 POWER STATION  
(October 1990 to March 1991)

Unit No.	Normal operation		Planned maintenance		Forced outage		Demand constraint		Total period	
	Hours	%	Hours	%	Hours	%	Hours	%	Hours	%
1	3,185	73	408	9	775	18	-	-	4,368	100
2	3,706	85	-	-	662	15	-	-	4,368	100
3	3,839	88	240	5	289	7	-	-	4,368	100
4	3,216	74	744	17	398	9	10	-	4,368	100
5	2,166	49	-	-	1,519	35	683	16	4,368	100
Average	3,222	74	278	6	729	17	139	3	4,368	100

Source: Ministry of Energy.

Table 9.1: INDICIES OF AVERAGE RETAIL PRICES BY COMMODITY GROUPS, 1985-89  
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(1980 = 100)

	1985	1986	1987	1988	1989
Total	103.0	102.0	102.0	102.0	102.0
Foodstuff	104.0	103.0	104.0	104.0	104.0
Nonfood	101.0	101.0	100.0	100.0	100.0

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Source: State Statistical Office.

Table 9.2: THE AVERAGE ANNUAL WAGE BY INDUSTRY, 1989-90

Branches and enterprises	1989 (Tugriks)	1990	Index of 1990 (1989=100)
Coal industry	8,266	8,294	100.3
Energy industry	7,582	7,015	92.5
Mining industry	9,964	9,872	99.1
Construction corporation of Ulaan Baatar	7,571	9,067	119.8
Wood processing company	7,707	7,167	93.0
Auto repair corporation	8,903	6,949	78.1
Food processing industry			
Meat processing factory	9,485	10,862	114.5
Alcohol and beer producing factory	6,170	6,491	105.2
Bread and bakery goods producing factory	6,976	6,469	92.7
Milk factory	7,144	6,866	96.1
Bakery	6,697	6,874	102.6
Light industry			
Clothing factory	7,440	8,513	114.4
Shoe manufacturing	7,262	7,874	108.4
Leather processing factory	6,244	7,271	116.4
Carpet manufacturing factory	6,858	7,102	103.6
Chrome plant	8,029	8,520	106.1
Factory of woolen products	7,883	7,920	100.5
Construction materials plant	10,501	9,619	91.6
Ferro-concrete plant	8,340	8,640	103.6
Transportation companies (total)	8,114	7,708	95.0
22nd transportation depot	8,697	8,559	98.4
Transportation company of Ulaan Baatar	8,433	7,880	93.4
Transportation corporation	6,965	7,599	109.1

Source: Ministry of Labor.

Table 10.1: COMPOSITION OF INVESTMENT, 1977-90

	Building and installation works		Machines, equipment, tools		Building and installation works		Machines, equipment, tools		Other
	(Million tugrik)	(Percent of total)	(Million tugrik)	(Percent of total)	(Million tugrik)	(Percent of total)	(Million tugrik)	(Percent of total)	
1977	3,009.9	1,896.4	954.9	158.6	63.0	31.7	5.3		
1978	3,724.2	2,236.3	1,256.3	231.6	60.0	33.7	6.2		
1979	2,600.0	1,704.9	719.1	176.0	65.6	27.7	6.8		
1980	3,104.0	2,060.8	806.2	237.0	66.4	26.0	7.6		
1981	4,288.9	2,556.7	1,209.5	522.7	59.6	28.2	12.2		
1982	4,646.1	2,804.2	1,287.4	554.5	60.4	27.7	11.9		
1983	3,924.3	2,200.0	1,269.4	454.9	56.1	32.3	11.6		
1984	4,281.8	2,405.9	1,324.0	551.9	56.2	30.9	12.9		
1985	4,633.8	2,740.0	1,409.4	484.4	59.1	30.4	10.5		
1981-85	21,774.9	12,706.8	6,499.7	2,568.4	58.4	29.8	11.8		
1986	4,762.5	2,627.8	1,525.4	609.3	55.2	32.0	12.8		
1987	4,552.2	2,361.3	1,523.1	667.8	51.9	33.5	14.7		
1988	4,537.9	2,492.3	1,358.8	686.8	54.9	29.9	15.1		
1989	4,806.8	2,639.7	1,528.0	639.1	54.9	31.8	13.3		
1990	3,379.8	2,227.1	810.0	342.7	65.9	24.0	10.1		

Source: State Statistical Office.

