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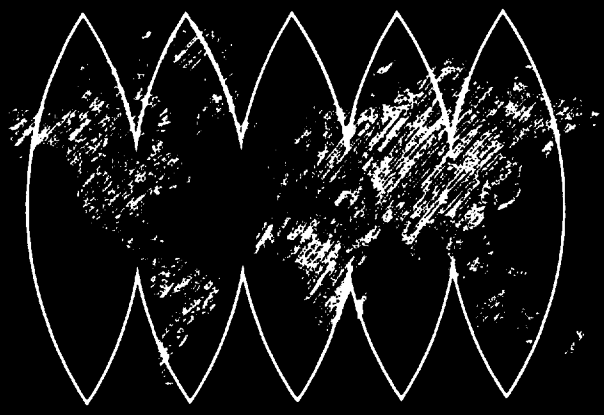
Central Asian Republics

Industrial development review

Volume II
Azerbaijan, Turkmenistan and Uzbekistan



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The Central Asian Republics

Volume II: AZERBAIJAN
TURKMENISTAN
UZBEKISTAN

Industrial Reform and Restructuring

Page

	D.	Ownership and investment patterns	147
	E.	Industrial location	148
	F.	Environmental issues	149
	G.	Trade in manufactures	149
	H.	International cooperation for industrial development	150
III.	**INDUSTRIAL BRANCH PROFILES**		151
	A.	Food processing and related agro-industries	151
	B.	Textiles and clothing	153
	C.	Leather and footwear	154
	D.	Wood and wood processing, pulp and paper	156
	E.	Petroleum and gas production and refining	157
	F.	Chemicals and petrochemicals	159
	G.	Construction materials	161
	H.	Ferrous and non-ferrous metallurgy	162
	I.	Machinery and transport equipment	164
	J.	Consumer goods	166
ANNEXES			
	A.	Statistical Tables	171
	B.	Contact points for investors	193
MAPS			197
INDUSTRIAL DEVELOPMENT REVIEWS ISSUED SINCE 1988			199
INDEX			201

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CONTENTS

			Page
LIST OF TABLES, FIGURES, BOXES AND ANNEX TABLES			v
PREFACE			xi
EXPLANATORY NOTES			xiii
BASIC INDICATORS			xv
SUMMARY			xxvii
INTRODUCTION			1
CHAPTER ONE:	AZERBAIJAN		11
I.	THE MACROECONOMIC AND INDUSTRIAL POLICY ENVIRONMENT		11
	A.	Recent economic trends	11
	B.	The economic structure	16
	C.	The macroeconomic policy environment	27
	D.	Policies towards industry	33
II.	THE MANUFACTURING SECTOR		38
	A.	Growth and structural change	38
	B.	Industrial employment	39
	C.	Productivity and performance	40
	D.	Ownership and investment patterns	41
	E.	Industrial location	42
	F.	Environmental issues	42
	G.	Trade in manufactures	43
	H.	International cooperation for industrial development	46
III.	INDUSTRIAL BRANCH PROFILES		47
	A.	Food processing and related agro-industries	47
	B.	Textiles and clothing	51
	C.	Leather and footwear	54
	D.	Wood and wood products	55
	E.	Petroleum and gas production and refining	55
	F.	Chemicals and petrochemicals	58
	G.	Construction materials	60
	H.	Ferrous and non-ferrous metallurgy	62
	I.	Machinery and engineering	63

Page

CHAPTER TWO: TURKMENISTAN 69

I. THE MACROECONOMIC AND INDUSTRIAL POLICY ENVIRONMENT 69

A. Recent economic trends 69
B. The economic structure 73
C. The macroeconomic policy environment 84
D. Policies towards industry 89

II. THE MANUFACTURING SECTOR 93

A. Growth and structural change 93
B. Industrial employment 94
C. Productivity and performance 95
D. Ownership and investment patterns 96
E. Industrial location 97
F. Environmental issues 97
G. Trade in manufactures 97
H. International cooperation for industrial development 98

III. INDUSTRIAL BRANCH PROFILES 100

A. Food processing and related agro-industries 100
B. Textiles and clothing 102
C. Leather and footwear 103
D. Petroleum and gas production and refining 105
E. Chemicals and petrochemicals 107
F. Construction materials 109
G. Machinery and transport equipment 110

CHAPTER THREE: UZBEKISTAN 117

I. THE MACROECONOMIC AND INDUSTRIAL POLICY ENVIRONMENT 117

A. Recent economic trends 117
B. The economic structure 120
C. The macroeconomic policy environment 131
D. Policies towards industry 137

II. THE MANUFACTURING SECTOR 144

A. Growth and structural change 144
B. Industrial employment 145
C. Productivity and performance 147

The Central Asian Republics

Volume II

AZERBAIJAN
TURKMENISTAN
UZBEKISTAN

Industrial Reform and Restructuring

INDUSTRIAL DEVELOPMENT REVIEW SERIES

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LIST OF TABLES, FIGURES, BOXES AND ANNEX TABLES

Page

TABLES

CHAPTER ONE

1.	Azerbaijan:	Economic growth performance, 1988-93	13
2.	Azerbaijan:	Industrial production, 1994	13
3.	Azerbaijan:	Crude oil production, 1980-95	14
4.	Azerbaijan:	Banking system, 1992	21
5.	Azerbaijan:	National income used, 1985-92	23
6.	Azerbaijan:	Current-account and trade balance, 1991-95	24
7.	Azerbaijan:	Trade with the states of the former USSR, 1987-94	24
8.	Azerbaijan:	Trade with countries outside the former USSR, 1992-94	25
9.	Azerbaijan:	Composition of trade, 1994	25
10.	Azerbaijan:	Trade with countries of the former USSR, 1991-94	27
11.	Azerbaijan:	Structure of manufacturing industry, 1992-94	38
12.	Azerbaijan:	Female labour force participation rates, 1928-76, selected years	40
13.	Azerbaijan:	Proportion of loss-making enterprises, 1990-93	41
14.	Azerbaijan:	Exports by commodity groups, 1987-94, selected years	44
15.	Azerbaijan:	Imports by commodity groups, 1987-94, selected years	45
16.	Azerbaijan:	Area under cultivation, 1940-92, selected years	47
17.	Azerbaijan:	Agro-industrial production, 1980-92, selected years	48
18.	Azerbaijan:	Production of tobacco, 1985-93, selected years	50
19.	Azerbaijan:	Production of textiles and clothing, 1980-94, selected years	53
20.	Azerbaijan:	Production of shoes, 1980-94, selected years	54
21.	Azerbaijan:	Output of refined oil products, 1980-92, selected years	57
22.	Azerbaijan:	Output of the chemical industry, 1980-92, selected years	58
23.	Azerbaijan:	Output of building materials, 1980-92, selected years	60
24.	Azerbaijan:	Demand and expected output of building materials, 1994	61
25.	Azerbaijan:	Output of the metallurgical industries, 1980-92, selected years	62
26.	Azerbaijan:	Main machine-building subsectors, 1992	64
27.	Azerbaijan:	Output of the machine-building industries, 1980-92, selected years	65
28.	Azerbaijan:	Output of consumer goods, 1980-92, selected years	66

Page

CHAPTER TWO

29.	Turkmenistan:	Raw cotton production, 1989-95	71
30.	Turkmenistan:	Trade flows, 1992-95	72
31.	Turkmenistan:	Price developments, 1990-95	72
32.	Turkmenistan:	Origin of net material product, current prices, 1985-93, selected years	74
33.	Turkmenistan:	Land use patterns, 1991	75
34.	Turkmenistan:	Agricultural production, 1990-93	77
35.	Turkmenistan:	Structure of demand, 1985-93, selected years	81
36.	Turkmenistan:	Top ten foreign trading partners, 1994	83
37.	Turkmenistan:	Commodity distribution of external trade, 1992	83
38.	Turkmenistan:	Distribution of trade by major trading partners, 1987-92	84
39.	Turkmenistan:	Educational institutions, 1993	89
40.	Turkmenistan:	Industrial enterprises by subsector, 1991	93
41.	Turkmenistan:	Industrial employment by subsector, 1988-92	94
42.	Turkmenistan:	Exports of manufactured goods, 1987-92	98
43.	Turkmenistan:	Imports of manufactured goods, 1987-92	98
44.	Turkmenistan:	Technical assistance, 1993 and 1994	99
45.	Turkmenistan:	Output of selected agricultural goods, 1990-93	100
46.	Turkmenistan:	Output of the food industry, 1980-92 selected years	101
47.	Turkmenistan:	Output of textiles and clothing, 1980-92, selected years	102
48.	Turkmenistan:	Output of selected textiles and clothing products, 1990-93	103
49.	Turkmenistan:	Output of the leather and footwear industries, 1980-92, selected years	104
50.	Turkmenistan:	Output of footwear, 1990-93	104
51.	Turkmenistan:	Fuel production, 1990-95	106
52.	Turkmenistan:	Output of selected oil and gas products, 1990-93	106
53.	Turkmenistan:	Enterprises producing base chemicals, 1994	107
54.	Turkmenistan:	Output of the chemical industry, 1985-94, selected years	108
55.	Turkmenistan:	Output of selected chemical products, 1991-93	109
56.	Turkmenistan:	Output of building materials, 1985-94, selected years	110
57.	Turkmenistan:	Output of the machinery industry, 1985-94, selected years	111

CHAPTER THREE

58.	Uzbekistan:	Price developments, 1991-95	119
59.	Uzbekistan:	Dependence of industry on the former USSR, 1993	124
60.	Uzbekistan:	Telephone service, 1990	125
61.	Uzbekistan:	Demand structure of GDP, 1987-93	128

			Page
62.	Uzbekistan:	Direction of trade with countries outside the former USSR, 1992-94	129
63.	Uzbekistan:	Composition of trade with countries outside the former USSR, 1992 and 1993	131
64.	Uzbekistan:	Balance of trade, 1993 and 1994	131
65.	Uzbekistan:	Educational institutions, 1990	137
66.	Uzbekistan:	Structure of the manufacturing sector, 1993	145
67.	Uzbekistan:	Industrial employment by subsector, 1991	146
68.	Uzbekistan:	Female participation in the non-farm workforce, 1928-75, selected years	146
69.	Uzbekistan:	Gross fixed investment, 1980-90, selected years	148
70.	Uzbekistan:	Share of trade in manufactured goods in total trade, 1987-94, selected years	149
71.	Uzbekistan:	Technical assistance, 1993 and 1994	150
72.	Uzbekistan:	Output of the food processing industry, 1985-93, selected years	151
73.	Uzbekistan:	Output of the food processing industry, selected products, 1991-93	152
74.	Uzbekistan:	Output of textiles and clothing, 1985-93, selected years	154
75.	Uzbekistan:	Output of the leather and footwear industries, 1985-93, selected years	155
76.	Uzbekistan:	Output of wood processing and related industries, 1985-91	156
77.	Uzbekistan:	Fuel production, 1985-93, selected years	157
78.	Uzbekistan:	Output of selected oil and gas products, 1990-95	158
79.	Uzbekistan:	Production of petrochemicals, 1985-91	159
80.	Uzbekistan:	Output of the chemical industry, 1991-93	160
81.	Uzbekistan:	Output of the building materials industry, 1985-93, selected years	161
82.	Uzbekistan:	Output of selected building materials, 1991-93	162
83.	Uzbekistan:	Production of metallurgical goods, 1985-93, selected years	164
84.	Uzbekistan:	Output of the machinery industry, 1985-93, selected years	165
85.	Uzbekistan:	Production of machinery and transport equipment, 1991-93	165
86.	Uzbekistan:	Production of consumer goods, 1991-93	166

FIGURES

CHAPTER ONE

1.	Azerbaijan:	Agricultural production	18
2.	Azerbaijan:	Animal husbandry	18
3.	Azerbaijan:	Net material product	22
4.	Azerbaijan:	Distribution of exports	26
5.	Azerbaijan:	Distribution of imports	26

			Page
6.	Azerbaijan:	Output of selected beverages	49
7.	Azerbaijan:	Output of selected fabrics	52
8.	Azerbaijan:	Output of selected wearing apparel and footwear	53
9.	Azerbaijan:	Output of selected fuels	56
10.	Azerbaijan:	Output of selected chemicals	59
11.	Azerbaijan:	Output of selected building materials	61
12.	Azerbaijan:	Output of selected metallurgical products	63

CHAPTER TWO

13.	Turkmenistan:	Agricultural production	76
14.	Turkmenistan:	Animal husbandry	76
15.	Turkmenistan:	Net material product	80
16.	Turkmenistan:	Distribution of exports	82
17.	Turkmenistan:	Distribution of imports	82
18.	Turkmenistan:	Gross output of the food industry	101
19.	Turkmenistan:	Gross output of the textile, clothing and leather industries	104
20.	Turkmenistan:	Gross output of the chemical and petrochemical industries	108
21.	Turkmenistan:	Gross output of the machine-building industry	111

CHAPTER THREE

22.	Uzbekistan:	Agricultural production	121
23.	Uzbekistan:	Animal husbandry	121
24.	Uzbekistan:	Net material product	127
25.	Uzbekistan:	Distribution of exports	130
26.	Uzbekistan:	Distribution of imports	130
27.	Uzbekistan:	Gross output of the food industry	152
28.	Uzbekistan:	Gross output of the leather and footwear industries	155
29.	Uzbekistan:	Gross output of the wood processing and related industries	156
30.	Uzbekistan:	Gross output of the fuel industries	158
31.	Uzbekistan:	Gross output of the chemical and petrochemical industries	160
32.	Uzbekistan:	Gross output of the metallurgical industry	163

BOXES

CHAPTER ONE	1.	Azerbaijan: Major trade agreements	31
CHAPTER TWO	2.	Turkmenistan: Major trade agreements	87
CHAPTER THREE	3.	Uzbekistan: Major trade agreements	135

Page

ANNEX TABLES

A-1.	Azerbaijan:	National accounts, 1985-94, selected years	172
A-2.	Azerbaijan:	General government budget, 1987-92	173
A-3.	Azerbaijan:	Summary of external trade, 1977-94, selected years	174
A-4.	Azerbaijan:	Exports by commodity groups, 1987-94, selected years	175
A-5.	Azerbaijan:	Imports by commodity groups, 1987-94, selected years	176
A-6.	Azerbaijan:	Industrial production by subsector, 1985-94, selected years	177
A-7.	Azerbaijan:	Production of main industrial products, 1980-92	178
A-8.	Turkmenistan:	National accounts, 1985-93, selected years	180
A-9.	Turkmenistan:	General government budget, 1985-93, selected years	181
A-10.	Turkmenistan:	Summary of external trade, 1987-93	182
A-11.	Turkmenistan:	Exports by commodity groups, 1987-93, selected years	183
A-12.	Turkmenistan:	Imports by commodity groups, 1987-92	184
A-13.	Turkmenistan:	Industrial production by subsector, 1985-94, selected years	185
A-14.	Uzbekistan:	National accounts, 1985-94, selected years	186
A-15.	Uzbekistan:	General government budget, 1987-94, selected years	187
A-16.	Uzbekistan:	Summary of external trade, 1987-94, selected years	188
A-17.	Uzbekistan:	Exports by commodity groups, 1987-94, selected years	189
A-18.	Uzbekistan:	Imports by commodity groups, 1987-94, selected years	190
A-19.	Uzbekistan:	Industrial production by subsector, 1985-94, selected years	191

PREFACE

This Industrial Development Review of the central Asian republics has been prepared by UNIDO as part of its research programme to provide surveys and analyses of the industrial development process at the country level. It represents the latest issues of a series of sales publications intended to provide a service to those within UNIDO and other international agencies concerned with industrial policy, planning, project development and implementation, and to be a ready source of information for governments, investors, industrialists, entrepreneurs, policy-makers, international organizations, aid agencies, academics, and research institutes.

The Reviews have two separate but interrelated objectives: they are designed to facilitate and promote the activities of UNIDO, as well as to serve as an informative and analytical document for the international industrial community. The analyses contained in the Reviews are intended to support the technical assistance programming for industry by providing industry-specific analysis which may serve as an input to programming activities and as a basis for informed discussions. The Reviews are also designed to accommodate the needs of a wide readership in the international community associated with industry, finance, trade, business, research and government, laying the groundwork for undertaking in-depth analyses of specific aspects of industrial development trends, policies and strategies.

The Review has been published in two volumes. The present volume covers Azerbaijan, Turkmenistan and Uzbekistan, and the companion volume covers Kazakstan, the Kyrgyz Republic and Tajikistan.

Each country chapter comprises three sections. The first section presents an overview of the economy, analyzing the macroeconomic and industrial policy environment of the country in question. The second section reviews the manufacturing sector of each country at the aggregate level, and examines, *inter alia*, its structure and growth performance, employment trends, productivity, contribution to foreign trade, and environmental impact. The final section surveys individual branches of manufacturing industry, and provides detailed studies of their resource base and past development trends as well as assessing their prospects for the future.

This Review was prepared on the basis of information available in May 1996.

EXPLANATORY NOTES

References to dollars ($) are to United States dollars, unless otherwise stated.

Dates divided by a slash (1991/92) indicate a fiscal year or a crop year. Dates separated by a hyphen (1991-92) indicate the full period, including the beginning and end years.

In Tables:
Totals may not add precisely because of rounding.
Two dots (..) indicate that data are not available or not separately reported.
A dash (-) indicates that the value is nil or negligible.

The following abbreviations are used in this publication:

AIOC	Azerbaijan International Operating Company
API	American Petroleum Institute
ASSR	Autonomous Soviet Socialist Republic
BAT	British American Tobacco
BFEA	National Bank for Foreign Economic Activity
BP	British Petroleum
CBR	Central Bank of Russia
CBU	Central Bank of Uzbekistan
CIS	Commonwealth of Independent States
CMEA	Council for Mutual Economic Assistance
CSCE	Conference on Security and Cooperation in Europe
CSPMP	Committee on State Property Management and Privatization
EBRD	European Bank for Reconstruction and Development
ECO	Economic Cooperation Organization
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
EU	European Union
FDI	Foreign Direct Investment
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GNP	gross national product
GSP	generalized system of preferences
IMF	International Monetary Fund
LNG	liquified natural gas
MFN	most favoured nation
NBA	National Bank of Azerbaijan
NMP	net material product
OECD	Organization for Economic Cooperation and Development
PFA	Popular Front of Azerbaijan
PTT	telecommunications company of Turkey (Posta, Telefon, Telegraf)
RBTC	regional bank training centre
Rb	rouble
SBU	Savings Bank of Uzbekistan
SCBT	State Central Bank of Turkmenistan
SOCAR	State Oil Company of the Azerbaijan Republic

SPC	State Property Committee
SSR	Soviet Socialist Republic
STF	systemic transformation facility
TACIS	Technical Assistance for the Commonwealth of Independent States
UK	United Kingdom
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
USA	United States of America
USSR	Union of Soviet Socialist Republics
VAT	value-added tax

BASIC INDICATORS

BASIC INDICATORS I: THE ECONOMY

Indicator		Azerbaijan	Turkmenistan	Uzbekistan
Population (mid-year 1994) (Millions)	:	7.5	3.9	22.1
Annual average growth rate of population, 1985-94 (Percentage)	:	1.1	2.2	2.4
GDP, 1994 ($ million)	:	3,557	2,667	4,270
Income per head, 1994				
GDP per head ($)	:	478.0	684.0	193.3
GDP per head ($ at purchasing power parities)	:	1,720	2,948 a/	2,390
Real output growth, 1994 (Percentage)				
GDP	:	-23.1 a/	-20.0	-2.3 a/
Agriculture		-17.8	..	-8.3
Industry		-5.1	-25.0	-0.7
Economic structure, 1994 (Percentage)				
Agriculture	:	26.9 a/	11.3 b/	28.5
Manufacturing		24.9	69.3	19.3
Construction		7.5	11.0	7.5
Other		35.6	8.4	34.1
Retail price inflation, 1994 (Annual average, percentage)	:	1,664	2,400	1,568
Public finance, 1994 (Percentage of GDP)				
Budget surplus/deficit	:	-14.8	-1.1	-7.1
Public spending		46.5	6.2 c/	43.1
Foreign trade, 1994 ($ million)				
Exports	:	682	2,425	2,940
Imports		791	1,476	2,727
Balance		-109	949	213
Current-account balance, 1994 ($ million)	:			
Before official grants		-121	500	29
Official grants		..	..	-
After official grants		..	..	29
Official exchange rate, 1994 (national currency equivalents to $1, annual average)	:	1,457	19.5	11.4

Sources: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995, European Bank for Reconstruction and Development, *Transition Report Update*, London, April 1996.

a/ 1993.
b/ 1992, NMP.
c/ Excludes many government activities that are not included in the central government concept.

BASIC INDICATORS II: THE INDUSTRIAL SECTOR

Indicator		Azerbaijan	Turkmenistan[a/]	Uzbekistan[b/]
Value of industrial production, 1994 ($ million)[c/]	:	781	239	5,615
Structure of industrial production, 1994 (Percentage of total)	:			
Fuel and energy		50.2	25.5	24.1
Processed foods		9.5	7.4	8.2
Meat and dairy products		2.0	4.2	3.9
Fish		0.1	0.6	0.2
Textiles		9.7	42.9	18.8
Clothing		1.0	6.7	2.7
Leather goods		0.7	0.9	1.6
Wood products, paper and pulp		0.5	1.2	1.2
Chemicals and petrochemicals		5.4	2.8	5.2
Building materials		3.0	7.0	5.6
Metallurgy		2.0	0.2	9.4
Machine building		7.3	1.2	9.9
Other		8.6	2.2	-
Real growth of industrial production, 1994 (Percentage)	:			
Fuel and energy		-9.1	5.8	-2.4
Processed foods		-23.4	-1.1	10.3
Meat and dairy products		-42.5	-4.9	-6.8
Fish		-21.4	-30.8	-28.8
Textiles		-23.9	7.6	9.7
Clothing		-12.7	15.2	22.6
Leather goods		-0.5	-24.6	-22.3
Wood products, paper and pulp		-66.3	-6.5	1.5
Chemicals and petrochemicals		-33.6	2.4	-22.3
Building materials		-35.3	0.6	-10.4
Metallurgy		-69.1	-7.1	-5.4
Machine building		-27.7	-5.1	8.8
Total		-22.7	5.3	1.0
Manufacturing employment, 1994	:			
Thousand employees		350	171	1,225
Percentage of total		13.1	10.4	14.9
Average wage in manufacturing, 1994 ($ per month)	:	14.1	8.7	35.6

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

a/ All data for Turkmenistan are for 1993.
b/ Data for Uzbekistan on value of industrial production and structure of industrial production are for 1993.
c/ At official exchange rates.

SUMMARY

OVERVIEW

This document is the second of two volumes reviewing the industrial development performance and potential of six newly independent central Asian republics of the former USSR: Azerbaijan, Kazakstan, the Kyrgyz Republic, Tajikistan, Turkmenistan and Uzbekistan. It begins with a brief introduction discussing the general problems of structural adjustment faced by all of these countries in the context of their transition from an economic system based on central planning to one guided by market forces. This is followed by three chapters surveying the industrial development trends and prospects of Azerbaijan, Turkmenistan and Uzbekistan. Each country chapter provides an overview of the economic and policy environment, an analysis of the structure and performance of the manufacturing sector at the aggregate level and comprehensive profiles of individual manufacturing branches.

INTRODUCTION

The dissolution of the former USSR resulted in the opening-up of a new and vast region in central Asia, comprising the recently independent states of Azerbaijan, the Kyrgyz Republic, Kazakstan, Tajikistan, Turkmenistan and Uzbekistan. Although low priority was placed on the industrial development of this region within the centralized planning system of the former USSR, most of the central Asian countries nevertheless possess a strong industrial base with the capacity to manufacture a number of capital goods and a wide range of light industrial products. With abundant natural resources and a substantial reservoir of basic industrial skills, these countries possess an enormous potential for economic and industrial growth. Their ability to realize this potential is inhibited, however, by the lack of an entrepreneurial base and of a market-oriented system of industrial production and technological development.