Table 10.2: COMPOSITION OF INVESTMENTS BY INDUSTRY, 1977-90

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
	(Million tugrik)													
Industry	1,423.0	1,689.5	907.4	1,254.8	1,767.2	2,614.5	1,740.9	1,668.3	1,583.3	1,870.1	1,397.8	1,246.5	1,401.0	936.1
Agriculture	425.8	483.6	391.2	408.6	488.2	563.2	552.2	691.6	671.0	615.6	601.2	687.5	731.6	337.2
Forestry	4.1	3.1	4.6	4.6	4.5	-	0.6	1.5	4.7	2.9	14.8	8.2	7.0	-
Construction	87.7	174.7	255.3	60.5	242.7	206.8	147.8	213.7	357.7	138.1	237.7	318.4	213.7	142.7
Transportation	213.0	270.8	153.1	165.8	223.2	262.6	280.7	288.1	293.1	445.3	461.7	552.3	515.0	341.2
Communications	32.5	95.5	122.3	157.4	131.7	58.2	62.7	109.8	89.3	102.2	58.9	51.6	65.0	26.2
Trade	85.0	43.9	41.8	52.6	82.1	63.3	27.3	43.5	58.7	100.9	122.2	127.5	162.0	95.7
Education, cul- ture, art	174.7	134.4	108.3	117.7	164.9	207.3	167.8	317.1	251.0	210.3	241.0	220.3	274.0	257.6
Science, health, sports	55.7	64.5	72.5	81.4	133.8	102.8	100.3	96.6	102.2	136.6	140.7	108.0	141.7	154.7
Personal services	102.5	98.6	109.9	97.7	86.0	141.0	103.8	114.7	107.3	205.3	238.4	226.0	267.0	991.9
Housing	344.1	617.3	372.0	487.5	702.8	772.8	447.4	490.1	796.0	608.0	746.4	753.3	857.0	1
Other	61.8	48.3	61.6	215.4	261.8	252.0	292.8	246.8	319.5	327.2	291.4	236.4	169.2	95.2
Total	3,009.9	3,724.2	2,600.0	3,104.0	4,288.9	5,242.5	3,924.3	4,281.8	4,633.8	4,782.5	4,552.2	4,536.0	4,804.2	2,386.6
	(Percent of total)													
Industry	47.3	45.4	34.9	40.4	41.2	49.9	44.4	39.0	34.2	39.3	30.7	27.5	29.2	39.2
Agriculture	14.1	13.0	15.0	13.2	11.4	10.7	14.1	16.2	14.5	12.9	13.2	15.2	15.2	14.1
Forestry	0.1	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.1	0.0
Construction	2.9	4.7	9.8	1.9	5.7	3.9	3.8	5.0	7.7	2.9	5.2	7.0	4.4	6.0
Transportation	7.1	7.3	6.9	5.3	5.2	5.0	7.2	6.7	6.3	9.4	10.1	12.2	10.7	14.3
Communications	1.1	2.6	4.7	5.1	3.1	1.1	1.6	2.6	1.9	2.1	1.3	1.1	1.4	1.1
Trade	2.8	1.2	1.6	1.7	1.9	1.2	0.7	1.0	1.3	2.1	2.7	2.8	3.4	4.0
Education, cul- ture, art	5.8	3.6	4.2	3.8	3.8	4.0	4.3	7.4	5.4	4.4	5.3	4.9	5.7	10.8
Science, health, sports	1.9	1.7	2.8	2.6	3.1	2.0	2.6	2.3	2.2	2.9	3.1	2.4	2.9	6.5
Personal services	3.4	2.6	4.2	3.1	2.0	2.7	2.6	2.7	2.3	4.3	5.2	5.0	5.6	0.0
Housing	11.4	16.6	14.3	15.7	16.4	14.7	11.4	11.4	17.2	12.8	16.4	16.6	17.6	0.0
Other	2.1	1.3	2.4	6.9	6.1	4.8	7.5	5.8	6.9	6.9	6.4	5.2	3.5	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: State Statistical Office.

Table 10.3: INVESTMENT BY MATERIAL/NONMATERIAL SPHERES

	Total	Material sphere (Million tugrik)	Nonmaterial sphere	Material sphere - (Percent of total) -	Nonmaterial sphere
1940	17.2	9.9	7.3	57.6	42.4
1941	26.5	15.3	11.2	57.7	42.3
1942	18.6	11.1	7.5	59.7	40.3
1943	17.4	10.4	7.0	59.8	40.2
1944	22.6	6.5	16.0	29.2	70.8
1945	26.3	11.5	14.8	43.7	56.3
1946	43.8	14.3	29.5	32.6	67.4
1947	47.0	11.1	35.9	23.6	76.4
1948	40.6	13.9	26.7	34.2	65.8
1949	31.7	9.6	22.1	30.3	69.7
1950	41.1	19.9	21.2	48.4	51.6
1951	40.7	14.8	25.9	36.4	63.6
1952	49.5	28.6	20.9	57.8	42.2
1953	60.2	37.8	22.4	62.8	37.2
1954	88.5	62.9	25.6	71.1	28.9
1955	123.9	92.6	31.3	74.7	25.3
1956	185.2	135.1	50.1	72.9	27.1
1957	341.6	267.1	74.5	78.2	21.8
1958	377.7	260.8	116.9	69.0	31.0
1959	510.7	355.5	155.2	69.6	30.4
1960	579.4	388.7	190.7	67.1	32.9
1961	639.4	391.6	247.8	61.2	38.8
1962	794.1	531.0	263.1	66.9	33.1
1963	872.4	667.4	205.0	76.5	23.5
1964	532.6	508.7	23.9	95.5	4.5
1965	814.9	490.0	324.9	60.1	39.9
1966	846.3	422.0	424.3	49.9	50.1
1967	1,018.2	690.4	327.8	67.8	32.2
1968	1,195.4	908.8	286.6	76.0	24.0
1969	1,168.4	897.4	271.0	76.8	23.2
1970	1,061.9	794.1	267.8	74.8	25.2
1971	1,149.2	833.1	316.1	72.5	27.5
1972	1,146.5	871.6	274.9	76.0	24.0
1973	1,236.3	853.6	382.7	69.0	31.0
1974	1,596.0	1,159.1	436.9	72.6	27.4
1975	1,882.5	1,174.0	708.5	62.4	37.6
1976	2,575.3	1,744.3	831.0	67.7	32.3
1977	3,009.9	2,271.1	738.8	75.5	24.5
1978	3,724.2	2,761.1	963.1	74.1	25.9
1979	2,600.0	1,875.7	724.3	72.1	27.9
1980	3,104.0	2,104.3	999.7	67.8	32.2
1981	4,288.9	2,939.6	1,349.3	68.5	31.5
1982	4,646.1	3,170.2	1,475.9	68.2	31.8
1983	3,924.3	2,812.2	1,112.1	71.7	28.3
1984	4,281.8	3,016.5	1,265.3	70.4	29.6
1985	4,633.8	3,057.8	1,576.0	66.0	34.0
1986	4,762.5	3,275.1	1,487.4	68.8	31.2
1987	4,552.2	2,894.3	1,657.9	63.6	36.4
1988	4,537.9	2,992.0	1,545.9	65.9	34.1
1989	4,806.8	3,097.0	1,709.8	64.4	35.6
1990	3,379.8	1,880.4	1,499.4	55.6	44.4

Source: State Statistical Office.

Table 10.4: INVESTMENT IN INDUSTRY <sup>a/</sup> BY SUBSECTORS, 1977-89  
(Million tugrik)

Year	Generation of electric energy and heating											Printing	Food	Other	Total	
	Petroleum refineries	Engineering	Nonferrous metals	Metal working	Chemicals	Building materials	Wood processing	Textiles	Glass	Clothing	Leather, fur					
1977	328.2	97.2	96.4	611.9	88.3	1.3	181.8	46.6	19.9	-	1.2	29.3	0.3	14.3	2.7	1,519.4
1978	188.0	202.9	142.8	783.5	48.9	67.3	183.1	105.4	86.8	-	0.1	32.3	1.5	16.6	23.1	1,832.3
1979	110.7	240.9	224.2	135.6	25.5	1.8	79.5	56.6	175.4	-	1.6	45.5	0.9	22.3	11.1	1,131.6
1980	81.2	207.0	207.0	168.2	58.2	29.4	381.6	56.6	167.6	3.3	-	31.6	0.3	29.5	40.6	1,462.1
1981	412.6	274.7	-	76.7	15.1	84.0	525.3	83.1	164.3	9.0	-	58.3	-	57.2	6.9	1,787.2
1982	616.0	332.8	-	376.7	11.2	180.7	162.1	65.4	86.7	1.7	2.4	29.7	-	144.5	7.6	2,017.5
1983	761.2	295.8	-	55.4	6.1	172.1	106.7	74.8	38.0	-	3.3	24.0	-	191.0	n.a.	1,728.4
1984	685.2	219.1	-	84.6	14.3	192.4	190.2	63.7	27.2	-	2.9	41.5	-	104.5	n.a.	1,626.6
1985	588.7	104.7	104.7	115.5	28.9	168.2	283.7	59.0	23.9	-	1.0	43.9	1.7	109.9	n.a.	1,632.8
1986	588.4	212.8	212.8	143.1	25.0	258.2	262.1	110.2	69.5	0.7	2.6	55.6	3.5	117.5	n.a.	2,062.0
1987	391.6	188.7	-	106.1	26.0	250.7	212.7	121.5	77.5	0.1	7.5	0.3	1.3	16.8	n.a.	1,400.8
1988	159.4	196.4	-	214.8	22.2	97.6	226.9	41.6	122.6	1.5	17.5	45.5	3.3	101.4	n.a.	1,260.7
1989	382.0	110.3	110.3	285.6	33.0	48.1	214.4	43.2	112.3	0.5	25.0	10.1	10.4	136.1	n.a.	1,471.8

<sup>a/</sup> Differs from Table 10.2 due to difference in sector coverage.

Source: State Statistical Office.

Table 10.5: CHANGE IN STOCKS BY SECTOR, 1979-90

(in millions of Tugriks)

	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Material sphere	1071.0	18.5	316.8	546.8	574.2	280.5	839.9	1421.3	-114.9	-203.4	134.4	-237.5
Agriculture	-10.0	-7.2	126.6	84.6	32.8	55.1	62.9	147.1	90.1	92.0	61.2	-80.1
Industry	176.7	108.2	110.7	240.7	272.8	176.8	287.5	389.5	18.6	-127.8	-83.1	-281.2
Construction	122.2	-25.4	45.8	14.9	-10.9	-9.9	18.5	98.4	-7.9	45.1	6.5	-1.9
Transport	11.2	24.4	-99.4	2.1	15.4	9.4	48.9	21.6	-17.5	-2.1	7.9	-6.5
Communications	-1.6	-1.5	3.2	0.3	-0.1	0.0	3.2	3.1	-1.6	2.0	2.4	-1.5
Trade & catering	772.5	-80.0	129.9	204.2	284.2	49.1	438.9	781.6	-186.6	-212.6	139.5	123.7

Source: State Statistical Office.

Table 10.6: STOCKS AT THE END OF THE YEAR, 1978-90

(in millions of Tugriks)

	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Material sphere	5,473	6,544	6,863	6,860	7,427	8,001	8,281	9,121	10,542	10,428	10,224	10,359	10,121
Agriculture	1,118	1,108	1,101	1,227	1,312	1,345	1,400	1,463	1,610	1,700	1,792	1,853	1,763
Industry	876	1,052	1,161	1,271	1,512	1,785	1,962	2,229	2,619	2,637	2,509	2,426	2,165
Construction	336	458	432	478	493	482	472	491	589	581	626	633	631
Transport	153	194	216	119	121	136	146	195	216	199	197	205	198
Communications	15	13	11	15	15	15	15	18	21	20	22	24	22
Trade & catering	2,947	3,720	3,640	3,770	3,974	4,238	4,287	4,728	5,488	5,291	5,078	5,216	5,342

Source: State Statistical Office.

Table 10.7: CHANGES IN STOCK OF INCOMPLETE INVESTMENT PROJECTS, 1970-90

(in millions of Tugriks)