In order to rejuvenate the industrial development of their economies and achieve the transition to a market-oriented system, the countries of the central Asian region will need to create an environment in which private enterprise can flourish. This will require the privatization of a large segment of their industrial base and the development of an appropriate institutional infrastructure designed to encourage and support private initiative. Considerable training in the skills required to operate under a market-oriented economy, such as cost-accounting, marketing and quality-control, will be necessary. This will have to be accompanied by the creation of an appropriate framework of market supervision, including the introduction of enforceable laws governing competition and bankruptcy. Many of the existing enterprises also require substantial restructuring in order to enable them to remain afloat in the increasingly competitive markets in which they are forced to operate following the loss of their traditional markets and sources of supply in the other states of the former USSR.

The implementation of privatization has varied considerably in the six central Asian states. The privatization of small-scale enterprises has proceeded smoothly but a more gradual approach has been adopted to the privatization of the larger state-owned enterprises. While such a sequential approach will help to minimize the inevitable dislocations caused by the process of economic transformation in the short term, there is a risk that this could result in the persistence of state capitalism dominated by large state-owned enterprises. This will almost certainly not be desirable in the long run.

Privatization has to be considered in the context of the restructuring of state-owned enterprises to ensure that they function efficiently in a competitive environment. This will require the development of new products, the acquisition of new technologies and production processes, and the application of modern managerial, accounting and marketing practices. For enterprises remaining under state control, such a reorientation to market principles will also require the imposition of hard budget constraints and the end to other privileges, such as preferential access to credit and official purchases through the state-order system.

The process of privatization and enterprise restructuring requires the establishment of an appropriate policy framework and the creation of a suitable institutional infrastructure for the mobilization of foreign and domestic investment and the optimal utilization of available resources. Clear objectives will also have to be set with regard to the extent of the desired economic and industrial restructuring. While the general goal must be increased market-orientation and a dismantling of the prevailing economic structure dominated by state capitalism, it must be recognised that this will be a long-term process. Over the short to medium term the principal objective must be to achieve a more balanced mixed economy. A comprehensive shift to an economic structure based predominantly on private enterprise is unlikely to be achieved in the foreseeable future.

An essential prerequisite for the evolution of such a mixed economy will be the development of an appropriate legal framework comprising a comprehensive body of company legislation to define various forms of business organization, management control, contractual relationships, employment regulations, competition rules and intellectual property rights. Although some basic legislation of this kind has been adopted in all the central Asian states, particularly with respect to the ownership of property and the operation of business activities, the existing legal framework is by no means comprehensive. A review of the total package of laws and regulations relating to industrial activities is urgently required in all of these countries, which would include a revision of the existing tax system in order to provide investment incentives for both foreign and domestic entrepreneurs.

Much also needs to be done about entrepreneurship development. Private-sector development has generally been viewed as being synonymous with the privatization of small enterprises in the central Asian republics. Once ownership has been transferred, little responsibility is taken for meeting the needs of these enterprises for credit, technology and marketing support. This needs to be remedied through the creation of a conducive climate for investment and risk-taking, and the provision of entrepreneurial training, credit, technology and marketing facilities for local entrepreneurs. The establishment of physical support facilities, such as industrial estates and technology parks, could also make a major contribution to the development of local entrepreneurship.

Attention also needs to be paid to retraining and upgrading the available pool of technologists, managers and other specialized personnel through the establishment of training institutions. The development of this technical and managerial expertise would be supported through inflows of foreign technology and know-how through joint ventures or technology-licensing agreements with foreign companies. This will, however, require a comprehensive knowledge of alternative sources of technology, and of the negotiating skills and procedures for the acquisition of such technology.

The successful introduction of this technology will require the provision of research facilities to facilitate the adaptation of imported technologies to local conditions, either through restructuring the existing agencies dealing with science and technology, or through the establishment of new specialized institutes for technological information and development.

In order to ensure competitive efficiency, it will be necessary to achieve specific quality standards in terms of products and production methods, such as the ISO 9000 series representing international standards for design, implementation and quality management for a wide range of products. The adoption of these standards will have to be accompanied by the establishment of certification bodies. These bodies and associated centres for productivity and standards need to be established with the minimum of delay in each of the central Asian countries if their enterprises are to compete effectively in international markets.

In view of the capital and technology constraints facing the countries of central Asia, they will need to make special efforts to promote inflows of foreign direct investment (FDI). The degree of such investment has so far been limited, due both to a reluctance on the part of multinational companies and an ambivalent attitude on the part of the national authorities, which have tended to scrutinize such investment proposals carefully and to limit foreign ownership to minority holdings. Consequently, most of the foreign investment to date has been concentrated in primary industries involving the exploitation of natural resources, which offer sufficiently high potential profits to attract investors. By contrast, there has been relatively little foreign investment in the manufacturing sector.

In order to increase the level of foreign investment interest, the governments of the central Asian republics will need to increase the attractiveness of their business environments. For the majority of potential investors this will require the establishment of clearly defined regulations and investment guarantees and the promise of the rule of law. Fairly well-defined policies and procedures regarding foreign investment have already been adopted in the central Asian republics, but they may need to be further refined and expanded. Once a more conducive environment for foreign direct investment has been put in place, it will also be necessary to publicize the opportunities they offer. For this purpose a list of preferred fields for foreign investment should be announced and published from time to time, together with profiles of selected sectors and investment projects.

It is essential that the industrial development of the central Asian republics should be carried out in an environmentally sustainable manner. This will require drawing up detailed, realistic environmental policies and programmes. Like other republics of the former USSR, the legislation enacted under the centralized Soviet system established high standards and requirements for environmental protection, most of which were not adequately monitored or complied with. In the present context it will be necessary to establish standards and to ensure that they are fully complied with, if necessary through the imposition of severe penalties for violating environmental regulations.

One of the most crucial needs of the central Asian republics is to improve and expand their trade, investment and industrial linkages with countries outside the former USSR, and all have joined a number of international trade organizations and entered into bilateral agreements. At the same time, however, it is also critically important that they retain their strong links with the republics of the former USSR and the Russian Federation in particular. In the short to medium term these countries will remain important markets for both inputs and outputs, and the Russian Federation will continue to play a dominant role in the development and marketing of the region's important oil and gas resources.

CHAPTER ONE: AZERBAIJAN

Recent economic trends

Like many other republics of the former USSR, Azerbaijan has had a tumultuous history with only brief periods of peace and independence. Situated at the crossroads of Europe along the Silk Route, the country has always fallen prey to its stronger neighbours. Azerbaijan's principal natural resource is crude oil, which was discovered in the 19th century and led to its emergence as one of the world's pre-eminent producers by 1900. The country remained an important producer until the 1970s, following which the focus of the USSR shifted to the development of the oil fields in western Siberia. Azerbaijan was also developed as a centre for the production of oil industry equipment, supplying 60 per cent of the total requirements of the entire USSR. The rate of growth of net material product (NMP) during this period was one of the highest among the republics of the former USSR. This growth slowed considerably in the second half of the 1980s, however, when Azerbaijan recorded one of the lowest levels of income per head in the union.

Azerbaijan began to extricate itself from the former USSR in mid-1989. It was recognized in September of that year by the republic's Supreme Soviet, which also adopted the Constitutional Law on the Sovereignty of the Azerbaijan SSR at the same time. The confusion following the coup attempt in Moscow in August 1991 provided Azerbaijan with an opportunity to declare its independence, which was formalized on October 18.

Azerbaijan agreed to join the Commonwealth of Independent States (CIS) on December 21, 1991, and the treaty was ratified in 1993. Despite Azerbaijan's early declaration of independence, its economy remained closely linked to the trading structures of the former USSR for several years, and only began to be given a broader global orientation in the mid-1990s. At the same time, however, the disruption of the existing trade links with the other republics of the former USSR and the ongoing war with Armenia over the Nagorno-Karabakh enclave seriously weakened the economy. By 1994 Azerbaijan's GDP was just 34 per cent of its 1989 level.

The decline in output recorded during the late 1980s and early 1990s was broadly based and affected all sectors of the economy. Output of crude oil and refined petroleum products continued to decline in 1995 in response to input shortages and increasing inadequacies in production methods and infrastructure. Production in 1996 could rise if the Azerbaijan International Operating Company (AIOC), the recently formed consortium of the State Oil Company of the Azerbaijan Republic (SOCAR) and several international oil companies, including the Russian Lukoil, begins producing before the end of 1996 as planned.

Price controls have been lifted in stages since January 1992 and have provoked sharp surges in inflation. In the first few years after gaining independence, the government of Azerbaijan made a concerted and largely successful effort to maintain fiscal discipline. But the continued expenditure associated with the Armenian conflict (estimates suggest it amounted to some 40-70 per cent of Azerbaijan's public spending in 1991-93 and has continued high despite the signing of the ceasefire in mid-1994) has led to significant budget deficits of around 13-15 per cent of GDP. In 1995 the deficit was held to 7 per cent of GDP and the budget for 1996 calls for a deficit of just 3 per cent of GDP.

One of the most encouraging economic developments in the early post-independence years was Azerbaijan's successful penetration of new export markets, with significant increases being recorded in sales of oil and gas products and other resource-based commodities, primarily to the

Islamic Republic of Iran and Turkey. This enabled the country to record a favourable current-account balance through 1992, after which the trend was reversed.

On August 15, 1992, the government decided to alleviate the massive shortage of roubles it was facing by issuing its own currency, the manat, at a rate of Rb10:Manat1 or Manat170-180:$1. It was not until January 1994, however, that the unit became the country's sole legal tender, trading at a rate of Manat118:$1. High inflation and large budgetary and trade deficits resulted in the collapse of the currency in the latter part of the year, and by January 1995 the manat was trading at Manat4,300:$1. Tight monetary policy and fiscal discipline during 1995 allowed the currency to hold its value and at the end of February 1996 it was trading at Manat4,445:$1.

After several years of independence many of the inefficiencies of the central planning system remain and the government continues to play a pervasive role in the economy, with the private sector remaining embryonic. The republic does, however, appear to have adopted a firm stance in favour of reform and since the ceasefire agreed in mid-1994 has already held for more than two years, there is a good chance that the war with Armenia will end. Several major oil deals have been signed. The largest of these, led by British Petroleum (BP) and the Norwegian state oil company Statoil, was finalized in November 1994. These will have an immediate beneficial impact on the economy as handsome upfront signing bonuses are part of the packages, and will also generate investment by related supply and service industries.

The economic structure

Azerbaijan is one the smaller republics of the former USSR with an area of only 86,000 square kilometres and a population of just 7.5 million. As part of the former USSR it accounted for only 1.7 per cent of the union's NMP. The country has a varied climate which permits the cultivation of a wide range of agricultural crops. The country is also endowed with substantial reserves of oil (estimated at over 5 billion barrels of recoverable oil) and natural gas.

Almost 55 per cent of Azerbaijan's population lives in urban areas. In addition, 1 million refugees from the war areas have come to the capital Baku, which normally has a population of 1.15 million.

Azerbaijan's strong agricultural base accounted for 40.4 per cent of NMP and 37.6 per cent of total employment in 1994. Major crops include cotton, grapes, fruit and vegetables, tobacco and tea, and the output of animal products is also significant. Since the mid-1980s the area devoted to cereal production has increased by 40 per cent, while the areas planted to cotton and grapes have declined by 19 per cent and 45 per cent respectively, the latter being due mainly to the anti-alcohol campaign of the 1980s. The agricultural sector suffered a particularly severe setback in 1992, partly due to adverse weather conditions and to the loss of output in the Nagorno-Karabakh region, but mainly as a result of soil erosion and poor fertility, inefficient irrigation (most of the republic's crops require extensive irrigation, and 1,401 hectares of the 1,763 hectares classified as agricultural land are irrigated) and water pollution.

The petroleum industry accounted for one-third of Azerbaijan's industrial output in 1994. The country's own crude oil production has been falling steadily since 1965, when Soviet authorities channelled new investment into the development of virgin Siberian fields. With refining capacity remaining around 20 million tonnes per year, Azerbaijan has traditionally made up the shortfall through imports from the Russian Federation and Kazakstan.

Azerbaijan has about 3,700 industrial enterprises, comprising several large metallurgical and chemical complexes, and a high number of small, mostly agro-industrial and light industrial entities. The country's heavy industry is dominated by the production of extraction and refinery equipment for the petroleum industry, which accounted for 16 per cent of industrial output in 1992. Light industry has centred on food processing, textile production and wine making; the latter was badly hit by the anti-alcohol campaign in the 1980s, but appears to be recovering.

Azerbaijan has a fairly well-developed transport infrastructure consisting of road, rail, air and shipping networks. Rail takes the largest share of freight traffic, but road transport is also important. Most roads are in poor condition, however, and many routes (both rail and road) have been closed periodically due to hostilities at home and in neighbouring areas. Air and shipping facilities are limited, but are being upgraded and expanded. The telecommunications infrastructure in Azerbaijan is wholly inadequate to support the move to a market economy and the government has devised a four-stage plan for the modernization of the telephone system in the 1994-2005 period.

Under the former USSR Azerbaijan's banks were regional branches of the Moscow-based USSR state banks. In 1992 the Law on Banks and Banking Activity and the Law on the National Bank was passed. The legislation established a two-tier system with the National Bank of Azerbaijan (NBA) intended to perform the functions of a central bank and supervise the commercial banking sector and four specialized state-owned banks. The NBA has not actively tried to influence credit allocation through interest rates. Until recently rates continued to be set on a case-by-case basis, and credit was extended administratively.

Trade and tourism have not traditionally been significant sectors of Azerbaijan's economy. Trading activities have begun to grow rapidly, however, following the gradual easing of controls over the private sector, and should continue to expand as they have comparatively low entry costs. Tourism, mainly in the form of business travel to the republic by foreign entrepreneurs, has also increased and will continue to do so as Azerbaijan moves towards a market economy and encourages the inflow of foreign investment.

Azerbaijan's economy was highly dependent on trade with the rest of the USSR. In the latter half of the 1980s exports and imports accounted for 46 per cent and 37 per cent of GDP respectively. Of this, 85 per cent or more consisted of trade with the former USSR, which accounted for more than 90 per cent of exports and 70-80 per cent of imports. Following the dissolution of the former USSR and the resulting economic dislocations suffered by its constituent republics, Azerbaijan's overall trade has fallen significantly in real terms. One of the main causes for this and for the deterioration of the trade balance is Azerbaijan's dependence on imports of crude oil from the Russian Federation and Kazakstan and of natural gas from Turkmenistan, and on exports of refined products throughout the former USSR. The disruption to trade routes due to hostilities and political disagreements with some of its neighbours has also adversely affected Azerbaijan's trade. The country's imports consist primarily of consumer goods.

The macroeconomic policy environment

In August 1994 the president of Azerbaijan unveiled a new economic programme, the principal features of which were a renewed commitment to the transformation of the country's economy to a market-based system and a broadening of its trade and economic relations with foreign countries and companies. While considerable progress was made towards achieving these goals, continued economic instability necessitated a review of the government's policy priorities during the course of the year. Public policy in 1995 was therefore aimed at stabilizing prices and creating an economic environment which would encourage the resumption of growth.

Azerbaijan's fiscal performance has been good in the past, and it does not have a history of running large budget deficits. Responding to the loss of all-union transfers after the dissolution of the former USSR, the government significantly cut spending and revised its tax system in 1992. A small surplus was posted that year. The continued struggle with Armenia and the deteriorating economic conditions increased budgetary pressures, and by 1994 deficits were rising. Partly under pressure from the International Monetary Fund (IMF), Azerbaijan's fiscal policy in 1995 was based on the need to restore budgetary equilibrium. The budget deficit was to be slashed, with the ratio of the deficit to GDP targeted to be cut from 13 per cent in 1994 to only 4.7 per cent. In 1995 the deficit was actually held at 7 per cent and the 1996 budget calls for further reductions to just 3 per cent of GDP.

Azerbaijan introduced its own currency, the manat, in August 1992, but it was not until January 1994 that this currency was designated the country's sole legal tender. The introduction of the new currency and the assumption of monetary control by the Azerbaijan authorities did not immediately result in a significant shift in monetary policy, however, and the lax monetary stance of the Central Bank of Russia (CBR) was not adequately reversed by the NBA until early 1995.

While the share of the state-order system in Azerbaijan's total trade has been decreasing in recent years, it still dominates external trade. The involvement of the government in foreign trade also extends to the issue of export licences by the Ministry of Foreign Economic Relations for goods defined as strategic. In addition, the government requires exporters to surrender a large percentage of their currency revenues.

The government responded to the decline in inter-republic trade with a determined attempt to diversify its export markets beyond the republics of the former USSR. By 1992 the share of exports to markets outside the former USSR had increased to more than 50 per cent but has since dropped as trade links with many former USSR countries have been re-established. Similar attempts have been made to open the domestic market, and since gaining independence Azerbaijan has significantly reduced the high tariff protection which had previously been applied by the former USSR. Over the longer term, the government aims to increase significantly Azerbaijan's exports of oil and oil-based products, including petrochemicals. The government also intends to expand the country's export capacity of light industrial products such as textiles, carpets and processed fish.

Policies towards industry

Privatization legislation was introduced late in Azerbaijan compared with the other republics of the former USSR and little progress has been made to date. Partly under pressure from the IMF, the government announced plans to speed up the privatization process in 1995. The new plans provided for the early corporatization of small and medium-sized enterprises through their transformation into joint-stock companies, and their subsequent privatization by means of a voucher-based scheme similar to those employed in the Czech Republic and the Russian Federation. Despite the delays in privatisation there has been fairly rapid growth in the establishment of small companies. A large proportion of the new private sector is engaged in trade with the other republics of the former USSR and with neighbouring countries and only limited activity and investments have been made in the manufacturing sector.

Some progress has been made in establishing the institutional base of the financial sector since independence in 1992. The most significant developments include the creation of the National Bank of Azerbaijan, as well as the drafting of legislation on the operation of the central bank and the commercial banking system. In addition, almost 200 new banks have been registered in

Azerbaijan since 1992, most of which are owned by state-owned enterprises, worker collectives and trade unions.

The acquisition of modern industrial technology is increasingly recognized as a critical requirement for Azerbaijan's industrial revitalization. Considerable infusions of foreign technology in particular will be needed to upgrade the technological base of the manufacturing sector. The government has sought to encourage the inflow of FDI, both for the establishment of new industries and for the modernization of existing enterprises. A new Law on Foreign Investment was adopted in January 1992, and a Foreign Investment Central Board entrusted with the promotion of FDI was established in 1993. The foreign investment law prescribes the conditions for FDI in Azerbaijan and stipulates its objective as the attraction of capital, technology and advanced administrative techniques.

Foreign investors are expected to play an important role in the exploration and development of new oil fields, involving an outlay of approximately $20 billion over the next ten years. Several oil companies and firms providing related equipment and services from the USA and western Europe have offices in Azerbaijan. The successful conclusion of the oil deals and the ceasefire with Armenia have resulted in a sharp increase in foreign investor interest.

In view of the slow progress of Azerbaijan's privatization programme, most of the existing medium-sized and large state-owned enterprises are likely to remain under state ownership for a considerable period. Consequently, their reform through legal, financial and managerial restructuring is one of the most important economic issues. The administration of industrial enterprises has already undergone major changes since independence. During a first stage of this transition the enterprises were removed from the control of the Soviet ministries and granted a high degree of decision-making autonomy with regard to their production, marketing and procurement policies. Subsequently, industrial enterprises operating in the same subsector were grouped into concerns, with holding companies assuming the decision-making function in a manner similar to the previous branch ministries. These large state concerns report directly to the deputy prime minister in charge of enterprises. The labour collectives of these enterprises also participate in their management, and enjoy the right of veto on certain major issues.

The manufacturing sector

Azerbaijan's economy has been centred on the production of oil for well over 100 years, and the country was one of the world's largest oil producers at the turn of the 20th century. As part of the former USSR, it was developed specifically as a refining centre, with little done to maintain its crude oil production capacity. This heavy dependence on the former USSR as an output market caused the manufacturing sector of Azerbaijan to suffer a near-collapse in recent years. Light industry has centred on food processing, textiles and wine making. The latter suffered a serious setback as a result of the anti-alcohol campaign of the 1980s, but appears to be recovering. Despite the fact that light and food industries accounted for close to one-half of the republic's output in 1991, Azerbaijan imported almost 60 per cent of its consumer goods.

Industrial employment in Azerbaijan has declined steadily since 1980 with employees leaving the sector in favour of the construction and non-material sectors, such as healthcare, housing and municipal services. The level of education in Azerbaijan is high but despite this the country lacks many of the skills necessary to make the transition to a market economy. Few students are enrolled in management and business courses, and foreign language skills are scarce. The country will have to make a concerted effort to remedy this. Curriculum changes will also have to take place at the Oil University, as the country hopes to find new Western markets which use vastly different technology from that of the oil production and refining industries of the former USSR to which it has been geared.

The measurement of both labour productivity and enterprise profitability is extremely difficult, if not impossible, in any of the republics of the former USSR. Firms operating under the Soviet system were more concerned with the achievement of production plan targets than with profitability. The concept of profit centres was alien to the system, and accounting procedures were geared towards counting production rather than costs. Neither product nor enterprise profitability is revealed in the available financial data, which are further distorted by the fact that many inputs such as energy were highly subsidized. While profitability is hard to measure, however, it is readily discernible if an enterprise is making a loss. In Azerbaijan, the number of enterprises recording losses has increased dramatically in recent years. In 1993 about 8 per cent of all industrial enterprises were making losses, while the corresponding figure for agricultural enterprises had risen to 28 per cent from 7 per cent in 1990.

The measurement of productivity in a Soviet-style enterprise is complicated by the fact that facilities often produce several completely unrelated products, and are generally also involved in a large number of ancillary activities such as the running of day care centres, medical clinics, fire brigades and others. Further distortions arise from the soft budget constraints faced by many effectively bankrupt enterprises, which have enabled them to maintain their staffing levels while dramatically reducing output.

Industrial ownership has been almost exclusively in the hands of the state. As noted, privatisation has made not much headway in Azerbaijan and estimates are that the private sector, including informal activities, accounts for only 15-25 per cent of GDP. This heavily state-oriented ownership structure of the economy means that capital investment in the country has also been dominated by the state. The bulk of such investment during the past five or six years was geared towards state enterprises and organizations in the material sphere. Investment in the private sector grew dramatically in 1987 and 1988, but remains limited. To date the interest and investment funds of foreigners has been concentrated in the oil sector.

Manufacturing industry is located mainly in the country's three major cities: the ports of Baku and Sumgait and the inland city of Gyanja, and industrial pollution, especially of the water resources in these areas, is a serious problem. The pollution of the ground water on the Apsheron Peninsula has begun to cause serious health problems to residents of Baku and Sumgait, who partly rely on it for drinking water. The Caspian Sea is also highly polluted: Azerbaijan alone dumps between 250 million and 300 million cubic metres of industrial and municipal sewage into it yearly. A more rigorous environmental policy is being established in Azerbaijan, with several important laws having been passed in 1992 in particular. Many critical issues still need to be dealt with, however, and more importantly, there is an urgent need to upgrade the existing technology and production processes at almost all of the country's industrial enterprises. This will take time and will involve a substantial degree of investment and technology transfer.

As an economy based principally on the processing of hydrocarbons, Azerbaijan is highly dependent on imports of raw materials such as crude oil and natural gas and has traditionally been an exporter of processed oil, gas and related products to the other republics of the former USSR. It also relies on imports to cover about 60 per cent of its demand for consumer goods, and for food in particular. In recent years the country has made a determined attempt to penetrate Western export markets. With the prices of Azerbaijan's oil-based exports rising to world levels, the hydrocarbon sector accounted for 94 per cent of the country's trade surplus in 1992. Now that a number of oil agreements with Western companies have been signed, Azerbaijan will become a major exporter of crude oil and the share of manufactured exports in total exports will decline.

Exports of refined goods will increase in volume terms, however, as the country is also upgrading and expanding its refining capacity.

Since attaining independence in 1991 Azerbaijan has received technical and financial assistance from a wide variety of multilateral and bilateral sources. The principal multilateral donors have included the European Union through its programme of Technical Assistance for the Commonwealth of Independent States (TACIS), the United Nations through the Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Development Programme (UNDP), the Organization for Economic Cooperation and Development (OECD), the International Monetary Fund (IMF) and the World Bank. The main bilateral sources have included India, the Islamic Republic of Iran, Japan, Pakistan and Turkey, although the major European countries such as the UK and Germany have also expressed an interest in providing assistance since 1994.

Most of the assistance provided so far has been channelled into sectors other than manufacturing industry, with the main priority areas including macroeconomic management and institution-building, human resource development, energy, agriculture, transport, telecommunications, water development and environmental measures. A support programme for the industrial development of the Sumgait region was initiated in August 1995 under the auspices of UNDP, with UNIDO acting as the implementing agency.

Industrial branch profiles

Azerbaijan's strong and diverse agricultural base provides a good foundation for the future development of the food processing industries. Currently crops account for over 60 per cent of output, with cattle-based dairy and meat products making up the bulk of the remainder. After dropping dramatically during the preceding decades, the area devoted to cereal production increased by 37 per cent between 1987 and 1992. By contrast, the area planted to cotton and grapes dropped by 23 per cent and 38 per cent respectively during the same period, with the latter being due mainly to the anti-alcohol campaign of the 1980s.

The most serious constraint facing the sector is the limited availability of water for irrigation purposes. Not only are water resources limited, much available water is unusable due to high levels of pollution. The hostilities with Armenia have also led to major disruptions in prime agricultural areas. The end of the conflict should result in increased production of agricultural goods. The water issue is going to be far more difficult to solve. Nevertheless, the outlook for the food processing sector in general is good. Already foreign investment has been made in tobacco by Philip Morris of the USA, and wine production is recovering. Packaging has also been a problem for Azerbaijan agricultural goods and other consumer items. Increased output of this sector will also require an upgrading and increase in the output of packaging materials.

Azerbaijan's textile industry is based principally on the processing of raw cotton and the production of silk fabric, but it also manufactures woollen goods and leather products. The textile industry accounts for the bulk of the country's non-food processing light industry, and offers one of the most promising areas for the development of small and medium-sized enterprises and the private sector. Since the end of central planning, the textile industry is emerging as one of the most attractive industries for private investors.

Having attracted the interest of foreign investors and buyers as well as the support of the government, the future of Azerbaijan's textile industry looks promising. With a well-developed resource base for the production of a wide range of cotton, woollen and silk textiles, the country can support a highly diversified processing industry provided that adequate capital resources and appropriate technological know-how can be obtained from external sources. The development of these industries could further support an expansion of the output of ready-made garments, for which there appears to be considerable demand both in the domestic and in external markets.

While data indicate a collapse in the production of leather-based goods such as shoes and leather clothing, the sector has drawn the attention of foreign investors and buyers, and could constitute a basis for the development of small enterprises. A number of Turkish companies have shown an interest in leather apparel produced in Azerbaijan, and have established several joint-ventures.

Azerbaijan's resource base for the further development and expansion of its wood processing industry is limited. Only 10 per cent of its area is forested, and the country is already feeling the effects of deforestation in the form of agricultural land erosion. Nevertheless, limited opportunities for the development of small- and medium-sized enterprises exist. The demand for furniture in Azerbaijan significantly exceeds the available supply at present, providing local enterprises with favourable prospects for the foreseeable future. Over the longer term, however, the development of the wood and wood products industries will clearly be constrained by the lack of domestic resources.

Azerbaijan hydrocarbon resources are significant both onshore and offshore. The available technology is very basic, however, and three of the four offshore fields discovered recently have remained beyond the reach of local technology. The help of Western partners has thus been enlisted to develop them, with Amoco and other companies being contracted to develop the Azeri field, Pennzoil to develop the Guneshli field, and British Petroleum to develop the Chirag field. The unsettled political situation in recent years caused considerable delays in the implementation of the new oil projects, however. These problems appear to be over with the $7.4 billion deal with the British Petroleum-led consortium signed and ratified in November 1994, followed by the conclusion of several smaller contracts, and should result in not only the regeneration of this sector, but also substantial investment in support sectors.

The chemical industry in Azerbaijan was developed to process cheap local oil into petrochemicals for distribution in the former USSR. Over time, however, greater reliance began to be placed on the processing of crude oil imported from other parts of the USSR, so that the industry became increasingly dependent on these external sources of raw material supply. The dissolution of the USSR resulted in a serious disruption of this industry and by early 1993 the majority of enterprises in the industry were operating at only 50 per cent of capacity.

The main constraints facing the sector have been the limited production of oil in recent years and the need for substantial restructuring. The former constraint should ease as production increases in the near future. Restructuring will require large amounts of new funds and new technology. Thus the success of any restructuring is likely to depend upon the level of foreign interest and investment that can be attracted. Western demand for Azerbaijan's chemical and petrochemical products has already been established, and has proved to be an important source of hard currency. With further improvements in production methods and marketing, and increased access to Western markets, the sector is likely to remain one of the leading engines of Azerbaijan's economic growth.

There are more than 213 identified mineral deposits which can be used in the construction materials industry in Azerbaijan. As of 1992 only 87 were being exploited, and many of those at only 20-50 per cent of capacity. This strong raw materials base provides the basis on which to develop further the construction materials industry based on privately-owned small and medium-sized enterprises. This would help to meet the growing demand for such materials generated by the increasing housing shortage and the need to construct more hotel and office complexes following the signing of oil production agreements with foreign companies. The industry's expansion has hitherto been hampered by a shortage of funds and by the high rates of interest payable on bank credits. Its growth would also have to be accompanied by measures to resolve the construction materials industry's environmental problems and to ensure that the new enterprises operate to safe standards.

Azerbaijan is also well-endowed with ferrous and non-ferrous metal deposits, including significant reserves of iron ore and two medium-sized deposits of gold. These extensive reserves of metallic minerals could form the basis for the development of a thriving metallurgical industry in the country and provide it with an important source of foreign exchange from the export of both processed and unprocessed metals. The exploitation of these resources will depend to a considerable extent on the ability of Azerbaijan to attract Western investment, however, since the technology required to develop these resources is not available locally. An example of such a partnership is the agreement signed in May 1994 for the reconstruction of the Sumgait aluminium plant with the UK firm, Kaiser Engineering. Increases in the cost of domestic energy may threaten the economic viability of the sector, however.

The most important subsector within the machine-building industry is the manufacture of oilfield equipment. At least 60 per cent of well-service, production and work-over equipment for the oil industry of the entire former USSR was produced in Azerbaijan, which has the largest concentration of enterprises producing such equipment outside the USA. While the output of the machine-building sector has fallen in recent years, as has output in most other sectors, the production of oil equipment has begun to adjust to new markets, with several orders for the supply of such equipment having been placed by Western firms. The oil equipment industry has also attracted considerable interest from Western investors.

The main constraint facing the future development of the sector is this need to adjust to Western technological standards. Even the oil industry of former Soviet Union, which is currently a captive market since it still relies on the technology used in Azerbaijan, is adapting Western standards such those of the American Petroleum Institute.

While still a part of the former USSR, Azerbaijan was developed as the centre for the assembly of air-conditioning units, one of the few household goods produced by the country at that time. With imports accounting for about 60 per cent of Azerbaijan's consumer goods requirements, the government has acknowledged that priority needs to be given to the development of consumer goods industries. In pursuit of this aim, an association of consumer goods producers was established in 1991. The existing enterprises have been re-equipped with Western technology, and a number of new small enterprises have been established. The profitability of these firms has increased significantly; their output includes plastic and metal products, glass and ceramics, cutlery and tableware, lighting, baby carriages, souvenirs and toys and has considerable potential for growth. It is a particularly attractive industry for the private sector and for foreign investors because of its often relatively small scale of operations, the limited capital investment needed to enter the industry and the substantial backlog of unfulfilled demand for its products.

CHAPTER TWO: TURKMENISTAN

Recent economic trends

The Russian conquest of the Turkmen region began in 1877 and led to the signing of a treaty with the British in 1895. Internal opposition to Russian rule nevertheless remained strong, and Soviet control was not firmly established until 1929, when the collectivization of agriculture and the forced settlement of the traditionally nomadic population began. Only limited industrial development took place in the 1920s and 1930s as a result of the continued opposition to Soviet rule, and the little industrialization that did take place was carried out by Russian-speaking immigrants to the urban areas. Agriculture was encouraged and irrigation facilities expanded culminating in the construction of the 1,200 kilometre Kara-Kum Canal and the rapid expansion of cotton cultivation.

After 1945 the production and processing of cotton became one of the mainstays of Turkmenistan's economy. By the 1980s the effects of over-irrigation and poor cultivation methods began to be felt, however, and output began to drop. This had a direct impact on the country's overall economic growth, which averaged 5 per cent per year between 1985 and 1988 but collapsed in 1989. The worsening economic performance, combined with unease over Turkmenistan's excessively high dependence on the rest of the former USSR, imposed a growing strain on the republic's relations with the central authorities. On October 27, 1991, the country declared its independence from the USSR as one of the union's poorest and least developed republics.

While beginning independence with one of the lowest standards of living among the republics of the former USSR, Turkmenistan has been affected far less seriously by the dissolution of the union and the resulting disruption of its trade links than many of the other republics due to its ability to raise the price of its gas exports to world levels, at least to some of its export markets. Statistical information on the economy's post-1993 performance is extremely patchy, with few official statistics having been released. After positive initial indicators suggesting a growth in output during the first half of 1993, the situation deteriorated, and for the year as a whole, output contracted by 1 per cent. Estimates for output in subsequent years indicate a severe contraction of the economy in 1994 (GDP falling by 20 per cent) and further contraction in 1995.

One of the most important reasons for this economic decline is Turkmenistan's heavy dependence on the former USSR for its gas exports. With the shift of inter-republic trade to world prices and hard-currency payments in 1992, most of Turkmenistan's existing customers became unable to pay for their imports while new outlets in hard-currency markets proved extremely difficult to find. This inability to pay, and the attendant fall in demand, has resulted in a sharp decline in the production of hydrocarbons. The impact of the downturn in the hydrocarbons sector has been reinforced by a similarly disappointing performance in the cotton sector, which represents Turkmenistan's only other significant source of export income.

Despite the deterioration in the performance of its two principal exports, Turkmenistan's external accounts have improved since the early 1980s, largely as a result of a sharp reduction in imports. Price reform began in 1991 and has taken place in stages but this, together with a relatively lax monetary stance (largely the result of Russian policy), has meant that inflation has been rampant. As is the case with the other republics of the former USSR, Turkmenistan left the rouble zone in an attempt to gain control of its monetary policy. To date it has not been successful. As a result, the new currency, the manat, has been on a downward spiral since its introduction in November 1993. Issued at Manat2:$1, the unit began 1996 at the Manat2,100:$1 level, and shows no sign of stabilizing.

Turkmenistan was one of the main beneficiaries of union transfers prior to its independence, with such transfers amounting to as much as 20 per cent of public expenditure. Budget data for the second half of the 1980s and the opening years of the 1990s show that although the government recorded continuous surpluses during this period, they were substantially smaller than the transfers it received from the centre. The loss of these transfers with independence has been largely offset by the increased revenue generated by the sale of natural gas exports in hard currency at world prices.

The economic structure

The Republic of Turkmenistan is the second largest of the central Asian republics. It has a continental climate with extremely hot summers and cold winters and much of the country receives little rainfall. While the country possesses major rivers, the Amu-Dar'ya and the Murghab, western portions of the republic have no significant natural waterways and the Kara-Kum Canal was built in 1954 to carry water into these areas from the Amu-Dar'ya.

Turkmenistan had an estimated population of 3.9 million in 1994. The vast majority of the country's inhabitants are ethnic Turkmens, who account for 72 per cent of the total population. The republic is predominantly rural, with 55 per cent of the population living in rural areas, although most non-Turkmens live in urban areas. Thus, 41 per cent of the population of the capital Ashgabat, which had a total population of 517,200 in 1992, is Russian. As in most other central Asian republics of the former USSR, the declaration of independence in Turkmenistan has been followed by a significant emigration of Russians and other non-local peoples. Since large numbers of these people were employed in the industrial labour force and often held management positions, their emigration has had a serious impact on the economy, leaving severe shortages of skilled workers and professionals.

Agriculture is the predominant economic activity in Turkmenistan. It accounts for more than 40 per cent of total employment and, until 1993, contributed almost half of its GDP. Activity is focused mainly on the production of cotton, of which Turkmenistan was the second largest producer in the former USSR after Uzbekistan. In addition, arable farming, horticulture and animal husbandry play an important role with the latter accounting for approximately 13 per cent of total agricultural production. The high degree of concentration on cotton production has made the country dependent on substantial food imports, however.

Turkmenistan's mining sector is dominated by the exploitation of hydrocarbon resources. With an annual output of approximately 90 billion cubic metres per year at independence, the country was the world's third largest producer of natural gas after the Russian Federation and the USA. In addition to this it also produced significant volumes of crude oil, amounting to approximately 213 million tonnes in 1990. Domestic consumption is equivalent to about 12 per cent of production, and the balance is exported. The regeneration and further development and exploitation of Turkmenistan's oil and gas resources are key elements of the country's development efforts.

Industry accounted for 20.4 per cent of Turkmenistan's net material product in 1991 and, due to the large jump in gas and oil prices, over 69 per cent of NMP in 1993. The principal manufacturing activities comprise the processing of petroleum, natural gas and other minerals, the production of chemicals and the manufacture of cotton-based textiles. In 1991 the production of textiles accounted for one-third of industrial production, and the production of hydrocarbon-based fuels and chemicals for a further third.

Transport and telecommunications services are of particular importance for Turkmenistan because of its geographical location, distance from major markets and dependence on international trade. The available transport and telecommunications infrastructure remains extremely inadequate, however, although this problem is being addressed by the government. Several projects have been undertaken in recent years to upgrade the country's road, rail and air transport facilities and linkages, as well as its telecommunications services.

The banking system in Turkmenistan was based on the same pattern as in the rest of the former USSR. In 1988 a two-tier structure was formed through the establishment of a number of specialized banks, leaving the State Bank to function as a branch of the Soviet Gosbank. With the introduction of the manat in November 1993, the State Central Bank of Turkmenistan became the country's central bank. In October 1993 a new Commercial Bank Law and Central Bank Charter were adopted by parliament, giving the central bank independence over monetary and foreign exchange policy. The reform process suffered setbacks in both February 1994 and February 1995, however, when budgetary constraints and the political need for consumer subsidies prompted the government to issue decrees requiring the undercapitalized banks to provide substantial volumes of forced loans to state-owned enterprises at strongly negative interest rates and to surrender all excess profits to the state.

Trade, tourism and other services have not played a significant role in the economy of Turkmenistan. As the move towards a market economy progresses and foreign direct investment enters the republic, however, they will assume increased importance. The creation of an adequate infrastructure for business travellers to the country will be especially important. Proposals for the construction of new hotels in Ashgabat have already attracted foreign interest, and as foreign investors become more active a wide range of business services, such as translation and typing services, will need to be developed.

Turkmenistan's principal export products are gas and cotton. With the shift to international prices in 1992, natural gas became the overwhelming export in value terms. While some shift to Western export markets has taken place (three of the country's top trading partners are Western countries), a significant proportion of gas exports has continued to be shipped to other republics of the former USSR, which, as noted, have faced increasing difficulties in meeting the hard-currency payment obligations and have run up substantial arrears. Despite some initial attempts to reduce Turkmenistan's dependence on cotton exports after it achieved independence, the troubles with the country's natural gas exports have caused it to resort once again to cotton as a leading export.

Turkmenistan's imports consist mainly of machinery and metalworking products, light industrial goods and food. As a result of the emphasis of its agricultural sector on the production of cotton and the rearing of livestock, the country has traditionally been a major importer of grain and processed foods.

The macroeconomic policy environment

The Economic Committee of the Presidential Council is entrusted with the formulation of economic policy in Turkmenistan. While the government of Turkmenistan has recognized the need to adopt a reformist economic policy aimed at inducing a gradual shift to a socially-oriented market economy, it has been slow to introduce the necessary market reforms or to create the conditions needed for the development of the private sector. The privatization process, for example, has made very little headway even though the necessary legislative framework was established in 1992. Similarly, the banking system continues to be state-owned, and domestic production and trade also continues to be officially determined by means of the state order system. Nevertheless, in December 1995 President Niyazov declared the first round of reforms complete and laid out an ambitious second economic reform programme, which aims to strengthen the existing market-oriented reforms, provide for internal convertibility of the manat and introduce market-oriented monetary and fiscal measures. Plans also call for the encouragement of foreign investment and the upgrading of the transportation infrastructure.

As a constituent republic of the union, Turkmenistan was one of the major beneficiaries of union transfers, which amounted to as much as 20 per cent of public expenditure or 10 per cent of GDP.

After the dissolution of the USSR the old revenue sharing schemes were discontinued, and significant changes to the domestic tax system were introduced in 1991. These included the adoption of an enterprise profit tax, the replacement of the turnover and sales taxes with VAT, and the levying of new excises on several goods. In 1994 a number of new measures were introduced to increase the transparency of Turkmenistan's fiscal mechanisms. Despite this promising start, the government proved unable to maintain the required budgetary restraint during the course of the year, which ended with a significant deficit. It is also expected that 1995 posted a deficit.

Following Turkmenistan's withdrawal from the rouble zone and introduction of its own currency, the manat, in November 1993, it was hoped that the State Central Bank of Turkmenistan would adopt a more conservative policy stance, and give high priority to maintaining domestic price stability and supporting the external value of the manat. These hopes have not been fulfilled, however, and inflation was 1,100 per cent in 1994, and an estimated 2,500 in 1995.

Because of its heavy specialization in cotton cultivation and the production of oil and gas, Turkmenistan is highly dependent on imports, with most light industrial products and processed foods being imported. After the country achieved independence, its new government initially placed great emphasis on increasing its self-sufficiency in a number of basic staple foods. In 1992 it substantially reduced the acreage allocated to the production of cotton in favour of crops such as sugar beets, and also proposed the establishment of local processing facilities for beet sugar.

The commodity composition and geographical distribution of Turkmenistan's exports is also highly concentrated and in view of this, the government's main trade policy objectives include not only an increase in export revenues, but also a diversification of the country's export markets and an increased level of domestic resource processing to add value to the country's raw material exports. The relaxation of direct trade controls in 1993 was followed by a renewed centralization of foreign trade in August 1994 following the establishment of a commodity exchange in Ashgabat. Since that time all trade transactions, both domestic and foreign, exceeding Manat250,000 must be conducted, or registered and endorsed, at this exchange.

When Turkmenistan issued the manat on November 1, 1993, the currency was fully convertible in principle, and officially had only a single exchange rate, which is fixed against the dollar at a weekly foreign exchange auction and then set for other currencies on the basis of their cross-rates to the dollar. The rate of the manat at issue was Manat2:$1. Although its exchange rate rose slightly in the first week, it has depreciated steadily since then. As of February 1996 the rate was Manat2,400:$1.

The education system in Turkmenistan is based on the Soviet model, and has been dominated by the need to produce specialists. While facilities for further training exist in Turkmenistan, they are inadequate to provide the qualifications to manage the country's transformation to a market economy. Both pre-employment training programmes and re-training programmes should be redesigned to reflect the new needs. As the level of unemployment rises in response to the restructuring of the economy, the number of programmes provided and people served must also be increased.

Policies towards industry

The legal framework for privatization was established through the Law on Destatization and Privatization of Property in Turkmenistan, adopted on February 19, 1992. The law is intended to develop various forms of property ownership, to give citizens the economic freedom to choose their occupation and sphere of employment, and to create new economic structures. The privatization process itself, however, has moved slowly and has not been implemented at all in the industrial sector. A presidential decree issued in May 1994 foresees a voucher privatization programme under which workers are given preference. In the meantime, the policy has been to begin with small privatizations such as shops and other small entities.

The intention of the government to reform the economy and establish the basic institutions of a market economy is reflected in the adoption of several legislative measures. One particularly important piece of legislation is an enterprise law enacted in November 1992, which prescribes the legal and social principles for the creation, reorganization and liquidation of enterprises under all kinds of ownership. The growth of the private sector has been limited, however, and was estimated to account for only 9 per cent of GDP and 22 per cent of employment in 1995.

The only access that the slowly emerging private sector has to bank financing is from the new commercial banks created from the former branches of the Soviet-era Gosbank. These commercial banks have inherited the large non-performing loans of state-owned enterprises, however, and are also considerably undercapitalized, with limited access to new funds. They lend only on a short-term basis for up to six months, and charge interest at rates significantly above the subsidized rates charged to state-owned enterprises, which are commonly negative in real terms. Credit allocation is in the hands of the central bank, and is based on the priorities established for various sectors by the government.

The legal, economic and organizational requirements for foreign direct investment in Turkmenistan are stipulated in the laws on foreign investment and foreign economic activity, both of which were issued in May 1992. They provide equal protection for the rights of foreigners and nationals, regardless of the form of ownership, and regulate the basic principles governing foreign economic activities in Turkmenistan. Foreign investment interest has so far centred on the exploration of oil and gas reserves, for which the government has issued international tenders to multinational companies. In early 1993 the government announced the establishment of seven free economic zones.

Enterprise restructuring has started only recently and has progressed to a limited degree. It is being undertaken largely in order to prepare selected enterprises for privatization. Several of the major enterprises and conglomerates, which have hitherto engaged in non-related activities, are being restructured along product lines.

The manufacturing sector

Turkmenistan was a predominantly nomadic and agricultural area. After the construction of the Kara-Kum Canal and the opening of vast new territories for cotton cultivation, cotton production became an increasingly important activity in the post-1945 period. The industrial sector has remained embryonic, with much of the modest industrial base that does exist having been built up in the 1920s. Over the years little structural change has taken place in the economy, or the industrial sector. Agriculture and the extraction of natural gas continue to dominate the economy. The latest available data indicate that Turkmenistan had 1,381 industrial enterprises in 1991. Of these, 38 were energy-based, and employed about 18 per cent of the industrial work force, which itself represented only 10.6 per cent of the total labour force.

Industrial employment accounts for only about 17 per cent of non-agricultural employment. Moreover, almost 25 per cent of industrial workers are engaged in agro-related industries. This structure has not changed since 1980. As in all of the countries of the former USSR, official estimates of unemployment have remained low. In mid-1994, open unemployment was recorded primarily in the high-skill fields such as the civil service and scientific institutes where work cutbacks have been implemented. As elsewhere in the former USSR, however, the official figures understate the true level of unemployment and mask the rampant underemployment in these countries.

Like many other central Asian and Caucasian republics of the former USSR, Turkmenistan has experienced a significant emigration of trained and skilled workers. Immigrant Russian speakers were responsible for the bulk of the country's industrial development and agricultural mechanization, so their return to their "home" republics since the dissolution of the union has left considerable skill gaps. Little has been done to fill these gaps, however, with no major programme having been initiated for the provision of specialized education or the development of technical skills.

The measurement of labour productivity in any of the republics of the former USSR is extremely difficult. With this in mind, based on calculations of net domestic production per employee, labour productivity in Turkmenistan is revealed to be low, as it is throughout the central Asian region. In 1970, productivity in the region amounted to 83 per cent of the average for the USSR as a whole. By 1985, the figure for Turkmenistan alone had dropped to 70 per cent of the Soviet average, and by 1990 it had fallen further to only 62 per cent.

The profitability of Soviet-style enterprises is as difficult to measure as their labour productivity since such enterprises did not employ the concept of profit centres and were geared toward counting production rather than costs. The situation is complicated further by the fact that many inputs, such as energy, were highly subsidized, and that any financial estimate of profitability would not reflect profitability in a market environment. Although there are no official data on the number of loss-making enterprises in Turkmenistan, the World Bank has suggested that most if not all enterprises in the country would be unprofitable if Western cost accounting methods were applied.

At the time of Turkmenistan's independence, almost all economic activities were controlled by the state. This situation has changed relatively little, with the privatization programme having made little progress. As a result of this pattern of ownership, investment in Turkmenistan has been dominated by the government. Currently government policy is to concentrate large amounts of investment in infrastructure development projects. Foreign investment, while slower to arrive in Turkmenistan than in many of the other republics of the former USSR, is nevertheless an important source of investment funds and will remain so. The largest investments are in the oil and gas sector, although the production of consumer goods, commerce and services have also attracted interest.