	1970	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Total	641.8	(433.8)	912.0	452.8	658.3	(1,072.3)	(1,273.8)	1,018.3	115.9	490.9	261.3	1,270.9
Material sphere	495.9	(358.3)	634.5	231.4	277.9	(972.7)	(1,169.7)	740.8	(177.0)	574.3	24.9	727.4
Industry	192.5	38.2	625.5	191.2	(177.5)	(1,099.2)	(783.6)	650.7	(190.8)	211.1	(221.2)	486.8
Construction	117.7	(250.1)	35.7	142.5	295.1	(157.4)	(185.2)	16.0	28.6	46.3	39.0	13.1
Agriculture	102.0	(199.1)	5.4	58.6	66.8	128.4	(268.5)	(56.9)	64.6	178.3	27.4	70.1
Transport	65.6	10.7	74.8	(174.8)	11.2	116.2	150.8	1.4	(78.0)	179.5	80.4	185.9
Communications	40.2	15.1	(103.4)	30.6	53.8	32.6	(83.6)	81.6	(46.4)	(35.2)	36.6	(23.2)
Trade & catering	(22.1)	16.9	(3.5)	(16.7)	8.5	11.7	0.4	48.0	50.0	(5.7)	62.7	(5.3)
Other material sphere	2.2	3.5	(11.0)	-	-	(0.2)	(0.1)	(0.2)	-	2.9	(1.2)	0.8
Nonmaterial sphere	145.9	(71.5)	277.5	221.4	380.4	(99.6)	(104.1)	277.5	292.9	(88.4)	236.4	543.5
Housing, communal and consumer services	165.0	(87.3)	325.1	162.7	139.5	(142.2)	(21.0)	146.9	208.0	199.3	214.4	805.4
Science & scientific services	(17.7)	(15.2)	(13.3)	(1.9)	(2.6)	(0.4)	1.6	3.7	1.3	3.2	12.5	31.1
Public health, social security, sport & tourism	7.7	17.5	(6.8)	17.7	64.7	(16.3)	(28.0)	(79.1)	(2.8)	12.4	24.0	57.9
Education, culture & arts	(21.3)	3.4	(20.4)	3.5	63.1	(27.8)	19.0	65.9	43.2	(120.5)	29.0	26.5
Other services	(7.6)	10.1	(7.1)	39.9	125.7	87.1	(75.7)	120.1	42.7	(177.8)	(43.5)	(377.4)

Source: State Statistical Office.

Table 11.1: FAMILY INCOME AND EXPENDITURES, 1978-89

		Tugrik					Percentages				
		1975	1980	1985	1988	1989	1975	1980	1985	1988	1989
<b>Income</b>											
<b>Total</b>	Rural /a	4,997.6	5,838.7	6,868.8	7,028.6	7,087.6	100.0	100.0	100.0	100.0	100.0
	Urban /b	11,822.8	12,081.5	14,039.8	14,809.8	14,980.4	100.0	98.7	99.2	99.3	99.1
<b>Wages and salaries</b>	Rural /a	3,832.4	4,369.6	5,217.4	5,313.7	5,394.8	72.7	74.8	76.0	75.6	78.1
	Urban /b	10,051.9	11,084.4	11,888.7	12,397.1	12,680.4	85.0	85.2	83.2	83.7	84.8
<b>Social insurance, pension, allowances /c</b>	Rural /a	392.1	533.3	600.2	394.1	436.6	7.8	9.1	8.7	5.6	6.2
	Urban /b	1,046.3	1,175.7	1,492.3	1,449.6	1,841.8	8.8	9.1	10.6	9.8	9.0
<b>Extra income from household</b>	Rural /a	752.1	722.5	630.0	1,068.1	1,012.4	15.0	12.4	12.1	15.2	14.3
	Urban /b	-	83.5	171.0	285.0	253.0	0.0	0.6	1.2	1.9	1.7
<b>Monetary benefits received /d</b>	Rural /a	-	135.4	139.4	154.3	157.8	0.0	2.3	2.0	2.2	2.2
	Urban /b	314.5	321.5	408.5	322.9	383.5	2.7	2.5	2.9	2.5	2.6
<b>Other</b>	Rural /a	221.0	77.9	79.8	98.4	85.0	4.4	1.3	1.2	1.4	1.2
	Urban /b	410.1	336.4	291.1	315.2	321.7	3.5	1.3	1.2	1.4	1.2
<b>Foodstuff Expenditures</b>											
<b>Total</b>	Rural /a	1,629.2	2,007.0	2,298.8	2,087.2	2,039.8	100.0	100.0	100.0	100.0	100.0
	Urban /b	5,478.9	6,112.9	6,046.1	6,038.7	6,184.2	100.0	100.0	100.0	100.0	100.0
<b>Meat, meat products</b>	Rural /a	228.0	320.9	278.3	239.9	269.0	14.0	16.0	12.0	13.6	13.2
	Urban /b	2,010.3	2,151.0	1,982.9	1,920.8	1,953.2	36.7	35.2	32.8	31.7	31.6
<b>Flour and cereals</b>	Rural /a	622.6	760.0	842.7	907.8	823.1	38.2	37.9	36.7	43.5	40.4
	Urban /b	663.5	752.9	734.4	685.5	627.1	12.6	12.3	12.1	11.3	10.1
<b>Bakery products</b>	Rural /a	61.8	69.5	120.1	115.8	111.6	3.8	3.5	5.2	5.5	5.5
	Urban /b	484.7	539.0	598.7	623.5	634.7	8.9	8.8	9.9	10.4	10.3
<b>Confection and fruit</b>	Rural /a	318.8	372.6	479.2	455.3	515.4	19.6	18.6	20.8	21.8	25.3
	Urban /b	561.8	620.8	698.0	745.0	746.1	10.3	10.2	11.6	12.5	12.1
<b>Milk, milk products</b>	Rural /a	27.1	35.4	23.4	58.8	85.4	1.7	1.8	1.0	2.7	1.6
	Urban /b	629.0	692.1	608.5	700.8	690.5	11.5	9.7	10.1	11.6	11.2
<b>Potatoes and vegetables</b>	Rural /a	5.0	5.0	25.1	25.0	19.0	0.3	0.3	1.0	1.2	0.9
	Urban /b	119.7	215.3	230.9	269.9	315.8	2.2	3.5	3.8	4.8	5.1
<b>Tea and salt</b>	Rural /a	155.7	181.8	191.4	189.7	149.5	9.6	9.1	8.3	9.1	7.3
	Urban /b	124.8	123.8	109.7	100.3	92.0	2.3	2.0	1.6	1.7	1.5
<b>Cafeterias and restaurants</b>	Rural /a	9.5	8.6	7.1	18.1	5.5	0.6	0.3	0.3	0.8	0.3
	Urban /b	288.0	340.4	374.0	441.1	451.1	4.0	5.6	6.2	7.3	7.5
<b>Alcohol and alcoholic beverages</b>	Rural /a	108.8	274.0	335.4	50.4	110.4	12.2	15.7	14.8	2.4	5.4
	Urban /b	558.1	740.8	814.7	842.4	478.8	10.2	12.1	10.6	8.7	7.7
<b>Other</b>	Rural /a	2.5	0.8	1.3	6.8	3.9	0.1	0.0	0.0	0.3	0.2
	Urban /b	53.0	87.9	97.7	203.9	188.1	0.6	0.6	1.6	3.4	3.0
<b>Nonfood Product Expenditures</b>											
<b>Total</b>	Rural /a	2,602.2	2,931.1	3,773.8	4,243.1	4,209.9	100.0	100.0	100.0	100.0	100.0
	Urban /b	4,022.8	4,859.1	4,747.1	4,992.8	5,051.8	100.0	100.0	100.0	100.0	100.0
<b>Cotton and woolen fabrics</b>	Rural /a	634.6	819.8	779.4	809.9	723.3	24.4	21.8	20.7	19.1	17.2
	Urban /b	487.2	442.8	573.5	260.0	504.6	11.8	10.2	7.0	5.6	6.0
<b>Other consumer goods</b>	Rural /a	63.2	122.5	170.4	151.5	159.5	2.4	4.2	4.5	5.6	5.8
	Urban /b	212.8	198.8	295.5	298.7	345.8	5.3	4.5	6.2	5.9	6.8