The level of industrialization in Turkmenistan is low. The country's major industrial centre is the second largest city, Mary, in the south-east. Other industrial centres are the cities of Byuzmeyin, the suburb of the capital, Ashgabat, and Chardzhou and Dashkhovuz. Petroleum is refined at Chardzhou and the Caspian port of Turkmenbashi.

Despite its low level of industrialization, Turkmenistan has not avoided the environmental degradation common to all republics of the former USSR. The most serious problems are associated with over-irrigation and the over-use of pesticides, as well poor land management. Industrial pollution is a serious problem in a few areas such as Chardzhou, which has high levels of air pollution emanating from the mineral fertilizer industry as well as from traffic and power generation.

Technical assistance to Turkmenistan has been limited and most projects have been regional in scope. The EU is the largest donor, followed by Turkey, Germany (in a bilateral capacity), the USA and UNDP.

Industrial branch profiles

Although Turkmenistan has limited agricultural land and relies heavily on irrigation, it has the ability to produce a wide variety of food crops. The most important of these are grains, fruit and vegetables, and grapes. The principal constraints faced by the food processing sector relate to the lack of handling, processing and packaging capacity. The country's produce is thus prone to rapid deterioration due to a lack of cold storage facilities and to poor handling in general, and cannot be processed before it perishes as the processing industry has no excess capacity into which to expand. The lack of packaging materials, including a shortage of bottles arising from the anti-alcohol campaign of the 1980s, also poses a major problem, necessitating for example the bulk shipment of wine to export markets in the rest of the former USSR.

Both domestic and regional demand is believed to be high for the processed foods produced in Turkmenistan. With the government giving priority to the development of the food processing industry, the necessary processing facilities are gradually being established.

While Turkmenistan is a major producer of cotton, it is of relatively poor quality and the country has limited processing capacity. The country has a comparatively strong resource base for the production of woollen goods, with animal husbandry being the second most important agricultural activity and involving the rearing of large numbers of sheep. This subsector also faces a shortage of processing capacity. The government has recognized the problem, however, and has begun to encourage the expansion of the processing industry and Turkmenistan is attracting considerable foreign investment interest in, and credits for, the textile industry. Given the level of foreign interest and the low cost of entry, the outlook for this sector is fairly good.

The large number of sheep and cattle in Turkmenistan provide the basis for the development of a leather industry, based in particular on sheepskins. There has been strong foreign interest in this field as in the other central Asian republics. This, together with the availability of local resources, means a bright outlook for the sector. Past experience, both in Turkmenistan and in the other central Asian republics, indicates that it is an industry for which international buyers are willing to provide initial capital in return for future delivery of product. For these reasons, it is one of the main sectors likely to witness the development of small private enterprises.

The development of Turkmenistan's hydrocarbon resources is one of the government's principal priorities, and forms the basis of its economic development plans. According to a major programme entitled "Ten Years of Well-Being" introduced in 1992, the output of natural gas was to be increased to 90 billion cubic metres in 1996, representing almost one-and-a-half times the 1993 level, and to 120 billion cubic metres in 2002. The output of oil and natural gas condensate, meanwhile, was targeted to rise to 9 million tonnes and 28 million tonnes over the same period.

The main constraints on the achievement of these objectives and the expansion of oil and gas production in Turkmenistan are the country's inadequate technical capacity to exploit its reserves and the shortage of financial resources. The most serious constraint inhibiting the production of oil and gas products, meanwhile, is the limited refining capacity in the country. In view of the strong interest expressed by foreign oil and gas companies in central Asia, it appears almost certain that the financial resources necessary to develop Turkmenistan's hydrocarbon resources will be found. The mobilization of such financial resources will nevertheless involve major commitments from transnational oil companies and international financing institutions, which are only likely to be forthcoming once the government has established well-defined laws and regulations for foreign direct investment in the energy sector.

Turkmenistan has large reserves of a number of inorganic chemicals and various salts, including iodine-bromine and sodium sulphate. In addition, the country's extensive hydrocarbon resources provide it with the capacity to develop a petrochemicals industry. The future of Turkmenistan's chemical industry will depend to some extent on its ability to adjust its production to the new needs of agriculture and environmental safety. Agriculture needs better and more environmentally friendly fertilizers. Existing facilities need to be upgraded in terms of their environmental standards and future emissions and dumping policies. Finally, as noted above, some of the resources upon which the industry has been based are near depletion.

The most difficult problem to overcome may be upgrading the existing production facilities to clean standards in view of the lack of investment funds in the country. It will also be the biggest deterrent to foreign investment in the existing facilities. In general, however, the outlook appears bright for the development of a petrochemicals sector based on the expected increase in the production of oil and gas.

Turkmenistan has several deposits of materials used in the production of construction materials, such as gypsum, asbestos, gravel, sand and limestone. Current production includes cut stone, bricks, tiles, cement, slate, gypsum, concrete blocks and several other products. Because of the shortage of wood in the country, chipboard produced from caustic dolomite, bischofite and cotton waste is an important construction material. Demand for construction materials will be strong in the medium to longer term, as the economy recovers from its current transitional disruption and foreign investment in the oil and gas industry gathers pace. Office space will be required, as will the construction and upgrading of housing and industrial plants. Development will be constrained by the lack of finance, since it requires substantial investment in the exploitation of local mineral resources as well as the import of costly western technology and equipment.

Turkmenistan has no specific resource-based advantages for the production of machinery and transport equipment, but was selected as a manufacturing location for some forms of machinery in line with the policy of inter-republic specialization prevailing in the former USSR. The machinery industry in Turkmenistan is centred on the production of equipment for the oil and gas industries, pumps and ventilators, and cables.

Demand will greatly increase for oil and gas industry equipment in the future, but since much of this will be generated by foreign investment-led projects, local production will have to adjust to meet the new technology needs. If it can make such adjustments, its outlook will be promising. The prospects for the development of a transport equipment industry are bright in view of recent foreign investment activity. While no such industry existed in the past, two international companies have signed deals to produce motor vehicles locally.

CHAPTER THREE: UZBEKISTAN

Recent economic trends

Soviet power was established in the current capital of Uzbekistan, Tashkent, in 1917 and the Turkestan Autonomous Soviet Socialist Republic (ASSR) was proclaimed in April 1918. Bukhara and Khiva remained independent People's Soviet Republics until 1924, when they were also incorporated into the Turkestan ASSR. On October 27, 1924, the Uzbek Soviet Socialist Republic was established. It comprised the whole area of the former Turkestan ASSR until 1929, when Tajikistan was established as a separate ASSR. In 1936, the Kara-Kalpak region was transferred from the Russian Federation to the Uzbek SSR, but retained its autonomous status.

The establishment of Soviet rule led to the rapid industrialization of Uzbekistan. This process was accompanied by the immigration of large numbers of skilled workers from Russia and Ukraine. During the Second World War the industrial base expanded further as a result of the transfer of industries from the war zone. Massive increases in cotton production provided the stimulus for the continued strong growth of the economy in the post-war period, but by the second half of the 1980s growth was beginning to stagnate and the environmental devastation caused by the over-irrigation of the cotton producing areas had become clearly evident. The Aral Sea was drying, soil salinity was high and soil fertility had declined considerably.

Since declaring independence in 1991, Uzbekistan has suffered a much less severe economic contraction than the other central Asian republics. The decline in industrial production initially was greater than the contraction of the economy as a whole due to several factors, the most important of which were the loss of input and output markets resulting from the dissolution of the USSR and the increase in input prices resulting from the gradual withdrawal of state subsidies as well as the shift to market-oriented pricing mechanisms. At the same time, the drop in the production of building materials was less severe than in the rest of the central Asian region due to an increase in residential construction following the privatization of the housing sector after independence. In 1994 and 1995 industrial production recovered, increasing by 1 per cent and 0.2 per cent respectively. The figures for 1995 may be optimistic, however, because of the poor agricultural performance in that year.

Uzbekistan's external trade performance has also been more favourable than that of most of the other republics of the former USSR. Faced with a particularly serious disruption of its traditional food imports from the other republics of the former USSR by the end of 1991, Uzbekistan resorted to an increased use of barter and began to trade cotton for food from suppliers outside the former USSR. In 1992 the country experienced a deterioration in the terms of trade as the price of imported energy rose. To compensate for this worsening of the external environment, Uzbekistan increased its sale of cotton to countries outside the former USSR.

Price liberalisation began in 1992 and has proceeded in stages. Despite attaining independence in 1991, Uzbekistan remained in the rouble zone for several years, thereby becoming vulnerable to the expansionist monetary policy pursued by the CBR and suffering high rates of inflation. In response to this lack of monetary control it was decided to withdraw from the rouble zone in November 1993, issue its own currency and take control of the country's monetary and foreign exchange policy. As a first step in this direction, the government issued a transitional currency known as the som-coupon and repealed an earlier requirement for exporters to surrender 60 per cent of their foreign exchange earnings. In July 1994, the transitional som-coupon was replaced with the country's new currency, the som.

The establishment of its own monetary institutions permitted the government to adopt a tighter monetary stance, which has helped it to rein in the inflationary pressures affecting the economy. The annual rate of consumer price inflation was thus reduced from 1,281 per cent in 1994 to an estimated 115 per cent in 1995.

The economic structure

Uzbekistan is the most populous of the central Asian republics, with more than 22 million people. The climate in Uzbekistan is marked by long hot summers and short but extremely cold winters.

More than 60 per cent of the republic consists of desert and steppe, and almost all agricultural land requires irrigation. The bulk of the water used for irrigation is derived from the country's two major rivers. Like many of the other central Asian republics, Uzbekistan is endowed with an abundance of mineral resources. The country has particularly rich deposits of hydrocarbons and natural gas is an important export commodity. In addition, it also has large reserves of silver, uranium, copper, lead, zinc, wolframite, tungsten and gold. It is the world's eighth largest producer of gold and possesses the world's largest single gold mine.

The vast majority (71.4 per cent) of Uzbekistan's inhabitants in mid-1994 were ethnic Uzbeks, while 8.3 per cent were Russian. The country is heavily urbanized, with 41 per cent of the population lived in urban areas in 1989. As in many of the other central Asian republics, the indigenous population tends to be concentrated in the countryside while Russians and other Russian speakers are concentrated in the cities.

Agriculture continues to play an important role in Uzbekistan's economy, accounting for about one-third of the country's net material product in 1994 and employing about 40 per cent of the workforce. Almost all of the country's agricultural land requires irrigation, however. The most important crop is cotton. Although there has recently been a shift in government policy towards reducing the acreage planted in cotton in favour of food crops, cotton will remain a major source of Uzbekistan's export earnings for the foreseeable future following the recent emergence of western Europe as an important market for the country's cotton lint.

Despite the fact that grain is also a major crop, Uzbekistan continues to import about 75 per cent of its domestic requirements. In September 1994 the government announced plans to make the republic self-sufficient, and allocated 1 million hectares of land to grain production in 1995. Silkworm breeding and animal husbandry are also important agricultural activities in Uzbekistan. Much of the country's livestock rearing industry is geared to the production of wool, and Uzbekistan is the second largest producer of astrakhan wool in the region after Kazakstan.

Uzbekistan possesses substantial mineral and energy resources. While a net importer of oil, the republic was one of the world's largest exporters of natural gas in 1994. Uzbekistan's energy consumption expanded rapidly in the 1980s, outstripping the expansion of domestic production by a substantial margin. This resulted in a sharp decline in the volume of gas exports by some 50 per cent, and a quadrupling of the country's net energy imports. The development of Uzbekistan's energy resources is thus one of the highest priorities of the government.

Uzbekistan's current production of gold amounts to some 60-70 tonnes per year and total reserves are estimated to exceed 4,000 tonnes. Foreign interest in developing Uzbekistan's gold resources is high, and several ventures have already been entered into with foreign partners.

Manufacturing in Uzbekistan remains limited. The bulk of the industrial sector, which accounts for approximately 30 per cent of net material product and 18 per cent of employment, is centred on the processing of agricultural raw materials and other natural resources. Even so, only 12 per cent of the raw cotton, 20 per cent of the sheepskins and 60 per cent of the silk cocoons produced in Uzbekistan are processed locally. Agricultural machinery, cotton harvesters and textile mill equipment are also produced locally, and Uzbekistan is the home of the largest aircraft manufacturing enterprise in the former USSR.

Uzbekistan has a relatively well-developed transportation system, although it faces serious problems due to lack of maintenance and the age of much of the existing infrastructure. The telecommunications system is also grossly inadequate to meet the demands likely to be placed upon it in the foreseeable future as efforts are made to develop the economy. Large amounts of investment will therefore be needed to upgrade the existing transport and communications facilities to enable them to meet the expected changes in demand.

In 1988 the then USSR introduced a two-tier banking system across the union. Further steps toward a reform of the banking sector were taken in the Uzbek Republic in 1991 with the passage of the Banking Law, which was followed by the approval of the statutes of the Central Bank in 1992. Central banking and commercial banking functions are, however, not yet clearly delineated, and in reality little restructuring has taken place. However, more than 30 new joint-stock commercial banks have been registered since 1990, often with state-owned enterprises and ministries holding a major share. The main objective of these new banks has been to mobilize funds for their owners.

Trade, tourism and other services did not have a large role in the economy of Uzbekistan before the country attained independence. As the economy becomes more market-oriented, however, the role of trade establishments and business support services in particular will increase dramatically.

By all relevant criteria, Uzbekistan is a very open economy. According to estimates prepared by the IMF, its total trade (imports plus exports) accounted for 154 per cent of GDP in 1992 and official figures for 1994 indicate that total trade was still 100.5 per cent of GDP. Within the former USSR, the Russian Federation and the four other central Asian republics accounted for 90 per cent of the country's trade.

The country's main exports are cotton, basic metals, machinery, agricultural and aviation equipment, textiles and fertilizers. Natural gas is also an important export item. Imports have historically been dominated by oil-, coal- and petroleum-related products, as well as foodstuffs, raw materials and consumer goods. Uzbekistan's imports of oil and oil-related products more than offset its exports of gas. Because of the large energy-based component of its international trade, Uzbekistan experienced a sharp deterioration in the terms of trade in 1992. By 1993, however, the increase in the price of the country's cotton exports to the other republics of the former USSR to close to world levels had more than offset the deterioration suffered in 1992.

The macroeconomic policy environment

Relatively few economic policies intended to facilitate a shift to a market-oriented economy were introduced in Uzbekistan until the end of 1993. The government's efforts were directed mainly at setting up new institutions to perform the functions which had formerly been directed centrally from Moscow. These institutions were intended to replicate the previous institutional structure with a view to replacing the erstwhile centralized institutions of the former USSR with national institutions to manage and control the economy.

Thus, although some reform did take place, it was not until January 1994 that firm steps were taken to accelerate the shift towards a market-oriented economy through the issue of a presidential decree "on measures to deepen economic reform, protect private ownership and develop entrepreneurship". This decree was indicative in nature, providing general guidelines for a wide range of economic, financial and legal reforms aimed at accelerating the privatization process and the growth of entrepreneurial activities, but leaving the formulation and implementation of specific legal, policy and institutional arrangements to a newly established inter-agency Council on Economic Reform, Entrepreneurship and Foreign Investment.

As a result of these measures the government has won the increased support of the major multilateral funding institutions and several bilateral donors. Nevertheless, the IMF remains concerned about the country's economic reform policy, especially its failure to make significant headway on privatization, and has indicated that it expects further reform in several other areas.

Since January 1992 Uzbekistan has not received the large budgetary transfers from the former USSR that previously constituted a major source of the government's financial resources. Accounting for approximately 40 per cent of state revenue (almost 20 per cent of GDP) in 1990 and 1991, this loss has seriously affected the country's fiscal position. The government responded to these changed circumstances with the tying of government expenditures in 1992 to monthly receipts. The deficit was held at 3.9 per cent of GDP that year, but largely through extra-budgetary financing. Although changes were made to the tax code in 1993, without extra-budgetary financing the deficit would have been 34 per cent of GDP.

It was not until July 1993, when the CBR de-linked the rouble circulating in the Russian Federation from that circulating in Uzbekistan, that the Central Bank of Uzbekistan began to exercise some degree of monetary control. With the introduction of the transitional som-coupon in November 1993 that separation was made formal and permanent. Thus in 1994 a tighter monetary stance began to be adopted, resulting in the deceleration of inflation to 550 per cent that year and, with a continuing slowdown in the rate of price increases in 1995, to around 115 per cent.

Uzbekistan's foreign trade is highly centralized and planned in accordance with national development priorities. One of the principal aims of the government's trade policies is the expansion of exports through the promotion of increased investment in export oriented industries. In particular, policy aims to change the country's status from being primarily an exporter of raw and semi-processed goods to becoming an exporter of finished goods, especially in the field of textiles, through an increase in the domestic value added of its resource-based exports. Another important objective is the restoration of trade links with the republics of the former USSR, and by the beginning of 1993 the country had signed trade agreements with many of them. Over the longer term, the government's principal trade policy objective is to reduce Uzbekistan's continued heavy trade dependence on the countries of the former USSR, and the Russian Federation in particular.

A major constraint on the expansion of Uzbekistan's exports outside the boundaries of the former USSR is the inadequate quality of many locally produced goods. The development of international export markets will therefore require an upgrading of the quality of several products where the country has competitive potential but the present product does not meet international standards. A case in point is the silk industry, where the quality of the cocoons and the dyes used for printing need to be significantly improved if exports are to be increased. Meanwhile, in an effort to diversify its import sources and facilitate the import of consumer goods, the government announced the suspension of all tariffs on imports from countries outside the former USSR between January 1994 and July 1995. At the same time, the Ministry of Justice, the Ministry of Foreign Economic Relations and certain other interested ministries were required to draw up a list of items whose imports would be prohibited.

Uzbekistan did not control its foreign exchange policy until the som-coupon (introduced in late 1993) was made sole legal tender in April 1994, and was itself replaced by Uzbekistan's new currency, the som, in July of that year. The som is subject to a managed float, with its daily value being determined by transactions conducted in a newly opened currency exchange in Tashkent. As indicated by a persistently large spread between the official and black market rates, however, the som is less than fully convertible.

The foreign exchange regulations in force in Uzbekistan still contain several elements of the old system, but are being progressively reformed. A particularly important step in this direction was taken in January 1994, when a presidential decree was issued liberalizing several features of the exchange rate system. Shortages of foreign currency have been the norm and this has made exchanges difficult: the president personally ordered banks to make over $120 million available for hard currency purchases in the second half of 1995. There have been reports that the government intends to introduce convertibility in 1996.

Although Uzbekistan has a large pool of educated and technically skilled labour, there is a severe shortage of the skills required for the transition to a market economy and the efficient functioning of the economy within a market-oriented system. Major efforts will therefore have to be made in coming years in order to provide manpower support for the reform process. In certain areas such as finance, where the lack of skills is particularly problematic, efforts have already been made to remedy the situation, often with external financial and technical assistance.

The principal environmental issue in Uzbekistan is the shrinkage and increased salinity of the Aral Sea. The drying up of the lake has led to large increases in the salinity of the soil in the Aral basin and decreases in its fertility. Other critical environmental issues include the overuse of pesticides, which have polluted much of the ground water, the unsafe disposal of solid and hazardous waste and industrial water pollution. Strict environmental standards were established by the former USSR, but have not been observed. The Ministry of Environment is responsible for formulating new environmental policies and has been engaged in preparing standards governing the exploitation of Uzbekistan's natural resources, setting permissible emission levels and devising measures to ensure an adequate implementation of existing regulations.

Policies towards industry

The process of privatization in Uzbekistan was initiated through the enactment of the Law on Destatization and Privatization of 1991, which was amended in May 1993. However, the introduction of these measures led to few concrete results until mid-1995, with government ownership and control continuing in all of the important sectors of the economy. In mid-1995, however, the process of privatization was given a boost by an announcement that the government was considering new methods of converting all remaining state-owned firms into joint-stock enterprises.

Despite the various policy measures taken in recent years, the institutional framework for the promotion of private sector development has remained inadequate. Its establishment has been hampered by a number of constraints, including the unavailability of sufficient credit and finance, the persistence of the state order system, the lack of local entrepreneurial capabilities, inadequate facilities for the development of small and medium-sized enterprises, and even the lack of office space and the absence of a real estate market.

The banking system, comprising both the established large state-owned banks and the newly created banks owned by state-owned enterprises, does not provide sufficient financing for new private enterprises. To finance newly established private businesses, the fund for the Support of Entrepreneurship was established in 1991 through the Union of Entrepreneurs. The government paid in Rb2 million, but the capitalization of the fund is too small to provide for the short- and long-term capital needs of the new private enterprises. Thus the financial support structure for industry has also remained largely unchanged from Soviet days and the new private sector has limited access to financing.

Since Uzbekistan's manufacturing sector is highly concentrated into a small number of subsectors, the diversification of the country's industrial base is one of the principal objectives of the government. A particularly high priority is placed in this context on the development of a consumer goods industry. This diversification is to be achieved both by the conversion of selected military-related industrial enterprises to the production of consumer goods, and through the encouragement of new private initiatives, including foreign direct investment.

The Law on Foreign Investments, adopted in 1991, established the legal basis for foreign investment and the participation of foreign investors in the privatization programme. The law provides assurances for the protection of investors' rights consistent with international norms, including guarantees against the nationalization and expropriation of foreign assets. In addition, it also stipulates that foreign investors will be compensated if their rights are infringed by any agencies of the Republic of Uzbekistan. A further relaxation of the regulations governing foreign investment was initiated in January 1994 through the presidential decree on measures to deepen economic reform, protect private ownership and develop entrepreneurship. As a result the laws and regulations relating to foreign direct investment provide a comparatively liberal framework, even though several issues critical for foreign investors have not been specified or are inadequately covered. Nevertheless, the inflow of foreign investment has been limited and largely directed at the lucrative extraction industries such as gold mining.

The manufacturing sector

With the exception of a modest mining industry, Uzbekistan was primarily an agricultural and pastoral region until the mid-1920s. The industrialization process began in the 1928-38 period, and the pace of industrialization was boosted further during the Second World War as a result of the relocation of a number of industries to Uzbekistan from the war zone. The process continued in the early post-war period, but industrial investment started to slacken in the 1970s when the USSR planners began to shift their attention to the development of the western Siberian oil regions. By the second half of the 1980s industrial growth had begun to stagnate due to a lack of imported inputs and decreased demand for its specialized products.

Uzbekistan's manufacturing base is extremely narrow, with only a relatively small range of industries having been established in the country during the Soviet era. A major objective of the government's economic reform and transformation process is the development of new industries and an expansion of the country's manufacturing capacity. The efforts to achieve these objectives are being focused mainly on industries using domestically available natural resources, such as textiles, building materials, metallurgy (including gold jewellery) and agrochemicals. Other industries targeted for growth by the government include automobiles, spare parts and service equipment, as well as a wide range of consumer goods industries.

The industrial labour force in Uzbekistan has not grown as rapidly as its agricultural counterpart. As a result, the percentage share of the total working population employed in industry dropped from 15.3 per cent in 1985 to 14.4 per cent in 1991. The percentage of working ethnic Uzbeks in the industrial labour force is comparatively low at 11.1 per cent, while that of Russian speakers amounts to 32.6 per cent.

The profitability of enterprises in Uzbekistan is extremely difficult to measure because of inadequate data and widespread economic distortions. These difficulties notwithstanding, it is widely accepted that many of the existing enterprises are loss-making, and that a significant proportion may even be technically bankrupt. In the first quarter of 1994 no less than 534 enterprises reported losses, which compared favourably with corresponding data for 1993.

Statistics for labour productivity in the republics of the former USSR are not readily available. The measurement of labour productivity is also complicated in Soviet-type enterprises because of the diversity of production and ancillary activities undertaken by them. However, it can still be said that productivity in Uzbekistan is generally low. The republic's net domestic material production per head has always been lower than the average for the former USSR as a whole (which itself was never very high), and has collapsed since the mid-1980s.