(Continued)

Table 11.1: FAMILY INCOME AND EXPENDITURES (concluded)

		Tugrik					Percentages				
		1978	1980	1985	1988	1989	1978	1980	1985	1988	1989
Ready-made clothes	Rural /a	235.5	855.6	551.6	621.7	681.5	9.1	13.3	14.6	14.7	15.7
	Urban /b	1,099.0	1,299.4	1,540.8	1,791.2	1,751.6	27.8	29.9	32.5	35.9	34.7
Footwear	Rural /a	438.2	549.7	660.2	751.2	794.7	16.8	18.9	17.5	17.7	17.5
	Urban /b	773.6	726.6	981.0	960.8	906.5	19.2	16.6	20.2	19.2	17.9
Articles of educational need /a	Rural /a	130.7	105.9	151.1	201.9	256.0	5.0	3.7	4.0	4.6	6.1
	Urban /b	250.7	287.2	273.9	418.0	377.2	6.2	6.6	5.8	6.4	7.5
Perfume and cosmetics	Rural /a	59.2	76.7	150.2	113.9	99.4	2.3	2.6	4.0	2.7	2.4
	Urban /b	253.1	298.4	232.2	258.7	294.9	6.8	6.6	4.9	5.2	5.6
Furniture	Rural /a	384.3	327.3	559.2	651.9	700.1	14.6	11.3	14.6	14.9	16.6
	Urban /b	564.8	546.4	566.3	514.4	653.1	9.1	12.6	11.9	10.3	12.9
Tobacco	Rural /a	114.2	123.7	150.1	104.3	119.2	4.4	4.3	4.0	2.5	2.7
	Urban /b	157.6	176.4	141.3	126.4	126.1	3.9	4.1	3.0	2.5	2.5
Fuel /f	Rural /a	11.7	32.2	48.3	59.2	60.6	0.4	1.1	1.3	1.4	1.9
	Urban /b	270.8	239.0	125.9	148.9	91.3	6.7	5.5	3.3	3.0	1.8
Other	Rural /a	532.6	558.4	553.1	708.6	702.0	20.5	19.2	14.7	16.8	16.7
	Urban /b	178.1	127.1	207.0	197.7	200.3	4.3	2.9	4.4	4.0	4.0
<b>Other Expenditures</b>											
Total	Rural /a	377.3	524.9	466.2	453.9	392.9	100.0	100.0	100.0	100.0	100.0
	Urban /b	2,830.0	2,269.2	2,903.0	3,591.4	3,641.2	100.0	100.0	100.0	100.0	100.0
Cinema, theater, sports	Rural /a	14.7	6.8	6.9	15.2	14.5	3.9	1.6	1.6	6.3	3.7
	Urban /b	125.9	91.4	75.9	89.5	62.4	4.4	4.0	2.6	2.6	2.3
Transport, communications	Rural /a	45.9	78.7	79.4	55.5	50.0	12.2	15.0	17.0	12.2	12.7
	Urban /b	553.6	410.8	553.7	728.7	709.2	15.2	18.1	19.1	21.5	19.5
Housing and communal services /g	Rural /a	4.2	4.4	1.7	0.9	1.3	1.1	0.8	0.4	0.2	0.3
	Urban /b	740.2	846.8	923.4	902.6	1,123.2	26.1	37.3	31.8	28.6	30.8
Health services	Rural /a	5.9	6.6	1.1	1.9	3.0	1.6	1.3	0.2	0.3	1.8
	Urban /b	142.8	126.1	127.0	187.4	135.9	4.0	5.6	4.4	4.9	5.8
Service repair	Rural /a	-	-	11.8	5.3	6.6	0.0	0.0	2.5	1.2	2.5
	Urban /b	-	-	125.6	160.1	172.5	0.0	0.0	4.3	4.9	4.7
All taxes	Rural /a	27.7	39.7	66.6	47.5	59.9	7.3	7.6	14.7	10.8	10.2
	Urban /b	438.0	417.3	458.7	476.3	520.1	15.5	15.4	15.1	14.0	14.3
Other	Rural /a	276.9	367.0	295.3	326.2	272.4	73.0	75.7	63.0	72.6	69.3
	Urban /b	529.6	379.0	658.6	681.6	604.9	18.7	16.6	22.7	25.4	24.6
<b>Total Expenditures</b>											
Total	Rural /a	4,606.7	5,433.0	6,539.6	6,784.2	6,642.6	100.0	100.0	100.0	100.0	100.0
	Urban /b	11,829.6	12,721.2	13,696.2	14,642.9	14,877.0	100.0	100.0	100.0	100.0	100.0
Foodstuff	Rural /a	1,629.2	2,007.0	2,298.6	2,067.2	2,039.6	55.4	60.9	55.2	50.6	50.7
	Urban /b	5,478.9	6,112.9	6,048.1	6,056.7	6,184.2	46.3	48.1	44.1	41.9	41.6
Nonfood products	Rural /a	2,802.2	2,901.1	3,778.6	4,243.1	4,209.9	59.8	53.4	57.7	62.5	63.4
	Urban /b	4,022.8	4,630.1	4,747.1	4,992.6	5,051.8	34.0	34.1	34.7	31.6	34.0
Other expenditures	Rural /a	375.3	524.9	466.2	453.9	392.9	8.2	9.7	7.1	6.7	6.9
	Urban /b	2,830.0	2,269.2	2,903.0	3,591.4	3,641.2	19.7	17.6	21.2	23.5	24.5