Until 1991 all industrial and commercial enterprises in Uzbekistan were owned by the state. The passage of the Law on Privatization in November 1991 marked the beginning of the ongoing process of transferring the ownership of the productive base of the economy from the state to the private sector. By the end of the third quarter of 1995 it was estimated by the European Bank for Reconstruction and Development (EBRD) that almost 30 per cent of Uzbekistan's GDP was accounted for by the private sector. This privatization process has not always resulted in a full transfer of control to private owners, however.

The ownership patterns in Uzbekistan have ensured that the government has historically been responsible for the bulk of gross fixed investment in the country. During the 1980s the agricultural sector was the largest recipient of such investment in the material sphere, while investment in the non-material sphere was channelled mainly into the housing stock.

The capital, Tashkent, is the most important industrial centre in Uzbekistan. With a population of more than 2 million, it was the fourth largest city in the former USSR. It is the principal centre for the production of agricultural machinery and the location of the country's large aviation factory. Cars are produced primarily in the Fergana Valley. Samarkand is the next most important industrial area, with a population of almost 400,000 and a well-developed infrastructure.

Uzbekistan's trade in manufactured goods has historically been limited largely to imports, since the country is primarily an exporter of raw materials and semi-processed goods, especially cotton fibre. Its manufactured exports include some agricultural equipment and other machinery, vegetable oil, tobacco, cotton and silk textiles, and some basic chemicals. Imports, however, include machinery, chemicals, processed foods, and light industrial products including clothing and woollen goods.

Technical assistance to Uzbekistan has been limited to date. Few programmes are aimed at Uzbekistan in particular, with the bulk of assistance in the form of regional efforts. The OECD countries, and particularly the members of the European Union, are the largest donors. Other major donors are the United Nations Development Programme (UNDP), Turkey and Germany. UNIDO has undertaken several projects in the republic and stationed a UNIDO country director in Tashkent.

Industrial branch profiles

Food processing and agro-based industries have not been major contributors to the economy of Uzbekistan. While the republic does produce and process much of its own meat and is the largest producer of vegetables in the central Asian region, its output of grains and grain-based products has traditionally fallen short of domestic requirements. Three-quarters of the republic's grain needs are consequently imported, and foodstuffs account for the bulk of the country's imports from outside the former USSR and for a large proportion of its imports from within it.

Perhaps the most serious constraint on the growth of Uzbekistan's food processing industry is the lack of water resources for expansion of the irrigation network. Any increase in the production of existing or new crops must be accomplished either through an increase in productivity of existing lands or through a shift in the crops produced, which has caused the government to promote the planting of food crops on land currently planted to cotton. Other constraints include inefficient farming techniques and poor post-harvest handling and storage facilities, which result in a high degree of lost output. Nevertheless, the increase in the production of a number of food items recorded since 1990 is encouraging and the government remains committed to the continued promotion of the sector's development.

The tobacco processing industry appears to have a particularly favourable outlook, and has attracted considerable foreign investment interest in recent years. The UK-based British American Tobacco Company (BAT) has taken a 51 per cent holding in UZ Tobacco, a newly formed joint venture with a consortium of domestic tobacco interests.

Uzbekistan is extremely well-endowed with a raw material base for the development of a textile industry. The country is one of the world's leading producers of cotton, with output having exceeded 4 million tonnes per year by a substantial margin for much of the 1980s. In addition, Uzbekistan is a significant producer of wool and silk, since the rearing of sheep and the breeding of silk worms are important agricultural activities. The biggest constraint on the future development of a modern textile industry is not the inability to increase raw material production but a general lack of financing and the need to expand domestic processing capacity. It has not been uncommon for existing clothing production facilities to be operating well below capacity due to an inability to obtain cloth. To help overcome this problem, the EBRD has extended a credit facility for the distribution of small loans for the development of small and medium-sized enterprises involved in the primary processing of cotton and other textile raw materials. With such financing from international donor organizations and continued high levels of interest by private foreign investors, the outlook appears favourable for the development of a competitive textile industry.

With the rearing of livestock accounting for a substantial proportion of agricultural activity in Uzbekistan, the country has a good local resource base for the development of a leather-goods industry. The production of sheepskins is particularly important, since sheep herding is a traditional activity in the country. Although the contribution of the leather-based industries to the national economy will remain limited, they are nevertheless expected to continue to grow in the coming years in response to increasing demand and the availability of sufficient raw materials. The production of sheepskins is expected to expand particularly rapidly, in view of the limited amount of capital investment required to enter the industry and the continuing high level of international demand.

Only 5.1 per cent of the land in Uzbekistan is forested. This is not nearly enough to allow the development of a local timber industry able to satisfy the country's demand for 10 million cubic metres of construction timber per year, let alone to provide the base for an active pulp and paper industry. The government has begun a programme of reforestation, however, which began with 5 million plantings per year in 1992 and is eventually expected to expand to 15 million plantings per year. Despite the current planting, Uzbekistan will not be able to produce enough local timber to support the expansion of its woodworking and paper industries. Imports will therefore have to continue to provide the bulk of the country's raw material needs, but its ability to import is likely to remain constrained for the foreseeable future by shortages of hard currency and difficulties in the payments system between Uzbekistan and the other republics of the former USSR.

Natural gas is the principal energy resource in Uzbekistan although the size of Uzbekistan's known reserves of oil has increased substantially since the mid-1980s as a result of large investments in exploration. It is now believed that the country possesses more than 244 million tonnes and it could become self-sufficient in oil. The oil and natural gas industries face a number of constraints, however, the most serious of which is a shortage of equipment and spare parts, which has restrained production in recent years, particularly in the older fields. The most binding constraint affecting the natural gas industry, meanwhile, is a lack of sufficient refining capacity.

The government is committed to the rapid development of the hydrocarbons industry, and is actively seeking to attract foreign technical know-how and funds into this sector. Several Western oil companies, including the French firm Elf Aquitaine and the US firm Chevron, have already entered into exploration and production agreements with the government and are expected to commence operations in the near future. Any shortfall in foreign investment is to be funded from local sources, and the government has begun to upgrade several facilities through funds obtained from exports of oil, gas and cotton. With this strong government commitment to ensure the availability of the necessary funds and foreign technology, the outlook for the oil and natural gas industries appears extremely favourable.

Uzbekistan's substantial hydrocarbon reserves provide it with a strong resource base for the development of a petrochemicals industry. The existence of organic minerals also gives the country a base for the development of a mineral fertilizer industry. But one of the main constraints facing Uzbekistan's chemical and petrochemical industries is their heavy dependence on the former USSR for 70 per cent of both their imports and their exports. Securing new sources for inputs and markets for outputs will not be easy. In recognition of this problem, the government has established a chemicals exchange in the hope that it will facilitate the procurement of raw materials and help enterprises to sell their output.

A further problem facing the sector is environmental. The existing chemical plants are highly pollutive, resulting in extensive damage to the ground water near several facilities and high levels of atmospheric pollution. Although efforts to reduce emissions and improve the handling and disposal of waste products have become a government priority, the lack of financial resources will inevitably restrain progress.

The mineral resource base of Uzbekistan includes several non-metallic minerals that can be employed for the production of building materials, including clays and limestones, which makes the medium-term outlook for the construction materials industry appears favourable. As the economy begins to recover and foreign investment flows increase, demand for office space, hotels and housing will rise, as will the upgrading and construction of industrial plants and infrastructural facilities.

Uzbekistan also has vast metallurgical resources ranging from gold and uranium to silver, copper, zinc, lead, tungsten and several other rare metals. The large economies of scale inherent in the metallurgical industry may serve to make it one of the most competitive manufacturing sectors in Uzbekistan. Because of its ability to reach new markets immediately, moreover, this sector will be more readily able to expand its exports than most others, which will be very beneficial to the economy during the transition period.

Uzbekistan's metallurgical industry provides a modest resource base for the manufacturing of machinery and transport equipment. In general terms, however, the development of the engineering industry in Uzbekistan was related to the requirements of the military industrial complex of the former USSR. Consequently, it was highly dependent on the other republics of the former USSR for both inputs and outputs, with some 70-80 per cent of its inputs being imported from these republics and 60-90 per cent of its outputs being exported to them.

This high level of dependence on the former USSR for inputs and on demand from the military for its outputs will restrain the growth of many parts of the engineering industry in the short to medium term. The transition to the production of civilian goods will not be easy for many enterprises. The industry has one of the highest labour intensities in the country, and will require major restructuring in order to survive the transition to a market economy. On the other hand, the engineering industry enjoyed one of the highest rates of new investment during the 1980s and has some of the most modern equipment in Uzbekistan. Manufacturers of some products, such cotton-picking machines, also have dominant market positions in world markets, and therefore face a more favourable outlook than many other engineering firms. The level of foreign interest and investment in the production of automobile parts and in car and truck assembly also augurs well for the sector, as does the shift of the Tashkent Aircraft Factory to the manufacture of commercial aeroplanes for the carriage of both passenger and freight.

The production of consumer goods has been extremely limited in Uzbekistan in the past, and the country has virtually no facilities for the sole purpose of consumer goods production. Much of the production that is being undertaken is the result of the conversion of enterprises previously producing military equipment. Since most of the military suppliers located in Uzbekistan were involved in the production of electronic and radio equipment, personal computers, radar and acoustic installations, printed circuits and electrical systems, the easiest conversion for many of these enterprises was to begin the production of electrical and electronic equipment such as electrical household appliances.

The long-term outlook for the consumer goods industry is quite bright. The demand for such goods is high, and several enterprises have already made the transition to their production. In addition, the industry can also draw on a relatively skilled labour force, and has been attracting a significant degree of foreign investment interest, which will facilitate the transfer of both technology and the urgently needed business and customer service skills. The shortage of these skills represents the most serious constraint on the development of the consumer goods industry at present, and its ability to compete against imports and to break into export markets in the future will depend crucially on improvements in quality control, marketing and customer service.

INTRODUCTION

The unprecedented events that led to the dissolution of the USSR also resulted in the opening-up of a new and vast region in central Asia, with enormous potential for economic and industrial growth. The region, comprising the newly independent states of Azerbaijan, the Kyrgyz Republic, Kazakstan, Tajikistan, Turkmenistan and Uzbekistan, possesses a tremendous potential for rapid industrialization. With abundant natural resources, ranging from large reserves of petroleum and natural gas in Kazakstan, Turkmenistan and Uzbekistan to vast deposits of other minerals and alternative energy sources, the region constitutes one of the richest concentrations of natural resources in the world.

Within the centralized planning system of the former USSR, relatively less emphasis was accorded to the industrial development of the central Asian region. Most of the central Asian countries nevertheless possess a relatively strong industrial base with the capacity to manufacture a number of capital goods and a wide range of light industrial products.

Although substantially lower than in the more industrialized parts of the former USSR, such as the Russian Federation or the Ukraine, the level of industrial skills available in the central Asian countries is relatively high, and provides an adequate base for further industrial development. The principal problems facing these countries are those afflicting all of the countries previously subject to the centralized planning system: the lack of an entrepreneurial base and of a market-oriented system of industrial production and technological development.

The period from 1991 to 1992 was one of considerable dislocation for most of the central Asian states. The dissolution of the former USSR prompted a major disruption of the existing inter-republic trade and the currency and exchange mechanisms, forcing a significant proportion of the external trade of the region to be conducted through barter arrangements in 1992-93. The situation was exacerbated in several of the republics by internal and external armed conflicts: Azerbaijan faced an extended war with Armenia over the Nagorno-Karabakh region, and Tajikistan became embroiled in a civil war. Smaller conflicts arose in some of the other republics.

In order to meet their stated goals of rejuvenating the industrial development of their economies and the transition to a market-oriented system, the countries of the central Asian region will need to create an environment in which private enterprise can flourish. This will require not only the privatization of a large segment of their industrial base to increase the degree of competition in the system, but also the development of the critical institutional infrastructure required to encourage and support private initiative as well as the transition process in general. Considerable training in the skills required to operate under a market-oriented economy, such as cost-accounting, will be necessary, and will have to be accompanied by the creation of an appropriate framework of market supervision, including the introduction of enforceable laws governing competition and bankruptcy.

The testing period for the central Asian region is continuing, although diplomatic, economic and trade relations between the republics of the former USSR, and between the central Asian republics and their other neighbours beyond the boundaries of the former USSR, are gradually being improved. The degree of socio-political stability across the region has also increased, and has helped to stimulate a growing number of proposals for foreign direct investment (FDI) by multinational companies, particularly in Kazakstan, Uzbekistan and, to a lesser extent, Turkmenistan, for the exploitation of the vast natural resources of these countries.

On the part of the central Asian countries, the response to such foreign investment proposals has been positive and welcoming, and a large number of joint venture agreements have been signed between multinational companies and state-owned enterprises active in the natural resource sectors of these countries. There has so far been relatively little foreign investment or participation in the upstream reaches of the manufacturing sector, however, including the manufacture of capital goods and intermediate products, where there is considerable scope for such investment. The consumer goods sector, by contrast, has seen a number of recent investments and strong interest, but the total amounts invested to date remain low.

At the same time, the pace of industrial growth has slowed considerably since 1991, with the existing state-owned enterprises suffering major dislocations as a result of the disruption in supplies of essential materials and inputs from other states of the former USSR, and the loss of markets for the products of these enterprises. Many of these enterprises require substantial restructuring in order to be able to remain afloat in the increasingly competitive markets in which they are forced to operate.

Privatization

The development of the state-owned enterprises in the central Asian republics needs to be viewed in the context of the programmes for privatization initiated in these countries, and of the efforts that have been undertaken to restructure these enterprises. The implementation of privatization has varied considerably in the six central Asian states. The privatization of small-scale enterprises has proceeded particularly smoothly in Kazakstan and Uzbekistan, and has begun to be undertaken in the other countries. However, a more gradual approach has been adopted in central Asian countries for the privatization of the larger state-owned enterprises, as a result of which the growth of the private sector in these countries has been confined mainly to the emergence of small-scale and micro-enterprises.

Unlike the central European countries, where foreign companies were able to acquire privatized enterprises, there has been little effort to attract foreign interest in the central Asian republics. This reflects a higher degree of reluctance on the part of both the multinational companies and the national authorities in the central Asian countries. Even though the latter have generally welcomed foreign direct investment, the governments concerned have tended to scrutinize such investment proposals carefully, and foreign ownership has tended to be limited to minority holdings in most cases.

It is unlikely that the central Asian republics will adopt policies for quick and full privatization in the foreseeable future. At best, it will be a gradual and sequential process. Such an approach is well grounded and should yield positive results. At the same time, there is a danger that the central Asian countries may adopt, and indefinitely continue, a policy of state capitalism through their large state-owned enterprises, which may not be desirable in the long run.

Enterprise restructuring

Privatization has also to be considered in the context of restructuring of the principal state-owned enterprises. The most critical element in the future development of these republics and their transition is the creation of a competitive environment, not the ownership of enterprise shares. Whether state- or privately-owned, what is important is that enterprises function efficiently. This is accomplished through competition and the imposition of hard budget constraints.

Whether privatized or not, the principal objectives of the existing enterprises in the region must be to ensure greater efficiency and to improve productivity and competitiveness. This will require varying degrees of enterprise restructuring. In most cases, the needs will be extensive and will require the development of new products, the acquisition of new technologies and production processes, and the application of modern managerial, accounting and marketing practices. For those enterprises remaining state-owned the reorientation to market operations will require the imposition of hard budget constraints and the end to preferential treatment, such as for credit and for purchase orders under the state-order system.

The privatization of state-owned industrial enterprises could then take place on a gradual and selective basis, but a programme for enterprise restructuring needs to be undertaken as soon as possible. This has already happened in Kazakstan and Uzbekistan and is also expected to be initiated in the other central Asian states.

Any extensive programme for the privatization of major enterprises must be developed with care and should be closely linked to a prior assessment of the implications of enterprise restructuring. For example, in the absence of a well-developed local private sector, the privatization of large enterprises could well involve the creation of several smaller units which could be transferred to local entrepreneurs. It is therefore important that, whenever possible, an industrial restructuring programme should precede decisions on the privatization of major enterprises.

Policy framework for institutional development

The policy framework and the market-oriented institutional and enterprise requirements for industrial development can be considered under several broad headings. First, the policy structure has to be viewed in relation to the creation of a conducive climate for the mobilization of investible resources and for promoting new investments in various fields from both domestic and foreign sources. Secondly, a strong institutional infrastructure has to be developed to support the process of broad-based and diversified industrial growth designed to achieve the optimum utilization of local endowments and factor resources. Enterprise-level support has to be provided both directly and through national institutions providing functions and services which have an impact on industrial growth and the activities of local enterprise.

Industrial objectives

With respect to clear industrial objectives, the position in most of the central Asian republics is still being formulated. While the principle of increased market orientation has been recognized, there continues to be a tendency for industrial development to be primarily achieved through existing state-owned enterprises. This is an understandable approach since industrial activities have been conducted entirely through state enterprises in the past. At the same time, it is essential not only that state-owned enterprises are suitably restructured in order to participate effectively in a competitive market environment, but also that local private-sector capability is developed to supplement the role of state-owned enterprises.

It is unlikely that all existing state-owned enterprises in the central Asian republics will be privatized in the next few years. Nor would such a situation be desirable until the private sector in these countries had developed to an adequate extent to take over the operations of state-owned undertakings. The present policy of state capitalism, particularly in the more industrialized states of Azerbaijan, Kazakstan and Uzbekistan, should gradually evolve into that of a mixed economy, with the participation of both state-owned undertakings and local private-sector enterprises. It is only after considerable time that such a mixed economy could be transformed into a wholly private-sector framework in the central Asian region.

Legal framework

An essential prerequisite for the evolution of mixed economies in the central Asian republics is the development of an appropriate legal framework for the functioning of market-oriented enterprises, in addition to specific policies for achieving increased investment or production in particular fields. In all the central Asian states certain basic legislation has been adopted, particularly with respect to the ownership of property and the operation of business activities by individuals and groups. The legal framework is by no means comprehensive, however, and a review of the total package of laws and regulations relating to industrial activities in each of the central Asian states is necessary.

Thereafter it will be necessary to develop, for each state, a comprehensive commercial code or body of company legislation, which would define various forms of business organizations; shareholding and capital participation; exercise of rights of ownership and property transfer; management control, including the functions of boards of directors and management; various contractual relationships, obligations and redress; regulations for employment; intellectual property rights including patents, trademarks and copyrights; and, in general, a broad-based legal framework within which local enterprises can be established and operated.

Tax system

The policy framework would need to prescribe a tax system which would be favourable for new investments and for the reinvestment of income and profits on the expansion or establishment of new business enterprises. An important aspect of industrial policy in these countries should also be to ensure that promotional and other incentives provided for foreign direct investments do not discriminate against local enterprises and investors. The structure of fiscal and non-fiscal concessions should basically favour new industrial investments, both national and foreign.

Local entrepreneurial development

It is in the area of the development of local private-sector capability that policies and institutional developments in the central Asian republics have been most inadequate to date. Private-sector development has generally been viewed in these countries as being synonymous with the privatization of smaller enterprises, as in Kazakstan and Uzbekistan. Once this is done, and ownership is transferred, little responsibility is taken for meeting the needs of these enterprises for credit, technology and marketing support. This has been a major weakness in market orientation in the region and it is important that new initiatives are undertaken in this regard.

The promotion of local entrepreneurship and enterprises requires, first, a conducive climate for investment and risk-taking by local persons with business initiative; secondly, the provision of entrepreneurial training for selected local persons; and, thirdly, the provision of credit and technology and marketing facilities for locally-owned small and medium-sized industries and the development of linkages by local enterprises, both within the economy and with external enterprises. A comprehensive package of policies and institutional support has to be provided if locally-owned enterprises are to be developed quickly.

A critical aspect of private-sector development in central Asia is the need to develop a new class of local entrepreneurs. New investments should not be viewed primarily in terms of foreign investments. Even if foreign investment is sufficient in some central Asian states, it may be limited to certain fields, mainly natural resource development. Unless local entrepreneurs and enterprises are developed, rapid and diversified industrial growth through private-sector initiative is unlikely to be achieved. The development of local entrepreneurial capability involves the implementation of a programme for the motivation and practical training of selected local entrepreneurs in business management, including training in accounting, production planning, use of industrial technology, management and marketing, and the development of external linkages.

Small and medium-sized enterprises (SMEs)

The promotion of local SMEs which would follow the growth of local entrepreneurship also involves the development of an institutional capability for the provision of credit, technology, and marketing on the one hand, and physical support facilities, such as industrial estates and technology parks, on the other. The most important requirement for SMEs is the provision of credit. This has posed considerable practical difficulties in most transition economies, since adequate assets as collateral against medium-term loans are often not available. It will be necessary for commercial banks in the central Asian states to set up suitable credit arrangements for small businesses which are primarily linked to the assets created from such loans by way of mortgage or hypothecation, and utilize such assets as collateral as far as possible.

In the early stages of SME development in these countries it may be necessary to provide physical support facilities, in the form of industrial estates with common machining services and other facilities, in one or two locations in each country. Technology parks for priority industrial subsectors could also be considered. It would be desirable to involve representatives of private-sector bodies and associations with public-sector institutions dealing with the promotion of SMEs. Such associations do not exist in most central Asian economies and will need to be encouraged and fostered.

Development of institutional capability

Apart from a comprehensive legal and policy framework, with appropriate regulatory measures in various fields, the most critical requirement in the central Asian states is the development of institutional capability and facilities for various critical industrial functions and services. Such institutions have to be developed to provide:

- credit to local industrial and business enterprises;
- training facilities for local entrepreneurs, technologists, managers and other specialized personnel;
- technical support for the development of small and medium-sized enterprises;
- information to local enterprises on alternative technologies and their sources, and assistance in technology negotiations and acquisitions;
- facilities for technological absorption and adaptation, both at enterprise level and through applied research institutions at national or local levels;
- marketing facilities and linkages with large state-owned enterprises and foreign enterprises in various fields;
- quality control and standardization; and
- extension services to local small and medium-sized enterprises.

Development banking

The most important group of support institutions relates to development banking; it is essential that the banking system in each of the central Asian states is restructured to provide long-term and medium-term credit, besides working capital, to local industrial enterprises. The present structure, by which highly favourable terms continue to be granted only to state-owned undertakings, must gradually be replaced by local financial institutions providing loans on comparable terms to various local enterprises, whether state-owned or privately-owned. In fact, in the case of small and medium-sized enterprises, special institutional facilities may need to be developed.

Human resource development

The development of human resources for the changing needs of competitive industrial enterprises is an urgent necessity across central Asia. Extensive training facilities need to be provided for local entrepreneurs on the one hand and for technologists, managers and other specialized personnel on the other. The need to develop local entrepreneurship has already been emphasized. However, the training programmes introduced in each country must also include the training of management and specialized personnel to meet the evolving needs of industrial enterprises.

With rapid technological changes, human resource capability also requires constant modification and upgrading. Thus it is advisable that each republic develop a training and management institute or similar institution to make an assessment of projected specialized manpower requirements and undertakes a programme of specialized training, either in the country or in external institutions, for creating the technical personnel within the required time-frame required. Special programmes for training will also be needed for various levels of management personnel, both in the state-owned enterprises and in private-sector enterprises as these are set up. Market-oriented management capability, too, is an urgent requirement and should be an integral feature of restructuring programmes of state-owned organizations.

Technological capability

An essential prerequisite for industrial growth in central Asia is a substantial inflow of foreign technology and expertise, both for existing state-owned enterprises and for new enterprises. For existing enterprises, much of the technology used is obsolete and outdated. Technology inflows can be attracted either through the development of joint-venture arrangements with foreign companies, or through technology licensing agreements with companies possessing the necessary technology and know-how. This, however, requires knowledge of alternative sources of technology which can be contacted for technology transfer on commercial terms and conditions. There has been no licensing of foreign technology by the central Asian state-owned enterprises so far.

Inflows of technology will also be necessary for local small and medium industries as these are set up by local entrepreneurs. Experience has shown that a vital institutional need is related to the development of technological support to local enterprises. This has to be considered at various levels. First, an information system needs to be developed on alternative technologies in priority sectors of each of the central Asian countries, together with alternative sources for specific technologies, and assistance on contracts with technology sources for technology licensing or transfer. Secondly, institutional assistance will be required by local enterprises, state-owned and private, in negotiations on technology transfer with foreign companies. For this purpose, it would be desirable to prepare guidelines on contractual terms and conditions which could be followed by local enterprises in their negotiations. Thirdly, institutional facilities need to be developed for technological absorption and adaptation through applied research at national or local levels in each of the countries. The existing agencies dealing with science and technology could be restructured to provide such institutional support. It may alternatively be necessary to set up an institute for technological information and development which would provide an institutional framework for the extension of technological support to local enterprises.

Quality control and standardization

In order to ensure competitive efficiency it will be necessary to achieve specific quality standards in terms of products, production standards and techniques. For example, the ISO 9000 Series represents international standards for design, implementation and quality management for a wide range of products. Such standards must necessarily be achieved by local enterprises competing in international markets.

The institutional requirements in this regard relate not only to the achievement of quality standards, but to the establishment of certification bodies for ISO 900 and to the setting up of centres for productivity and standards for respective countries. The institutional requirement indicated above also needs to be established fairly rapidly in each of the republics if local enterprises are to compete effectively in international markets.

Promotion of foreign direct investment (FDI)

While the potential profits arising from the exploitation of natural resources appear to be high enough to attract FDI, regardless of the prevailing obstacles and high levels of risk, this is not the case with other sectors such as manufacturing. Thus it is important that these republics provide an attractive environment for FDI. For the majority of potential investors this includes clearly defined regulations and investment guarantees, and the promise of the rule of law.

Fairly well-defined policies and procedures relating to FDI have been adopted in the central Asian republics. These may, however, need to be refined further in some of the countries. The experience of other countries, especially in central and eastern Europe, suggests that the following issues may need to be reviewed:

a. The degree of foreign participation. In many of the transition economies, foreign investments are permitted in all sectors except national defence, and there is no limit on the level of ownership. Restrictions in these areas need to be reviewed in the central Asian republics.

b. The objectives of foreign investment. These may include the rapid development of human resources and maximization of employment of nationals, the inflow of foreign capital and technology for accelerated industrial growth and diversification, the development of export capability in various fields and/or the optimum utilization of natural resources, but they should be clearly defined. Foreign investors are more comfortable and willing to invest when they know what is expected and desired of them. With this knowledge, business plans can be tailored to meet both the needs of the investor and the goals of the host republic. By the same token, the host country can more easily assess project proposals if their goals are clearly defined.

c. The corporate form of FDI. This may range from a wholly foreign-owned subsidiary of a foreign company to a joint-venture enterprise with a state-owned enterprise or with a private individual or group of individuals. It may be advisable that FDI be permitted in any corporate form determined by the foreign investor. The particular needs of certain projects may necessitate a partner while other deals may not, and the investor may be sensitive to the issue of corporate governance.

d. The employment of expatriates. Enterprises having FDI should be entitled to employ expatriates in senior positions. Not only does this solve many of the skill gap problems, but it also lends a large degree of comfort to the investor. Expatriate personnel should be required to pay personal income tax at the same rate as local employees.

e. Support institutions. National institutions and agencies dealing with FDI should perform a variety of functions. These include the preparation and circulation of necessary information on investment projects in the country; the promotion of specific investment propositions through investment profiles and contacts with foreign enterprises and prospective investors; the provision of assistance to foreign investors with respect to location, local participation and local materials and inputs; and any other assistance that may be required by foreign investors.

f. The approval mechanism for FDI. The approval process in most of the republics needs to be streamlined. While such investments may be subject to prior approval of the government, speedy approval is essential. Lengthy negotiations and approval delays are one of the biggest deterrents to FDI. The necessary authorization or decision should be issued by the government within 60 days of the receipt of any proposal.

g. Profit and capital repatriation guarantees. The transfer of dividends due to foreign shareholders and legitimate payments to foreign enterprises should be freely permitted in convertible currency. Foreign shareholders should also have the right to transfer their shares to third parties by agreement with the other shareholders, and should be entitled to repatriate the full proceeds from such transactions. Apart from remittances of dividends and other contractual income, foreign investors should be permitted to remit profits from any investments, proceeds from the liquidation of an enterprise, payments for debt servicing, and fees and royalties for technology transfer and technical services, including management.

Once the environment for FDI is in place, it is important that these republics get the word out. Outside the potential for the exploitation of natural resources, few investors are aware of the opportunities that exist in this region. Foreign investors will need to be provided with all the necessary information on the economic and industrial potential of the country and specific investment opportunities in various fields and sectors, and for particular projects. For this purpose, a list of preferred fields for foreign investment should be announced and published from time to time, together with the distribution of investment profiles on selected sectors and projects.

Environmental policies and programmes

It is essential that a detailed and realistic programme is drawn up for the implementation of environmental policies and programmes, particularly those arising out of industrial activities, including mining activities in each of the central Asian republics. As in the case of other republics of the former USSR, the legislation enacted under the centralized Soviet system established high standards and requirements for environmental protection. Most of these standards, however, have not been adequately monitored or complied with. It will be necessary to ensure appropriate standards in the present day context and achieve full compliance with such environmental standards, with severe punishments for the violation of environmental regulations.

Clearly defined environmental laws and regulations are particularly important to foreign investors. Especially important to them is clarification and strict apportionment of liability for past damage if existing enterprises and sites are being acquired. Potential investors are far more concerned about uncertainty than stringent standards.

External linkages

One of the most important objectives of the central Asian republics is to improve and expand their trade, investment and industrial linkages with countries outside the former USSR. All have joined international trade organizations and entered into bilateral agreements as well. Their geographical location has enabled most of these countries to develop closer economic ties with China, Pakistan, Afghanistan, the Islamic Republic of Iran and Turkey. The similarity in resource base may make the Gulf Arab states natural investment partners.

It is also critically important that links with the republics of the former USSR, the Russian Federation in particular, be kept strong. In the near and medium term they will remain important markets for both inputs and outputs, and the Russian Federation will continue to control the major outlets for much of the region's oil and gas exports until new pipelines are constructed. The Russian Federation will also continue to be a major player in such regional issues as the development of the Caspian Sea oil and gas resources.

CHAPTER ONE: AZERBAIJAN

I. THE MACROECONOMIC AND INDUSTRIAL POLICY ENVIRONMENT

A. RECENT ECONOMIC TRENDS

The historic and Soviet periods prior to 1991

Like many other republics of the former USSR, Azerbaijan has had a tumultuous history with only brief periods of peace and independence. Situated at the crossroads of Europe along the Silk Route, the country has always fallen prey to its stronger neighbours. After the October Revolution of 1917 in Russia and a brief period of pro-Bolshevik rule in Baku, a nationalist group took power and declared the country's independence. It was short-lived. Red Army troops invaded in early 1920 and the Soviet Republic of Azerbaijan was established in April of that year. In December 1922 it became a union republic, the Azerbaijan Soviet Socialist Republic (SSR).

Azerbaijan's principal natural resource is crude oil, which was discovered in the 19th century and led to its emergence as one of the world's pre-eminent producers by 1900. The country remained an important producer until the 1970s, following which the focus of the USSR shifted to the development of the oil fields in western Siberia. From 21.5 million tonnes per year in 1965, representing 8.9 per cent of the former USSR's total output, Azerbaijan's production of oil fell to 13.7 million tonnes in 1988, representing 0.6 per cent of the USSR's output.[1/] At the same time domestic refinery capacity was expanded well beyond domestic production levels, and crude oil was sent to the country from the Russian Federation and Ukraine for processing.

Azerbaijan was also developed as a centre for the production of oil industry equipment, supplying 60 per cent of the total requirements of the entire USSR. The rate of growth of net material product (NMP) during this period was one of the highest among the republics of the former USSR. This growth slowed considerably in the second half of the 1980s, however, when Azerbaijan recorded one of the lowest levels of income per head in the union even though it ran annual trade surpluses with the rest of the USSR.

Azerbaijan began to extricate itself from the former USSR in mid-1989, when the nationalist Popular Front of Azerbaijan (PFA) was established. It was recognized in September of that year by the republic's Supreme Soviet, which also adopted the Constitutional Law on the Sovereignty of the Azerbaijan SSR at the same time. This move, the first of its kind by any of the republics of the former USSR, effectively represented a declaration of sovereignty and an attempt by Azerbaijan to regain control over its land, water and natural resources. The confusion following the coup attempt in Moscow in August 1991 provided Azerbaijan with an opportunity to declare its independence, which was formalized on October 18 when the Supreme Soviet voted to "restore the independent status of Azerbaijan" and to abstain from signing the new treaty establishing an economic union with the other republics of the former USSR.

The political upheaval accompanying the dissolution of the former USSR and the associated disruption of established trade links took a severe toll on the economy of Azerbaijan. The situation was exacerbated by the ongoing war in the Nagorno-Karabakh enclave, comprising one-third of Azerbaijan's agricultural land, where ethnic Armenians were demanding the territory's transfer to Armenia. This resulted in the flight of hundreds of thousands of Azerbaijani refugees to the country's capital of Baku. Other contributory factors to the economic disruption included the anti-alcohol campaign launched in the former USSR in the late 1980s, which severely damaged the republic's grape and wine production, and industrial work stoppages in 1990. In overall terms, the country's NMP contracted at an annual average rate of 5 per cent in 1989-91.

The period since 1991

Azerbaijan agreed to join the Commonwealth of Independent States (CIS) on December 21, 1991, but reserved the right to establish its own national guard. The treaty was not ratified by the country's parliament until September 1993, however. Instead, the republic chose to broaden its international links and became a member of the United Nations, the International Monetary Fund (IMF), the World Bank and the Conference on Security and Cooperation in Europe (CSCE). It also signed the regional Black Sea Cooperation Accord in February 1992.

Despite Azerbaijan's early declaration of independence, its economy remained closely linked to the trading structures of the former USSR for several years, and only began to be given a broader global orientation in the mid-1990s. The other republics of the former USSR continued to account for 87.4 per cent of Azerbaijan's total trade in 1991 and 52.9 per cent of its total trade in 1994, for example, and the country did not effectively leave the rouble zone until January 1994.[2/] At the same time, however, the disruption of the existing trade links with the other republics of the former USSR seriously weakened the country's economy. By 1994 Azerbaijan's GDP was just 34 per cent of its 1989 level, and the European Bank for Reconstruction and Development (EBRD) is anticipating a further contraction in 1996 to leave GDP at only 32 per cent of the 1989 level. The country's economic problems were exacerbated by an extended conflict with Armenia in the Nagorno-Karabakh region, which had resulted in the flight of an estimated one million refugees to the Baku area by the time a ceasefire was agreed in mid-1994.

Official production data indicate that the decline in output recorded during the late 1980s and early 1990s was broadly based and affected all sectors of the economy. The drop in production ranged from 23 per cent in agriculture to 52.4 per cent in the transport sector in 1992, with the manufacturing sector contracting by 31 per cent. The poor performance of the agricultural sector was exacerbated by excessive rainfall, but other factors included inefficient production methods, the poor condition of the available stock of agricultural equipment, and falling soil productivity. The problems of the transport sector are due mainly to the reduction in demand from the former USSR, and to the war-related closing of the major rail line to the Islamic Republic of Iran and Turkey.

This downward trend has continued with severe drops in both industrial and agricultural output through 1995. Industrial output contracted by 27.5 per cent in 1992, 13.3 per cent in 1993 and close to 23 per cent in both 1994 and 1995. Bad weather and a shortage of fertilizer and spare parts led to a decline in both cotton and food crops in 1994 and 1995.[3]

Table 1. Azerbaijan: Economic growth performance, 1988-93
(Real growth, percentage change)

	1988	1989	1990	1991	1992	1993
GDP	3.3	-4.4	-11.7	-0.7	-22.6	-23.1
Net material product (NMP)	0.6	-6.0	-11.5	-1.9	-27.5	-13.3
Agriculture	-3.5	-8.9	2.2	-2.6	-24.4	-17.8
Industry	4.4	-3.3	-17.1	-7.8	-18.2	-5.1
Construction	-2.3	-16.7	-49.7	-2.8	-25.5	-27.2
Transport and communications	-1.5	-12.5	62.2	-9.8	-52.3	-38.1
Other	-2.8	6.2	-7.6	-14.7	-63.1	-35.2

Sources: The Economist Intelligence Unit, *Country Profile: Azerbaijan, 1995-96*, London, 1996; European Bank for Reconstruction and Development, *Transition Report Update*, London, April 1996.

Table 2. Azerbaijan: Industrial production, 1994
(Percentage change)

Total	-22.7
Energy and fuel	-9.1
Electricity	-9.7
Fuels	-8.7
Processed foods	-24.0
Light industry	-23.9
Forestry, woodworking and pulp and paper	-66.3
Chemicals and petrochemicals	-33.6
Building materials	-35.3
Ferrous and non-ferrous metals	-69.1
Machine building and metalworking	-27.7

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Output of crude oil and refined petroleum products continued to decline in 1995 in response to input shortages and increasing inadequacies in production methods and infrastructure. Crude oil production amounted to slightly more than 9.6 million tonnes in 1994, compared to 14.7 million tonnes in 1980. Early figures indicate that production in 1995 declined further to 9 million tonnes. Azerbaijan's refineries are also operating well below capacity as a result of both the fall in domestic production and the decrease in imports of crude oil. Production in 1996 could rise if the Azerbaijan International Operating Company (AIOC), the recently formed consortium of the State Oil Company of the Azerbaijan Republic (SOCAR) and several international oil companies including the Russian Lukoil, begins production before the end of 1996 as planned.

Price controls have been lifted in stages since January 1992, when the prices of several items other than utilities, some foodstuffs, medicine and energy were freed. This provoked a sharp surge in inflation, with the consumer price index rising by 1,174 per cent in 1992 and a further 1,081 per cent in 1993.[4/] By mid-1994 this series of price adjustments had been virtually completed, resulting in a significant easing of inflationary pressures over the following months, with the monthly rate of inflation falling to about 4 per cent in March and April 1995. In February 1995 another round of price increases was undertaken when energy prices were raised 80 per cent and bread subsidies removed. This was followed by further energy price increases in April 1995. At this time both domestic gas and crude oil prices were doubled.

Table 3. Azerbaijan: Crude oil production, 1980-95
(Thousand tonnes)

	Khazardenizneftgaz (Offshore)	Aznefte (Onshore)	Total
1980	9,600	5,053	14,653
1981	9,371	4,703	14,074
1982	8,247	4,666	12,913
1983	8,409	4,286	12,695
1984	8,447	4,057	12,504
1985	9,233	3,909	13,142
1986	9,419	3,902	13,321
1987	10,069	3,734	13,803
1988	10,324	3,417	13,741
1989	10,139	3,023	13,162
1990	9,931	2,582	12,513
1991	9,492	2,249	11,741
1992	9,225	1,970	11,195
1993	..	..	10,294
1994	..	..	9,563
1995	..	..	9,000[a/]

Sources: Azerineft; World Bank, *Azerbaijan Country Economic Memorandum*, Washington DC, July 1993; Reuters News Service; BBC Monitoring Service, July 29, 1994, The Economist Intelligence Unit, *Country Report: Azerbaijan, 1st Quarter 1996*, London, 1996.

a/ Estimate.

Azerbaijan's employment data are difficult to interpret. While registered unemployment, defined as the proportion of the labour force applying for benefits, was officially estimated at 0.56 per cent at the end of 1994, such estimates are widely believed to underestimate the true rate of unemployment. Other official statistics indicate that some 500,000 people, representing 17.6 per cent of the labour force, were jobless in mid-1993. This figure includes Azeri refugees from both Armenia (160,000) and Nagorno-Karabakh (220,000), but excludes employees who were being paid but were effectively not working. Their number is believed to be quite large since most state-owned enterprises have been unwilling to lay off workers and, facing soft budget constraints, have not been forced to. Consequently, employment levels have contracted much less sharply than the overall drop in output, even though many enterprises and their employees are operating well below capacity.

In the absence of a comprehensive statistical data base, the IMF has attempted to estimate changes in aggregate demand and private consumption by examining trends in monetary income, expenditure, retail turnover and real wages. These estimates, which do not entirely capture the potentially quite significant grey economy, suggest that real consumption may have declined by 35-40 per cent by 1992. Despite the government's attempts to limit the decline in real wages, the IMF estimates that they dropped by some 35 per cent in 1992 alone, and according to OECD data they fell a further 27.9 per cent in 1993. A minimum wage exists that is nominally inflation-indexed but it has clearly failed to keep pace with price increases.

In the first few years after gaining independence, the government of Azerbaijan made a concerted and largely successful effort to maintain fiscal discipline. A reform of the tax system was initiated in early 1992, and public expenditure was cut back sharply, as a result of which the budget was in surplus by 2.8 per cent of GDP in that year. There were sharp increases in expenditure in 1993 and 1994 which resulted in deficits of 13 per cent and 14.8 per cent respectively. The best available estimates suggest that some 40-70 per cent of Azerbaijan's public spending in 1991-93 was channelled towards financing the war with Armenia rather than the needed reform and restructuring of the economy,[5/] and more recent indicators suggest that military spending has not declined significantly despite the signing of a cease-fire in mid-1994. In 1995 the budget deficit was held to 7 per cent of GDP and the budget for 1996 calls for a deficit of just 3 per cent of GDP.

As noted above, the Azerbaijan authorities have not subjected failing enterprises to the laws of bankruptcy. Effectively insolvent enterprises have continued to receive credit through official banking channels and inter-enterprise arrears. The share of such doubtful debt in the banking system's total outstanding credits was estimated to have accounted for 9 per cent in October 1992, and has grown substantially in the meantime. Real interest rates have remained significantly negative in past years, and it was only in mid-1994 that modest attempts were made to reform the banking system and limit credit expansion.

The situation regarding inter-republican payments is even more precarious, and in many cases such payment schemes have broken down completely. Several enterprises still able to obtain inputs from former USSR suppliers or to supply goods to customers in other republics have been unable to complete transactions because of a continued inability to clear payments.

One of the most encouraging economic developments in the early post-independence years was Azerbaijan's successful penetration of new export markets, with significant increases being recorded in sales of oil and gas products and other resource-based commodities, primarily to the Islamic Republic of Iran and Turkey. This enabled the country to record a favourable current-account balance through 1992 despite the fact that it had traditionally run a deficit in its trade outside the former USSR. This trend was reversed in 1993, however, when a slight trade deficit of $5 million was recorded. In 1994 the deficit increased significantly to $109 million, largely due to the disruption of traditional trade patterns caused by the fighting in Chechnya.

Even prior to 1992, however, the increase in Azerbaijan's foreign reserves did not match the performance of the current account, since many exporters failed to repatriate their foreign exchange earnings. On August 15, 1992, the government decided to alleviate the massive shortage of roubles it was facing by issuing its own currency, the manat, at a rate of Rb10:Manat1 or Manat170-180:$1. Little of the new currency was issued, however, and while it was declared the sole legal tender, roubles remained in circulation as well. It was not until January 1994 that the unit became the country's sole legal tender, trading at a rate of Manat118:$1. However, high inflation and large budgetary and trade deficits resulted in the collapse of the currency in the latter part of the year, and by January 1995 the manat was trading at Manat4,300:$1. Tight monetary policy and fiscal discipline during 1995 allowed the currency to hold its value and at the end of February 1996 it was trading at Manat4,445:$1.

After several years of independence many of the inefficiencies of the central planning system remain and the government continues to play a pervasive role in the economy, with the private sector remaining embryonic. A large segment of the economy is forced to operate in a vacuum created by the weakening of the traditional links that formed the mainstay of the centrally planned system, while market forces remain underdeveloped. The republic does, however, appear to have adopted a firm stance in favour of reform, and may be emerging as model member of the IMF. Its foreign trade has been largely liberalized, many restrictions on foreign exchange have been lifted, a new currency has been issued and a privatization programme has been drawn up.

With the ceasefire agreed in mid-1994 already having held for more than two years, there is also a good chance that the war with Armenia will end and several major oil deals have been signed. The largest of these, led by British Petroleum (BP) and the Norwegian state oil company Statoil, was finalized in November 1994. These will have an immediate beneficial impact on the economy as handsome upfront signing bonuses are part of the packages, and will also generate investment by related supply and service industries.

B. THE ECONOMIC STRUCTURE

The physical environment

Situated in the eastern Transcaucasus on the shores of the Caspian Sea with the Russian Federation and Georgia to the north, Turkey and the Islamic Republic of Iran to the south and Armenia to the west, Azerbaijan is one the smaller republics of the former USSR. It has an area of only 86,000 square kilometres and a population of just 7.5 million. As part of the former USSR it accounted for only 1.7 per cent of the union's NMP.

The greater part of Azerbaijan consists of lowlands surrounding two rivers; the Kura which flows from the north-west to the Caspian Sea, and its tributary the Araks which runs along the border with the Islamic Republic of Iran. The Greater Caucasus mountains run along the northern border of the country, and thence through the north-eastern part of the country to the Caspian Sea at the Apsheron Peninsula, an area of significant oil reserves. Several rivers flow from the mountains into the Kura basin, which has a hot, dry climate with average temperatures ranging from 1°C in January to 27°C in July, although the area to the south of the mouth of the Kura has a subtropical climate. The average annual rainfall in the lowlands is 200-300 millimetres, but the Lenkoran plain surrounding the mouth of the Kura receives 1,000-1,750 millimetres per year.

Azerbaijan's varied climate permits the cultivation of a wide range of agricultural crops, including cereals, cotton, tobacco, tea, grapes and other fruits and vegetables. The country is also endowed with substantial reserves of oil (estimated at over 5 billion barrels of recoverable oil) and natural gas. In addition, it possesses significant deposits of iron ore, zinc, copper, lead, limestone and some gold. If the hostilities with Armenia can be brought to a peaceful conclusion and the various oil contracts currently under negotiation with Western partners finalized, Azerbaijan has the potential to become a very wealthy country.

Azerbaijan includes the Nakhichevan Autonomous Republic, which is physically separated from the country by Armenia, and the Nagorno-Karabakh Autonomous Region, which is surrounded by Armenia and has a 65 per cent ethnic Armenian population. An unofficial war between ethnic

Armenians and Azeris has been in progress in Nagorno-Karabakh since 1988. By the end of 1993 it was estimated that almost one million Azeri refugees had fled the region and surrounding areas in Armenia, mostly to the Azerbaijani capital of Baku. Although a cease-fire was agreed in mid-1994, and was still holding in mid-1996, the disruptive effects of the conflict were still being felt.

The demographic base

Almost 55 per cent of Azerbaijan's population of 7.5 million lives in urban areas. The three most important urban centres of the country are Baku, the capital, which has a regular population of 1.15 million and may have taken in close to 1 million refugees; Gyanja (formerly Kirovabad), which has a population of 281,000; and Sumgait, which has a population of 235,000. Gyanja is situated in the foothills, while Baku and Sumgait lie on the Caspian coast, on either side of the Apsheron Peninsula. All of these three cities are major industrial centres.

Five million Azerbaijanis are between the ages of 15 and 64. Life expectancy in the country is 71 years at birth, and the rate of population growth has slowed from an annual rate of 1.5 per cent in 1980-92 to a projected 1.2 per cent in 1992-2000.

The country has a literacy rate of 99 per cent. The main language of instruction in primary schools has been Azerbaijani. Secondary education has tended to be in Russian, but is also increasingly conducted in Azerbaijani. The full educational curriculum in Azerbaijan lasts ten years, which 90 per cent of students complete.[6/] Eight years, from the ages of 7 to 16 years, consist of mandatory general education, while the additional two years can comprise further general education or professional or technical vocational education. Approximately 15 per cent of students proceed to university.