- /a Members of agricultural producer cooperatives.
- /b State employees.
- /c Social funds including children and student allowances.
- /d Monetary remuneration from the workplace and the municipality.
- /e Includes books, pencils and notebooks.
- /f Includes petroleum, coal and firewood.
- /g Includes electric energy.

Source: State Statistical Office.

Table 11.2: CONSUMPTION OF FOODSTUFFS PER PERSON, 1980-90

(Kg)

	1980	1985	1988	1989	1990
Meat, meat products	92.0	91.5	89.9	93.1	97.0
Milk, milk products	99.2	110.1	118.9	120.7	120.0
Butter	2.6	3.1	3.0	3.0	3.0
Flour	100.3	108.0	109.0	105.3	83.0
Sugar	23.1	22.1	23.8	23.6	18.0
Fish	1.1	0.8	1.4	1.3	1.0
Rice (cereals)	9.6	11.6	12.5	12.4	9.3
Eggs (units)	18.3	26.6	27.4	26.9	28.0
Potatoes	15.3	27.3	28.7	27.4	27.0
Vegetables	14.8	17.0	23.1	21.5	22.0
Fruit	7.6	9.4	11.4	12.1	12.0
Vegetable oil	0.9	1.2	1.3	1.4	1.0
Animal fat	2.0	2.7	2.6	2.7	3.0

Source: State Statistical Office.

Table 11.3: PENSIONS AND ALLOWANCES, 1990

Type pensions and allowances	No. of persons covered (Thousands)	Amount spent (Tug mln)	The source of finance
<b>Pensions</b>			
Age pension	170.5	351.5	State budget
Disability pension	29.4	45.2	--/--
For loss of a breadwinner	37.0	60.9	--/--
Permanent pension	5.7	2.8	--/--
Subtotal	242.6	460.4	
<b>Allowances</b>			
For mothers of a large family	99.4	68.2	--/--
Premium of a hero-mother medal	6.0	0.7	--/--
For twins	0.6	0.4	--/--
For looking after a baby in arms	44.5	15.6	--/--
To war and revolution veterans	12.9	5.1	--/--
Others	1.0	1.9	--/--
Subtotal	164.4	91.9	
<b>Second allowances</b>			
Temporary disability allowance	215.4	40.9	Social insurance
Pregnancy and confinement allowance	57.4	63.7	fund
For ill person attendance	92.9	9.6	--/--
For the care of children	19.5	4.4	--/--
For funeral	4.4	0.5	--/--
Subtotal	389.6	119.1	
<b>Total</b>	<b>796.6</b>	<b>671.4</b>	

Source: Ministry of Labor.

Table 12.1: EDUCATION SECTOR

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
<b>Primary schools</b>											
No. of schools	353	-	-	-	-	341	-	-	317	314	-
No. of students ('000)	372.1	378.9	387.4	397.4	405.7	415.7	423.5	430.5	438.2	446.7	-
<b>Secondary schools</b>											
No. of schools	108	-	-	-	-	145	-	-	195	207	-
No. of students ('000)	22.1	22.7	22.9	23.6	25.7	27.7	29.3	32.1	33.8	34.1	-
<b>Colleges and universities</b>											
No. of schools	7	-	-	-	-	8	-	-	8	8	-
No. of students ('000)	23.2	24.1	25.1	26.0	25.1	24.6	23.5	22.6	20.7	19.5	-
<b>Technical and vocational schools (secondary level)</b>											
No. of schools	62	-	-	-	-	68	-	-	71	-	-
No. of students ('000)	18.7	19.8	20.7	21.4	21.8	23.0	23.2	23.8	22.6	20.5	-
<b>Total No. of schools</b>	-	-	-	-	-	588	591	604	607	615	643
<b>Number of PhDs</b>	62	-	-	-	-	68	-	-	71	-	-
<b>Mean years of school attendance</b>											6.0
<b>Adult literacy rate (Percent of population above 15 years of age)</b>											91.0

Sources: Asian Development Bank and International Monetary Fund.

Table 13.1: CONSTRUCTION OF HOUSING, 1980-90

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	New housing completed Floor area (Thousands Square Meters)
1980	206.7
1981	214.3
1982	203.4
1983	245.0
1984	310.4
1985	257.1
1986	217.3
1987	277.3
1988	350.1
1989	348.1
1990	380.0

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Sources: Asian Development Bank and International Monetary Fund.