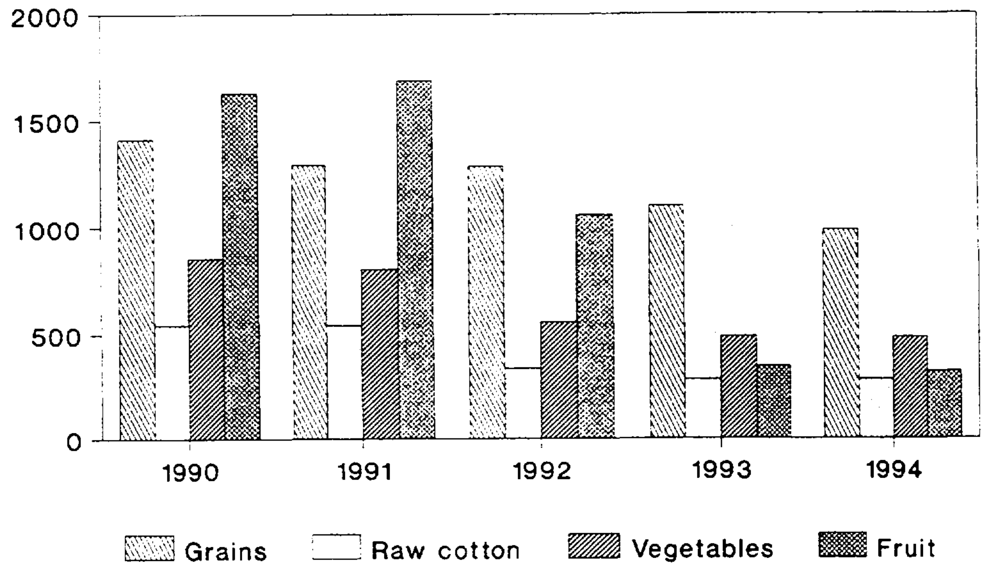
Agriculture

Azerbaijan has a strong agricultural base, which accounted for 40.4 per cent of NMP and 37.6 per cent of total employment in 1994. Major crops include cotton, grapes, fruit and vegetables, tobacco and tea, and the output of animal products is also significant. Azerbaijan has a total of 2,086 collective and cooperative farms, and 1,200 state farms. Cooperatives are responsible for most of the cotton production, while the state farms are focused on the production of grapes.[7/] Farming accounts for more than 60 per cent of agricultural output, with animal husbandry making up the bulk of the remainder.

Since the mid-1980s the area devoted to cereal production has increased by 40 per cent, while the areas planted to cotton and grapes have declined by 19 per cent and 45 per cent respectively, the latter being due mainly to the anti-alcohol campaign of the 1980s. The productivity of the agricultural sector is well below Western norms. A World Bank survey of Azerbaijani agriculture found, for example, that the country's cotton farms have average yields of 2.2 tonnes per hectare while similar cotton-growing areas in the USA yield an average of 3.6 tonnes per hectare. Similarly, the average yield for cereals in rain-fed areas amounted to 1.9 tonnes per hectare, which increased to 2.4 tonnes when irrigated areas were included. By 1994 these figures had dropped substantially to approximately 1.3 tonnes per hectare for cotton and 1.6 tonnes for grain.[8/] By contrast, French yields average 6 tonnes per hectare, and yields on irrigated land in Turkey average 4 tonnes per hectare.

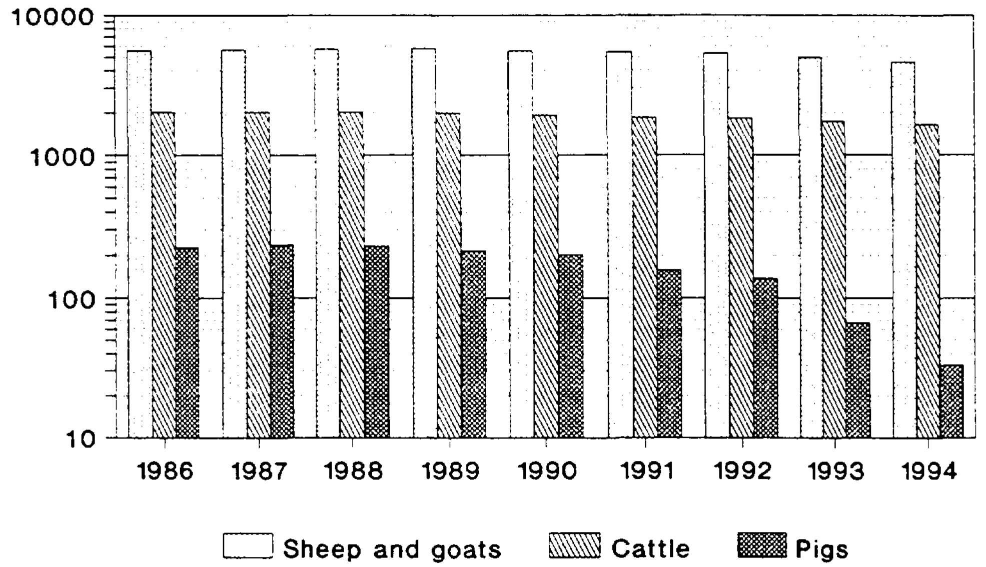
The agricultural sector suffered a particularly severe setback in 1992, when production fell by 23 per cent in real terms and reduced the sector's share in NMP to 33.5 per cent from 41 per cent in 1991. While this was due in part to adverse weather conditions and to the loss of output in the

Fig. 1. Azerbaijan: Agricultural production
(Thousand tonnes)



Sources: State Statistics Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Fig. 2. Azerbaijan: Animal husbandry
(Thousand animals)



Sources: State Statistics Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Nagorno-Karabakh region, which accounts for one-third of the republic's agricultural land, it also reflected more serious underlying problems. These include soil erosion and poor fertility, inefficient irrigation (most of the republic's crops require extensive irrigation, and 1,401 hectares of the 1,763 hectares classified as agricultural land are irrigated), and water pollution.

Faced with this long-term decline in output and soil productivity, the government has expressed a strong commitment to the regeneration of the agricultural sector. Apart from supporting the revitalization of existing crops, the government wants to promote the production of new high-value cash crops such as saffron. In addition, it wants to encourage other activities such as silkworm breeding, which have been important in the past.

Mining and energy

The petroleum industry accounted for one-third of Azerbaijan's industrial output in 1994. The country's own crude oil production has been falling steadily since 1965, when Soviet authorities channelled new investment into the development of virgin Siberian fields. In 1965 Azerbaijan's production amounted to 21.5 million tonnes, representing 8.9 per cent of the total output of the former USSR, but by 1995 production was running at only 9 million tonnes. With refining capacity remaining around 20 million tonnes per year, Azerbaijan has traditionally made up the shortfall through imports from the Russian Federation and Kazakstan.

The country also contains deposits of several other minerals such as iron ore, zinc, copper, lead, limestone and some gold. The exploitation of these resources has so far been limited, however, owing to the priority given to the extraction and processing of petroleum. The production and refining of petroleum has formed the mainstay of Azerbaijan's economy since the country's reserves of crude oil first began to be developed in the latter half of the 19th century. Much of the manufacturing sector of Azerbaijan is devoted to producing oil-based or oil-related products.

Manufacturing

A major difference between the industrial structure of the countries of the former centrally planned economies of central and eastern Europe and the developed market economies is the size of enterprises and the degree of industrial concentration within each industry. The average size of enterprises in the centrally planned economies was generally more than ten times larger than the average Western firm in the same industry, and one or two large enterprises often dominated an industry or a product line. This reflected the fact that industry was developed to serve the needs of a command economy and, to a large degree, the market of the former USSR. It also meant that the centrally planned economies were characterized by a relative absence of small and medium-sized enterprises.

Azerbaijan has about 3,700 industrial enterprises, comprising several very large metallurgical and chemical complexes, and a large number of small, mostly agro-industrial and light industrial entities. The country's heavy industry is dominated by the production of extraction and refinery equipment for the petroleum industry, which accounted for 16 per cent of industrial output in 1992. Light industry has centred on food processing, textile production and wine making; the latter was badly hit by the anti-alcohol campaign in the 1980s, but appears to be recovering now.

Transport and communications

Azerbaijan has a fairly well-developed transport infrastructure consisting of road, rail, air and shipping networks. Like most of the other republics of the former USSR the country is transport intensive, generating roughly seven times more freight transport per unit of GNP than the economies of western Europe.[9/] Half of the total transport demand is for export and import traffic. Nevertheless, the transport infrastructure will require considerable upgrading to meet the future needs of the country's development.

Rail takes the largest share of freight traffic, and accounted for 78 per cent of the total of 39.2 billion tonnes in 1991. The country has 2,120 kilometres of rail lines connecting Baku with Tbilisi in Georgia, Makhachkala in Daghestan, and Yerevan in Armenia. A line also runs through the Nakhichevan autonomous region to Armenia, and from Nakhichevan to Tabriz in the Islamic Republic of Iran. Of the total rail network, 1,280 kilometres are electrified and 820 kilometres are double-tracked. The Azerbaijan rail system also has more than 400 main-line locomotives. A survey conducted by the World Bank in 1993 estimated, however, that 700 kilometres of rail lines needed reconstruction and about 50 per cent of the stock of electric locomotives had exceeded their normal service life.[10/]

Road transport is also important, and buses take about 60 per cent of private passenger traffic. Of Azerbaijan's 30,400 kilometres of roads, 28,600 kilometres have a hard surface.[11/] According to the World Bank survey cited above, 60 per cent of the main roads were in poor condition and needed repair, while 90 per cent of the country's buses had exceeded their normal service life.

The Caspian Shipping Company is Azerbaijan's only shipping concern, and provides services on the Caspian Sea linking Baku with Turkmenistan and the Islamic Republic of Iran. In 1993 it had 70 vessels with a total capacity of 330,000 tonnes. There are regularly scheduled flights between Baku and Moscow, Germany, the UK, Iran and Turkey. The country is currently renovating and upgrading Bina airport in Baku and has completed the upgrading of the Nakhichevan.

The telecommunications infrastructure in Azerbaijan is wholly inadequate to support the move to a market economy. The country has a total of approximately 665,000 telephone lines, of which 300,000 are in Baku. It has been estimated that 400,000 more lines are needed.[12/] Local, long-distance and international telephone services are poor, with international calls only possible by satellite telephones. Approximately 25 per cent of the switching and transmission equipment is more than 30 years old and is highly unreliable.

The government has devised a four-stage plan for the modernization of the telephone system over the 1994-2005 period. Efforts are currently under way to establish international gateways through Turkey and the Islamic Republic of Iran, and direct satellite links with the American continent. Several smaller projects to upgrade domestic services and increase the number of lines have also been initiated in cooperation with, or under licence from, Western firms.

Banking and finance

Under the former USSR Azerbaijan's banks were regional branches of the Moscow-based USSR state banks: Gosbank, the central bank; Sberbank, the savings bank; Promstroibank, the bank for industry and construction; Agroprombank, the agriculture bank; and Veneshtorgbank, the foreign trade bank. All significant decisions were made in Moscow with the branches acting as payment agents. With the dissolution of the USSR, the branches of Gosbank, Agroprombank and Promstroibank were merged into the National Bank of Azerbaijan (NBA). Sberbank remained separate and Veneshtorgbank was liquidated.

In August 1992 the Law on Banks and Banking Activity and the Law on the National Bank was passed. The legislation established a two-tier system with the NBA intended to perform the functions of a central bank and supervise the commercial banking sector. The law also established four specialized state-owned banks: Sberbank, a new Agroprombank, Promstroibank, and a new International Bank. Several small commercial banks have been established.

Table 4. Azerbaijan: Banking system, 1992

	Banks	Branches
National Bank	1	2[a/]
Agro-Industrial Bank	1	70
Industry-Construction Bank	1	32
Savings Bank	1	82[b/]
International Bank	1	0
Commercial/cooperative	92	..

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

a/ Nakhichevan Bank and Baku Administrative Bank.
b/ 4,000 sub-branches.

Under the 1992 law the NBA was given the authority to issue the national currency, to support the functioning of the payments system, to help design and implement monetary policy to stabilize the currency and influence interest rates, to serve as a provider of liquidity to the commercial banks, to serve as the fiscal agent of the government, and to manage Azerbaijan's official foreign exchange reserves. The NBA is also charged with establishing prudential rules, bank accounting standards and settlements procedures. It is governed by a nine-member managing board which is accountable to the Azerbaijan parliament.

The NBA has not actively tried to influence credit allocation through interest rates. Until recently rates continued to be set on a case-by-case basis, and credit was extended administratively. Although reserve requirements and lending limits were established for commercial banks, the four specialized banks were not initially bound by these controls. New regulations issued in the second half of 1994 have brought these specialized banks under the influence of the NBA, however, and they are now required to meet reserve requirements.

The 1992 law provides for commercial banks to function as universal banks with the right to engage in leasing, factoring, equity holding and trust operations. The banks are no longer agents of the state, and state officials cannot participate in bank management. The International Bank was given a near-monopoly on foreign exchange activities, but foreign exchange licences have also been granted to some commercial banks.

The largest commercial bank in the republic is Azakbank, a joint venture with TC Ziraat Bankasi of Turkey. Azakbank deals almost exclusively in foreign-currency transactions for joint ventures with foreign partners and has correspondent relations with several foreign banks. There are also six other joint-venture banks operating in Azerbaijan, including Russia's Mostbank which has plans to issue credit cards by the end of 1996.

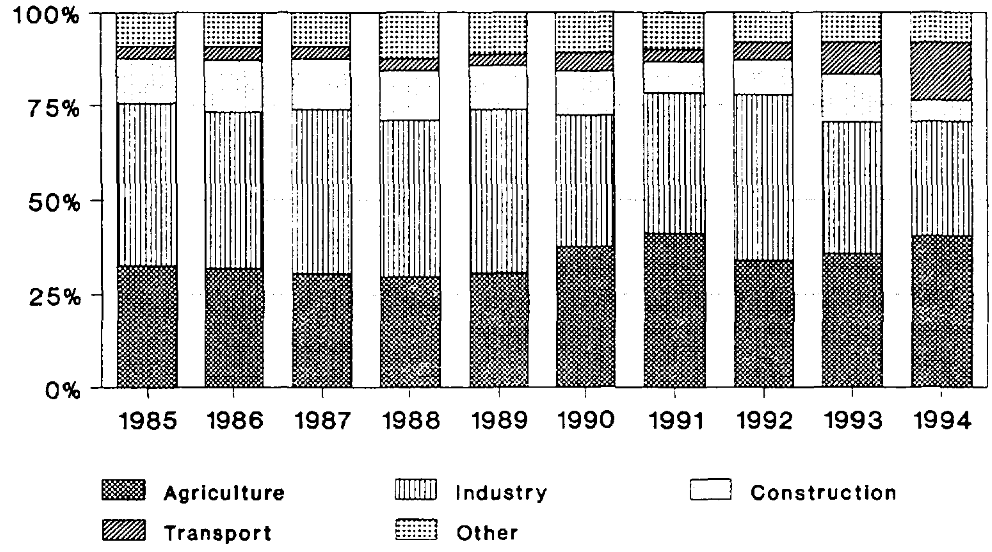
Trade, tourism and other services

Trade and tourism have not traditionally been significant sectors of Azerbaijan's economy. Trading activities have begun to grow rapidly in recent years, however, following the gradual easing of controls over the private sector, and should continue to expand as they have comparatively low entry costs. In fact the Turkish construction firm, Star, has already begun construction of a $40 million five-star hotel and business complex in Baku.

Tourism, mainly in the form of business travel to the republic by foreign entrepreneurs, has also increased and will continue to do so as Azerbaijan moves towards a market economy and encourages the inflow of foreign investment. Hotel construction will be a particularly important growth industry in the coming years. The demand for basic business support services is also increasing rapidly, and the sector is beginning to attract a number of new privately-owned small-scale enterprises.

The outlook for the development of Azerbaijan's coast on the Caspian Sea as a resort area is limited due to pollution caused by the industrial enterprises in the area. The country does, however, have some areas of historical interest that may offer limited opportunities for development as tourist sites.

Fig. 3. Azerbaijan: Net material product
(Percentage share)



Sources: State Statistics Committee; World Bank, *Statistical Yearbook 1995 - States of the Former USSR*, Washington DC, 1995.

Demand structure of GDP

A breakdown of Azerbaijan's national accounts by expenditure categories reveals that personal consumption continues to play a large role in aggregate demand, but that its share has dropped in recent years. In 1992 it accounted for 64.5 per cent of national income, after increasing in the latter half of the 1980s to reach 79.3 per cent in 1991. Over the same period, public consumption climbed to a peak of 9.4 per cent of national income in 1989, and then dropped significantly to 7.3 per cent in 1991 and just 5.6 per cent in 1992. External trade has always been an important determinant of aggregate demand. After fluctuating widely from 14.4 per cent to 23.2 per cent of national income during the latter half of the 1980s, it fell to only 3.9 per cent in 1990. In 1992 it surged to 36.8 per cent as petroleum and oil-based products were exported to the West at world prices.

Table 5. Azerbaijan: National income used, 1985-92

	1985	1986	1987	1988	1989	1990	1991	1992
Percentage share, current prices								
Consumption	68.6	73.9	73.3	76.5	86.8	78.0	86.8	70.1
of which								
Personal consumption	61.2	65.9	65.0	67.8	77.4	69.7	79.3	64.5
Savings	31.4	26.1	26.7	23.5	13.2	22.0	13.2	29.9
Increase in fixed assets	16.0	14.3	18.9	12.6	11.1	5.4	4.2	17.5
Change in inventories a/	15.4	11.8	7.8	10.9	2.1	16.6	9.1	12.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Percentage change, constant prices b/								
Consumption		2.3	5.0	3.6	7.6	0.8	3.9	-6.0
of which								
Personal consumption		2.2	4.6	3.3	8.8	0.6	3.4	-0.4
Savings		-16.7	1.7	-12.0	-47.1	75.2	-83.2	360.0
Increase in fixed assets		-16.2	29.0	-30.6	-18.9	-50.0	-78.4	521.6
Change in inventories c/		12.5	8.4	10.8	2.4	15.9	2.8	10.1
National income used		-3.6	4.1	-0.6	-5.3	10.6	-14.3	8.9

Source: State Statistics Committee.

a/ Includes unfinished construction.
b/ 1986-88 in constant 1983 prices; 1989-92 in previous year's prices.
c/ Share of national income used; includes unfinished construction.

External trade and payments

Like most other central and eastern European countries and the republics of the former USSR, Azerbaijan's economy was highly dependent on trade with the rest of the USSR. In the latter half of the 1980s exports and imports accounted for 46 per cent and 37 per cent of GDP respectively.[13/] Of this, 85 per cent or more consisted of trade with the former USSR, which accounted for more than 90 per cent of exports and 70-80 per cent of imports. While Azerbaijan ran strong surpluses with other republics of the former USSR, trade with areas outside the former USSR was generally in deficit by about 7 per cent of GDP.

Following the dissolution of the former USSR and the resulting economic dislocations suffered by its constituent republics, Azerbaijan's overall trade has fallen significantly in real terms. Estimates prepared by the World Bank suggest that the constant 1990 rouble value of exports fell from Rb6,105 million in 1990 to Rb2,853 million in 1992, while imports fell from Rb4,247 million to Rb2,105 million. While the country was initially able to maintain a trade surplus, its value fell in constant terms from Rb1,858 million in 1990 to Rb749 million in 1992.[14/] By 1993 trade surpluses were replaced with trade deficits.

Table 6. Azerbaijan: Current-account and trade balance, 1991-95
($ million)

	1991	1992	1993	1994	1995[a/]
Current account	153	488	2	-121	-300
Trade balance	60	489	-5	-109	-225
Former USSR	102	118	-114	-217	..
Non-former USSR	-42	371	109	108	..

Source: European Bank for Reconstruction and Development, *Transition Report Update,* London, April 1996.

a/ Estimates.

Table 7. Azerbaijan: Trade with the states of the former USSR, 1987-94
(Percentage of total)

	1987	1988	1989	1990	1991	1992	1993	1994
Exports	93.0	93.7	93.7	94.9	93.9	40.8	51.5	41.2
Imports	76.5	75.1	73.1	73.8	80.3	51.2	67.0	63.0
Former USSR	85.6	85.2	85.5	85.0	87.4	44.7	59.3	52.9

Sources: International Monetary Fund, *Economic Review: Azerbaijan,* April 1993; European Bank for Reconstruction and Development, *Transition Report Update,* London, April 1996.

One of the main causes for the decline in trade and the deterioration of the trade balance is Azerbaijan's dependence on imports of crude oil from the Russian Federation and Kazakstan and of natural gas from Turkmenistan, and on exports of refined products throughout the former USSR. By 1992 imports of oil and gas had declined considerably, resulting in a corresponding reduction in exports of refined products. The disruption to trade routes due to hostilities, and in some cases political disagreements with its neighbours, has also adversely affected Azerbaijan trade.

About 53 per cent of Azerbaijan's trade continues to be conducted with the republics of the former USSR, and with the Russian Federation, Ukraine and Turkmenistan in particular since 1994 when it became a major supplier of natural gas. This trade has, however, been seriously disrupted by the outbreak of the war in Chechnya, which prompted a suspension of rail shipments through the region to the Russian Federation in September 1994 and resulted in a sharp fall in the share of exports to the Russian Federation. Unlike many of the other newly independent republics, however, Azerbaijan has been extremely successful in developing new markets. Data published by the World Bank indicate a doubling of exports to markets outside the former USSR in 1992, to $754 million from $375 million in the previous year. To a considerable extent this shift has been due to the export of crude oil and petroleum products to the Islamic Republic of Iran and to the countries of the Mediterranean region.

Table 8. Azerbaijan: Trade with countries outside the former USSR, 1992-94
(Percentage of total)

	Exports			Imports		
	1992	1993	1994	1992	1993	1994
Industrial countries	40.4	28.6	28.1	36.6	18.5	24.6
United Kingdom	12.5	2.1	2.4	19.7	0.9	17.1
Others	59.9	71.4	71.9	63.4	81.5	75.4
Europe	39.2	37.8	35.3	31.5	25.1	8.0
Turkey	26.4	26.6	26.0	17.1	17.4	4.4
Iraq	17.0	17.4	23.0	31.1	55.0	66.9

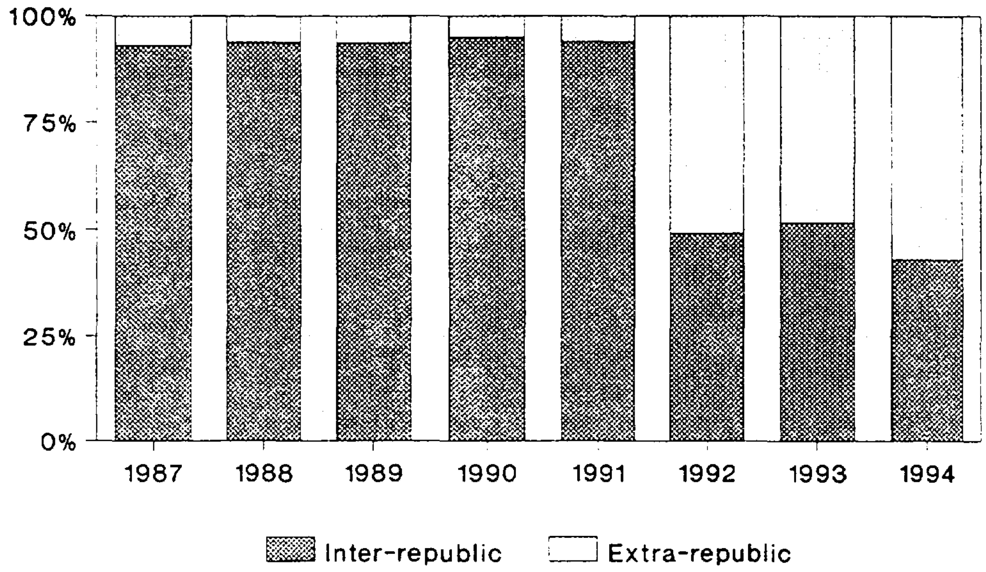
Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Table 9. Azerbaijan: Composition of trade, 1994
($ million)

	Exports	Imports
Agriculture	..	28.0
Industry	517.0	748.0
Electric power	6.0	17.0
Oil and gas	80.0	231.0
Processed foods	65.0	178.0
Light industry	9.0	12.0
Wood, wood products, pulp and paper	5.0	22.0
Chemicals and petrochemicals	38.0	51.0
Building materials	2.0	10.0
Ferrous metals	88.0	73.0
Non-ferrous metals	10.0	8.0
Machines and metalwork	99.0	121.0
Other industry	115.0	25.0
Other	120.0	2.0
Total	**637.0**	**778.0**

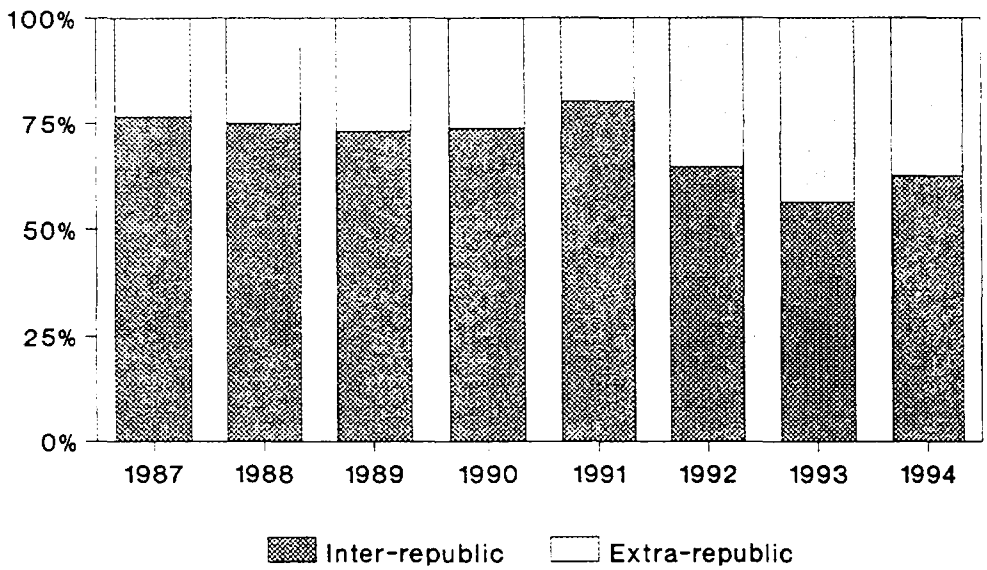
Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Fig. 4. Azerbaijan: Distribution of exports
(Percentage share)



Sources: State Statistics Committee; World Bank, *Statistical Yearbook 1995 - States of the Former USSR*, Washington DC, 1995.