Table 14.1: HEALTH AND NUTRITION, 1980-90

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
Life expectancy at birth (years)											62.5
Total no. of physicians	3,686	3,881	4,070	4,234	4,371	4,595	4,870	5,192	5,485	5,715	6,180
Total no. of other medical personnel ('000)	12.6	12.9	13.6	14.1	14.6	15.2	15.7	16.4	17.2	18.0	-
Bed/population ratio per 10,000	108	106	108	109	110	114	113	115	115	118	123
Daily calory supply (per capita)	2,394	-	-	-	-	2,486	-	-	2,529	-	-
Percent of required daily calories	-	-	-	-	-	117.0 a)	-	-	-	-	-

a) Average for 1984-87.

Sources: Asian Development Bank and International Monetary Fund.

Table 15.1: TELECOMMUNICATIONS SYSTEM, 1940-90

	Telephones a) (Thousands)	Long- distance calls (Millions)	Telephones a) (Per hundred population)	Long- distance calls (Per thousand population)
1940	2.4	..	0.3	..
1960	5.6	0.3	0.6	326
1970	19.5	1.0	1.6	814
1980	39.8	3.6	2.4	2,227
1985	49.3	4.4	2.6	2,392
1988	58.6	..	2.9	..
1989	64.2	..	3.1	..
1990	66.4	19.6	3.1	9,443

a) Telephone sets of all kinds connected to the public network.

Sources: National Economy of the MPR for 70 Years (1921-1991), Anniversary Statistical Yearbook, (Several data of 1990 are preliminary), State Statistical Office of the MPR, Ulaanbaatar, 1991 (Tables 2.2, 7.9, 7.10) and staff estimates.

**Table 16.1: VEHICLE FLEET, 1970-89**

	1970	1980	1985	1986	1987	1988	1989
	(units)						
Cars	3,608	5,912	5,671	5,755	5,787	5,775	5,660
Trucks	13,511	21,880	25,118	25,805	26,577	27,316	27,384
Buses	703	1,331	1,460	1,514	1,628	2,105	2,410
Special vehicles	1,015	2,863	3,335	3,399	3,322	3,962	4,072
Trailers	4,137	7,511	8,536	8,941	9,868	10,639	n.a.
<u>Total</u> (excl. trailers)	<u>18,837</u>	<u>31,986</u>	<u>35,584</u>	<u>36,473</u>	<u>37,314</u>	<u>39,158</u>	<u>39,526</u>
	(tons)						
Average truck capacity (load)	3.14	3.84	4.35	4.35	4.42	n.a.	n.a.

Source: Ministry of Transport

Table 16.2: PASSENGER TRANSPORT, 1970-90

	1970	1980	1985	1986	1987	1988	1989	1990
(*000 passengers)								
<u>Total</u>	<u>53.4</u>	<u>122.1</u>	<u>171.1</u>	<u>187.5</u>	<u>211.6</u>	<u>234.5</u>	<u>242.2</u>	<u>231.7</u>
Railway	0.7	1.4	2.1	2.3	2.5	2.6	2.7	2.6
Highway	52.4	120.2	168.4	184.5	208.3	231.1	238.7	228.3
River transport	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air transport	0.2	0.4	0.6	0.7	0.8	0.8	0.8	0.8
(average trip length, km)								
<u>Average</u>	<u>8.4</u>	<u>8.2</u>	<u>8.3</u>	<u>8.3</u>	<u>8.0</u>	<u>8.5</u>	<u>8.7</u>	<u>8.8</u>
Railway	193.1	211.9	207.5	203.1	194.6	204.2	214.3	218.9
Highway	3.9	4.1	4.1	4.0	4.0	4.0	4.0	4.0
River transport	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air transport	531.0	533.0	490.8	460.4	459.6	665.5	709.1	704.1
(million passenger--km)								
<u>Total</u>	<u>447.8</u>	<u>1,007.1</u>	<u>1,418.5</u>	<u>1,536.5</u>	<u>1,692.8</u>	<u>1,986.8</u>	<u>2,102.9</u>	<u>2,047.7</u>
Railway	135.2	296.6	435.8	467.1	486.5	531.0	578.6	569.3
Highway	206.4	497.2	688.2	747.1	838.6	923.4	957.0	914.6
River transport	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Air transport	106.2	213.2	294.5	322.3	367.7	532.4	567.3	563.8

Source: Ministry of Transport

**Table 16.3: DOMESTIC FREIGHT TRANSPORT, 1970-90**

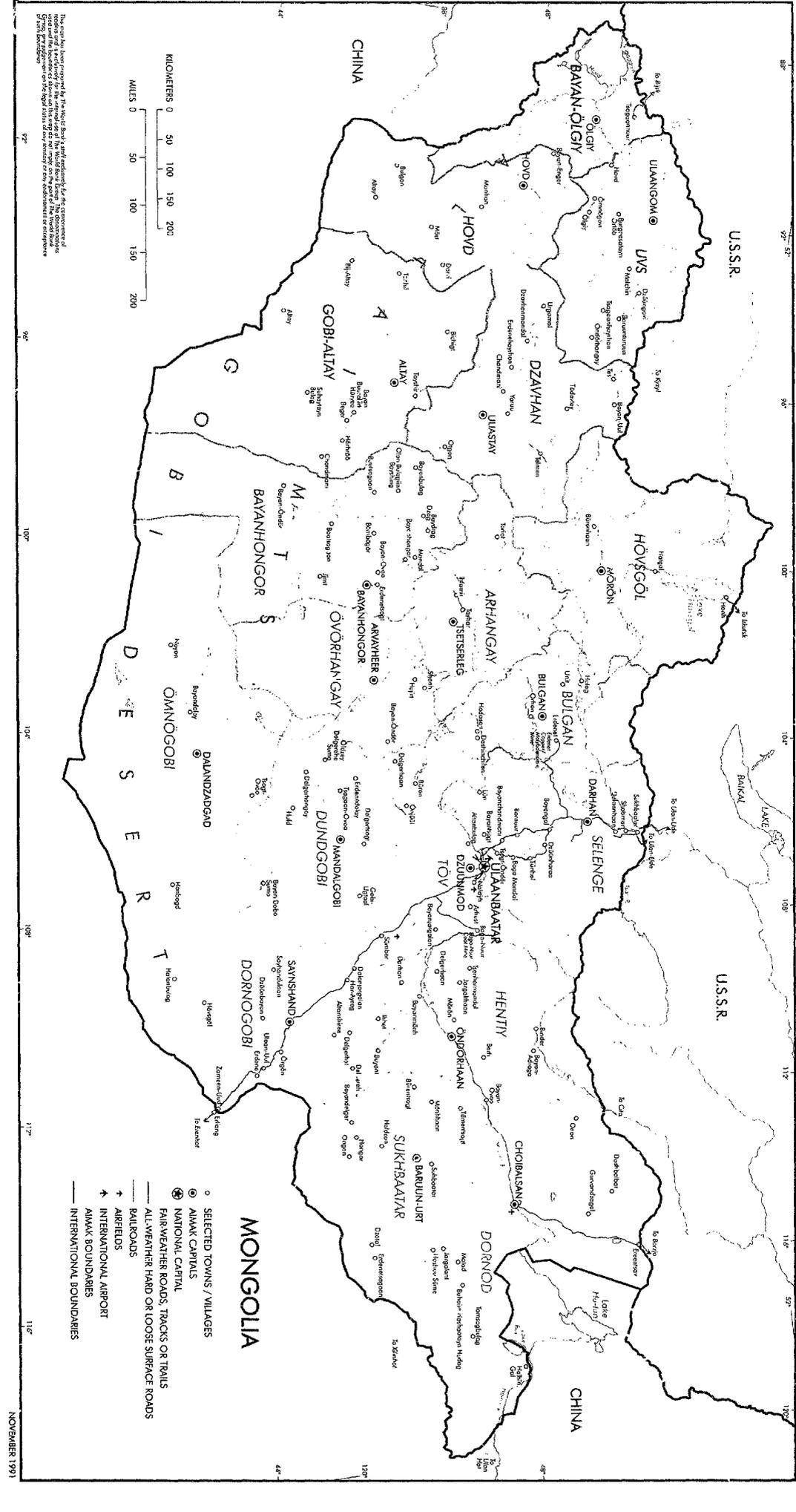
	1970	1980	1985	1986	1987	1988	1989	1990
('000 tons)								
<u>Total</u>	<u>14,465.5</u>	<u>33,092.8</u>	<u>50,982.6</u>	<u>55,431.3</u>	<u>60,141.1</u>	<u>63,716.7</u>	<u>62,013.8</u>	<u>51,443.6</u>
Railway	4,724.6	9,783.2	15,029.3	15,929.4	17,752.9	17,850.4	16,848.7	14,523.6
Highway	9,710.7	23,263.31	35,903.1	39,453.3	42,331.3	45,807.6	45,095.9	36,837.6
River transport	27.4	37.4	38.6	35.5	43.0	44.2	56.1	71.6
Air transport	2.8	8.9	11.6	13.1	13.9	14.5	13.1	10.8
(average trip length, km)								
<u>Average</u>	<u>149.1</u>	<u>150.7</u>	<u>155.1</u>	<u>151.3</u>	<u>140.2</u>	<u>132.1</u>	<u>130.1</u>	<u>133.5</u>
Railway	323.3	352.6	394.0	397.6	368.9	349.6	353.5	350.2
Highway	64.3	65.7	53.7	51.6	49.6	47.2	46.5	48.1
River transport	131.4	125.7	123.8	121.1	120.9	110.9	89.1	68.4
Air transport	535.7	505.6	542.0	542.0	582.7	731.0	755.7	722.2
(million ton--km)								
<u>Total</u>	<u>2,157.3</u>	<u>4,987.5</u>	<u>8,390.9</u>	<u>8,390.9</u>	<u>8,292.3</u>	<u>8,418.8</u>	<u>8,068.9</u>	<u>6,870.3</u>
Railway	1,527.6	3,449.4	5,959.6	6,333.4	6,179.9	6,241.1	5,956.1	5,085.9
Highway	624.5	1,528.7	1,934.3	2,046.0	2,099.1	2,162.2	2,097.9	1,771.7
River transport	3.6	4.7	4.7	4.3	5.2	4.9	5.0	4.9
Air transport	1.5	4.5	6.5	7.1	8.1	10.6	9.9	7.8

Source: Ministry of Transport

**Table 16.4: MAIN GOODS TRANSPORTED BY ROAD**  
(\*000 tons)

	1970	1980	1985	1986	1987	1988	1989	1990
Coal	735.3	1,411.2	1,605.8	1,721.6	1,717.6	1,800.5	1,716.1	1,502.5
Metal products (steel)	0.0	246.7	309.6	277.5	592.2	555.9	398.2	383.8
Construction materials	1,654.1	9,998.1	17,979.0	21,179.3	23,805.5	27,616.2	19,584.3	21,443.5
Cement	152.5	466.8	891.0	642.6	744.6	691.7	416.4	412.5
Wheat	339.1	528.7	1,399.0	1,501.0	1,329.5	1,383.4	1,100.3	945.8
Petroleum & gas	346.2	462.0	533.9	603.9	597.7	684.7	673.7	602.6
Fodder	96.7	323.4	630.4	686.5	769.6	589.3	494.9	630.4
Drinking water	0.0	942.2	1,363.5	1,346.9	1,394.9	1,341.0	1,071.0	1,088.4
Food products	69.6	102.6	196.7	271.8	307.1	125.8	222.2	134.4
Others	1,952.2	5,887.5	11,127.6	7,751.9	8,206.5	8,320.3	20,128.9	9,515.7
<b>Total</b>	<b>5,345.7</b>	<b>20,369.2</b>	<b>36,036.5</b>	<b>35,982.1</b>	<b>39,465.2</b>	<b>43,108.8</b>	<b>45,806.0</b>	<b>36,659.6</b>

Source: Ministry of Transport



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