Fig. 5. Azerbaijan: Distribution of imports
(Percentage share)



Sources: State Statistics Committee; World Bank, *Statistical Yearbook 1995 - States of the Former USSR*, Washington DC, 1995.

Azerbaijan's imports consist primarily of consumer goods. The principal products imported from outside the former USSR comprise grains, flour, foodstuffs and machinery, which together account for 70 per cent of the total. It has been estimated that as much as half of Azerbaijan's total trade in 1993 was conducted on a barter basis.[15/]

Table 10. Azerbaijan: Trade with countries of the former USSR, 1991-94
(Percentage of total)

	Exports				Imports			
	1991	1992	1993	1994	1991	1992	1993	1994
Belarus	5.0	4.0	2.7	1.6	2.8	5.7	4.0	2.9
Estonia	0.5	0.5	..	..	0.2	0.2	..	..
Georgia	6.1	8.4	6.0	1.6	2.0	3.0	8.2	6.2
Kazakstan	4.1	5.3	11.4	10.7	5.3	7.0	8.2	5.8
Kyrgyz Republic	0.6	0.4	0.2	0.4	0.6	0.1	0.4	0.7
Latvia	0.8	1.1	..	..	0.6	-	..	..
Lithuania	0.9	0.7	..	..	0.6	0.2	..	..
Moldova	1.2	2.0	3.2	2.7	0.7	0.9	3.5	4.4
Russian Federation	59.7	47.6	41.1	24.3	56.1	41.4	49.6	51.1
Tajikistan	1.0	4.8	-	-	0.5	1.1	1.7	0.4
Turkmenistan	4.5	7.6	17.7	40.3	0.3	4.4	10.5	6.2
Ukraine	13.1	18.7	17.4	17.7	28.3	35.3	12.9	21.2
Uzbekistan	2.6	1.2	0.4	0.6	2.2	1.1	1.1	1.1
Statistical discrepancy	-	0.6	..	..	-	-2.3	..	..

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

C. THE MACROECONOMIC POLICY ENVIRONMENT

Economic reforms

In August 1994 the president of Azerbaijan unveiled a new economic programme, the principal features of which were a renewed commitment to the transformation of the country's economy to a market-based system and a broadening of its trade and economic relations with foreign countries and companies. While considerable progress was made towards achieving these goals, continued economic instability necessitated a review of the government's policy priorities during the course of the year. Public policy in 1995 was therefore aimed at stabilizing prices and creating an economic environment which would encourage the resumption of growth.

Fiscal policy

Azerbaijan's state budget consists of the central government budget and 68 local budgets for 56 regions, ten cities and the two autonomous regions. Extra-budgetary funds, hard-currency funds and funds for the social security system are not reflected in the overall financial position of the public sector. The budgets do, however, include union transfers traditionally granted by the central government of the former USSR to some of the union's constituent republics. For many republics in the central Asian region these transfers constituted a major source of public funds.

The country's fiscal performance has been good in the past, and Azerbaijan does not have a history of running large budget deficits. In 1987-89 the republic ran pre-transfer deficits equivalent to less than 2 per cent of GNP, which rose to about 5 per cent of GNP in 1990-91. During 1987-90 union transfers ranged from 2-4 per cent of GNP. In 1991 the republic ran a post-transfer surplus equal to 3 per cent of GNP.[16/]

Responding to the loss of union transfers after the dissolution of the former USSR, the government significantly cut spending and revised its tax system in 1992. A small surplus of 2.8 per cent of GDP was posted that year. The continued struggle with Armenia and the deteriorating economic conditions increased budgetary pressures, and the budget for 1994 projected a deficit of Manat43 billion, or 7 per cent of expected GDP.[17/] This target was missed by a significant margin, however, with the final deficit amounting to 13 per cent of GDP in 1993. Further deterioration occurred in 1994 and a deficit of 14.8 per cent was recorded despite the cessation of hostilities against Armenia in mid-year.

Partly under pressure from the IMF, Azerbaijan's fiscal policy in 1995 was based on the need to restore budgetary equilibrium. The budget deficit was to be slashed, with the ratio of the deficit to GDP targeted to be cut from 13 per cent in 1994 to only 4.7 per cent in 1995. This was to be accomplished through the introduction of new revenue-generating schemes, a widening of the tax base, and an improvement of tax collection mechanisms, as well as sharp cuts in spending, especially on such items as bread subsidies and defence. To ensure compliance with these spending limits, the government introduced a "cash rationing" system, whereby expenditure is matched with revenue on a prioritized basis. Non-priority expenditure will be approved only if funds are available. This increased budgetary discipline has won the approval of the IMF, which began to release funds from a $170 million systemic transformation facility in April 1995. In 1995 the deficit was held at 7 per cent and the 1996 budget calls for further reductions to just 3 per cent of GDP.

The 1992 tax reforms included the introduction of a value-added tax (VAT), a new tax on profits, and a personal income tax. Inflation adjustments were also made to taxes on motor vehicles, residential buildings and agricultural land. In mid-1992 an excise tax was also imposed on petroleum production. The VAT, which was initially set at 28 per cent but later reduced to 20 per cent, proved to be a good source of revenue and provided 37 per cent of all tax revenue in 1992. Excise taxes were the second most important source of revenue, contributing approximately 20 per cent in that year.

Monetary policy

Azerbaijan introduced its own currency, the manat, in August 1992, but it was not until January 1994 that this currency was designated the country's sole legal tender. Large quantities of roubles continued to circulate until November 1994, giving the Central Bank of Russia (CBR) effective control over Azerbaijan's monetary policy. The introduction of the new currency and the assumption of monetary control by the Azerbaijan authorities did not immediately result in a significant shift in monetary policy, however, and the lax monetary stance of the CBR, which had led to the hyper-inflation and shortage of roubles that ultimately culminated in the collapse of the rouble zone, was not adequately reversed by the NBA until early 1995.

The situation has changed significantly in the meantime, and since the beginning of 1995 the NBA has pursued a monetary policy consistent with the reduction of inflation and aimed at building up foreign reserves. Credit to the government has been limited to 2 per cent of GDP, reserve requirements have been raised to 15 per cent and are being more rigidly enforced, and the growth of the NBA's net domestic assets has been limited.

Foreign exchange policy

In response to a severe shortage of roubles in Azerbaijan and the announcement of the withdrawal of all pre-1993 roubles by the CBR, the government initiated the switch to the use of the manat in August 1993. By the end of that month the new currency was used in almost all retail transactions, even though it did not become the sole legal tender until January 1994 and did not entirely replace the rouble in internal transactions until the end of the year. The adoption of its own currency gave the government of Azerbaijan control over the country's monetary and foreign exchange policy, with the official exchange rate of the manat being set weekly on the basis of a weighted average of the rates quoted by the commercial banks authorized to deal in foreign exchange. Plans have also been drawn up to promote the development of an interbank trading market. While the value of the manat dropped sharply over the course of 1994, from Manat118:$1 in January 1994 to Manat4,300:$1 in January 1995, since then monetary and fiscal discipline have helped stabilize the currency and in February 1996 the unit was trading at Manat 4,445:$1.

The currency regulations currently in force in Azerbaijan date back to the former USSR, and the situation is confusing at best. A new law governing foreign exchange transactions has been drafted but not yet enacted, and both current- and capital-account convertibility remain restricted. The official rate of the manat is used in all official foreign exchange transactions and for the surrender requirement on strategic goods.

Locally registered joint ventures and wholly-owned foreign subsidiaries may hold foreign currency accounts, but their foreign exchange receipts in Azerbaijan may be restricted. Foreign currency may be obtained from legal foreign trade activity. Foreign currency loans require a licence.

Non-resident companies may open foreign exchange accounts (current and deposit), but only with an authorized bank. Foreign currency may be purchased locally only to carry out settlements with non-residents or with authorized banks in relation to the repayment of loans. Foreign currency transactions between residents of Azerbaijan or between residents and non-residents may only be carried out through an authorized bank and may require a licence.

Trade policy

The foreign trade of Azerbaijan has remained centrally controlled and is implemented mostly through the state-order system, which covers the internal and inter-republic procurement and distribution of the inputs and outputs of state-owned enterprises. Under this system, which had been one of the traditional tools of central planning during the former Soviet administration, inter-republic trade is based on bilateral agreements defining the quantity of goods traded and the prices at which they are to be delivered. While the share of the state-order system in Azerbaijan's total trade has been decreasing in recent years, it still dominates the country's external trade. In 1993 the volume of trade not subject to government control was estimated at only about 10-30 per cent of Azerbaijan's total trade,[18/] and bilateral trade agreements were in force with Belarus, Kazakstan, Latvia, Lithuania, Moldova, the Russian Federation, Turkmenistan and Ukraine.[19/]

Apart from its role in administering the state-order system, the involvement of the government in foreign trade extends to the issue of export licences by the Ministry of Foreign Economic

Relations for goods defined as strategic. These include oil, petrochemicals, cotton, tobacco, caviar, aluminium and all other commodities traded against foreign exchange. In addition, the government requires exporters to surrender 85 per cent of the hard-currency revenues earned from the sale of strategic goods, which accounted for approximately 75 per cent of Azerbaijan's total exports in 1993.[20/] Exporters of goods not deemed to be strategic are permitted to retain 30 per cent of their foreign exchange earnings.

A significant proportion of Azerbaijan's exports are subject to VAT, which is often levied at a substantially higher rate than the average domestic VAT level. Export VAT rates in 1993, for example, amounted to 60 per cent for wine and spirits, 50 per cent for cotton and 65 per cent for tobacco. These high taxes on export commodities have considerably reduced the net revenues gained by exporters.[21/]

The government responded to the decline in inter-republic trade with a determined attempt to diversify its export markets beyond the republics of the former USSR. By 1992 the share of exports to markets outside the former USSR had increased to more than 50 per cent but it has since dropped to just under 50 per cent as trade links with many former USSR countries have been re-established. Similar attempts have been made to open the domestic market, and since gaining independence Azerbaijan has significantly reduced the high tariff protection which had previously been applied by the former USSR. The liberalization of imports from countries outside the former USSR has, however, stimulated only a modest growth of imports, which have remained severely constrained by the limited foreign exchange resources. A major share of the country's foreign exchange reserves is held by the government,and their allocation is subject to the priorities and approval of the National Bank of Azerbaijan.

The continued high degree of government intervention in Azerbaijan's foreign trade through such mechanisms as the state-order system and licensing requirements significantly constrains the development of efficient trading patterns in general, and enterprise-level trade in particular. Similarly, the foreign exchange surrender requirements and high rates of value-added taxes on export commodities act as disincentives for exporters. Export licences are given preferentially to state-owned enterprises, which require only a general licence for export. Private enterprises, by contrast, are forced to follow a two-step procedure, involving first the submission of an application for a licence ascertaining their financial creditworthiness, followed by a request for a second "contract-based" licence related to specific features of the agreement concerned, such as the commodity in question, its price, and similar details.

Inter-republic trade outside the state-order system is constrained by the inconvertibility of the manat, which is not accepted by the Central Bank of Russia as a medium of payment. Consequently, a significant proportion of Azerbaijan's trade with other republics of the former USSR is confined to barter arrangements, which greatly limits the flexibility and efficiency of the trading system.

Two events caused a particularly serious decline in Azerbaijan's trade in 1994. At the beginning of the year, the Turkmenistan government reduced Azerbaijan's gas supply from 12 million to 5 million cubic metres per day due to a disagreement about pricing. This was followed in March by the proclamation of a presidential decree temporarily prohibiting all exports of strategic goods. This was partly due to the decrease in production of several strategic goods, and partly to the priority assigned by the government to meeting previous commitments arising from bilateral barter agreements, which provided for the import of grain, food products and military goods from the Russian Federation and Ukraine.

In 1995 exports were depressed by poor economic performance in the countries of the former USSR and border closures with Russia. Increased trade with the Islamic Republic of Iran and Turkey, however, appears to have at least partially offset the decline.

Over the longer term, the government aims to increase significantly Azerbaijan's exports of oil and oil-based products, including petrochemicals. It also intends to expand the country's export capacity of light industrial products such as textiles, carpets and processed fish. While there is considerable scope for increasing and diversifying Azerbaijan's export base, the realization of this potential will remain constrained for some time to come by a lack of suitable information on export markets and limited access to export financing.

Box 1. Azerbaijan: Major trade agreements

* GATT observer status (1993).
* EC Trade and Cooperation Agreement (December 1989) with USSR still in force, but not signed by Azerbaijan.
* Other OECD countries have granted MFN and/or GSP status, some on an exceptional, temporary or *de facto* basis.
* Economic union with the CIS countries signed September 1993. Bilateral barter and inter-governmental agreements in place with CIS countries.
* Member of the Economic Cooperation Organization (ECO) formed by Turkey, the Islamic Republic of Iran and Pakistan.

In order to promote the further development of Azerbaijan's international trade relations, the government aims to improve the export mechanism, to allow enterprises to act independently in export and foreign exchange matters, and to increase their export potential. Specific measures include the following:

- the liberalization of trade in goods previously defined as strategic;
- a liberalization of the existing controls imposed on the export of strategic goods;
- the adoption of regulations requiring all exports to be prepaid or financed through irrevocable letters of credit (L/C);
- the adoption of regulations requiring prepayment documentation or L/Cs to be presented to customs before shipment;
- the issuance of instructions to the council of ministers to:
    - formulate and adopt new regulations for the deduction of foreign currency revenues for the Republican Currency Fund;

  - take control of exports in order to ensure the conformity of prices with market requirements;
  - establish a new tariff structure for energy-based exports; and
  - adopt a list of documents required for customs control in import/export transactions;

- the issuance of instructions to the National Bank to:
  - prepare and implement measures for the internal conversion of foreign exchange into the manat;
  - ensure control over currency operations performed by commercial banks; and
  - ensure that foreign currency revenues be channelled into the Republic Currency Fund according to regulations; and

- the establishment of a State Control Committee for Foreign Economic Relations entitled to authorize, in exceptional cases, barter operations for strategic goods.

Environmental policies

Azerbaijan has inherited a number of serious environmental problems.[22/] One of the most serious is the heavy pollution of the Caspian Sea, which also affects the water supply of Baku, the capital. The country also suffers from a high level of industrial pollution, especially near the major centres of the metallurgical and chemical industry. More recently, shortages of gas caused by reduced deliveries from Turkmenistan have resulted in increased timber felling for firewood. This will have a major impact on soil erosion and could threaten agricultural output over the longer term.

Water pollution represents a particularly serious problem for Azerbaijan. Although estimates of water resources and usage indicate that the country should be able to meet its current requirements, it suffers frequent shortages due to poor water management. The quality of surface water also varies regionally. The Kura river is only moderately polluted in its upper branch, but as it approaches the Caspian Sea it is ranked as being suitable only for industrial use due to agricultural and municipal run-off. There are few municipal waste water treatment plants, and those that do exist are only equipped for the mechanical treatment of effluent and are reported to be in poor mechanical and technical condition. Agricultural pollution, caused mainly by fertilizer and pesticide run-off, has been particularly severe in areas of grape and cotton cultivation, and has hampered the production of other high-value crops such as tea due to the non-availability of clean water for irrigation purposes.

Another potentially serious ecological problem is presented by a steady rise in the level of the Caspian Sea, at a rate of 25 to 30 centimetres per year. In 1994 its level was already 2 metres higher than in 1977. The cause for this has not yet been discovered, but it is expected to continue into the foreseeable future and poses a serious threat to the Apsheron Peninsula and the entire coastal zone. The issue was discussed at a conference of the Caspian Sea countries in July 1994, which resulted in an agreement to build more dykes to protect threatened coastlines and to consider the possibility of resuming work on the Ural-Volga canal to reduce the flow of water into the Caspian, but it was decided not to divert water to the Aral Sea,[23/] which is itself experiencing an ecological disaster and shrinking.

Soil degradation is also a problem in Azerbaijan. Some 1.4 million hectares of agricultural land has been affected by erosion, and 1.2 million hectares has a salinity level that is adversely affecting crop yields. The causes are poor agricultural practices such as over-grazing, deforestation, irrigation, cultivation of steeply sloping fields, and the extensive and improper use of chemical fertilizers and pesticides.

A Committee for Ecology has been established to formulate and implement environmental policies. No new environmental regulations have been adopted as yet, however, and the laws of the former USSR remain in force. These regulatory norms are very strict by international standards but have not been enforced, and would not be enforceable under current conditions. To ensure the success of the economic restructuring process currently under way it will also be important to set more attainable environmental goals, and establish procedures to monitor and enforce compliance with the new regulatory norms. If Azerbaijan follows the route taken by most other CMEA countries, it is realistic to expect that emission standards prevailing in the European Union (EU) will be phased in over time. Many countries in the region are adopting a Dutch model of environmental law, since it is one of the most well defined.

D. POLICIES TOWARDS INDUSTRY

Privatization

Privatization legislation was introduced late in Azerbaijan compared with the other republics of the former USSR. Adopted by the country's parliament in January 1993, the privatization law provided for the privatization of all assets with the exception of those stipulated in a negative list, and entrusted the State Property Committee (SPC) with the responsibility of formulating and implementing a privatization programme. The drafting of this programme generated considerable debate, however, and revealed an underlying lack of commitment to the concept of privatization. When finally agreed in April 1994, the programme provided for the privatization of medium-sized enterprises to commence in 1996, and for that of large enterprises to begin in 1998.

Partly under pressure from the IMF, the government announced plans to speed up the privatization process in 1995. The new plans provided for the early corporatization of small and medium-sized enterprises through their transformation into joint-stock companies, and their subsequent privatization by means of a voucher-based scheme similar to those employed in the Czech Republic and the Russian Federation. Specifically, these plans stipulate that employees of the enterprises intended for privatization are to receive a priority allocation of 15 per cent of the stock of their enterprises, with a further 50 per cent being offered for vouchers through national privatization auctions, 25 per cent being reserved for specialist investment funds, and 10 per cent to be offered for sale at cash auctions. Some 20 large enterprises are also to be transformed into joint-stock companies and majority stakes made available for both domestic and foreign purchase. In March 1996 the IMF announced agreement on an $80 million loan to support the privatization of 8,000 small businesses.

Private-sector development

Despite the slow rate of progress in the implementation of economic reform and the privatization process, there has been fairly rapid growth in the establishment of small companies. By June 1992 about 3,500 private enterprises were registered, employing approximately 20,000 persons.[24/] By 1995 that figure had jumped to 10,000 registered firms but many were not operational. A large proportion of the new private sector is engaged in trade with the other republics of the former USSR and with neighbouring countries. Scrap iron and rare metals are imported from the

Russian Federation and Tajikistan by the private sector, for example, and exported to Turkey and the Islamic Republic of Iran in exchange for consumer goods, which are sold in the local market.

New private-sector activity and investments have been very limited in the manufacturing sector. The relatively low capital requirement and higher short-run profitability of trading activities have made investments in these activities more attractive than in manufacturing, which requires long-term commitments and relatively higher levels of capital expenditure by investors.

The operations of Azerbaijan's financial institutions, and in particular of the country's large banks, are geared primarily towards the provision of credit and financial services to state-owned enterprises. Lending to such enterprises often takes place at negative interest rates. New private enterprises have very limited access to the credit and the financial services provided by the state-owned banking system.

The government established a Private Enterprise Support Fund in its 1993 budget. The purpose of this fund, which is capitalized at Rb4.5 billion or approximately 1 per cent of the national budget, is to grant concessional loans to new private businesses. The resources provided under this fund are too modest to promote a broad-based development of the small- and medium-sized industrial sector, however, and its effective operation will also require the creation of an institutional capacity to evaluate project proposals and credit risk.

Apart from the lack of capital, the development of new private enterprises has been hindered by the lack of such simple facilities as land, buildings and office space, which are hard to obtain and command high prices because of the continued absence of a market in real estate. Similarly, the absence of a private distribution system also imposes a serious constraint on the development of private enterprises. The existing state-order system, which discriminates in favour of state-owned enterprises in the allocation of raw materials and other inputs, also creates supply difficulties for potential new entrepreneurs in the manufacturing sector, as does the disruption of input supply lines from the other republics. The situation is exacerbated by the high degree of vertical integration of the large state-owned enterprises, which gives them no incentive to support the development of small-scale suppliers. A further constraint is posed by the limited availability of relevant business information on domestic and foreign market opportunities, accounting standards, quality control services, standardization measures, and managerial and marketing skills.

The establishment of new enterprises is also hindered by the complex licensing system governing the establishment of private businesses. Excessive documentation requirements and processing delays, the imposition of various fees and levies, and the frequent lack of administrative clarity hamper the entry of potential new investors. In addition, the development of the private sector has been constrained by the preferential treatment given to state-owned enterprises, which receive priority in the allocation of supplies, have access to exclusive state-owned marketing channels and subsidized credit, and often enjoy monopoly privileges in the domestic market as well as priority access to export licences. In the continued absence of policies designed to ensure equitable operating conditions for all businesses, including the adoption of anti-monopoly legislation, small privately-owned businesses find it extremely difficult to compete with the privileged state-owned sector.

Financial support for industrial development

Some progress has been made in establishing the institutional base of the financial sector since independence in 1992. The most significant developments include the creation of the National Bank of Azerbaijan from the local branches of Gosbank, Agroprombank and Promstroibank,[25/]

as well as the drafting of legislation on the operation of the central bank and the commercial banking system. In addition, almost 200 new banks have been registered in Azerbaijan since 1992, most of which are owned by state-owned enterprises, worker collectives and trade unions. Their assets are considerably smaller than those of the large state-owned banks, however, which prompted the government to introduce new regulations in April 1995 requiring them to raise their authorized capital to $50,000 by January 1, 1996, in an attempt to strengthen and consolidate their role within the banking system.

The newly formed privately-owned banks provide only a narrow range of services, such as the provision of short-term loans to traders, usually for periods not exceeding a month at high effective interest rates. The persistently high inflation prevailing in the country deters banks from issuing the medium- or long-term credits required for the establishment of new industrial entities. Consequently, they account for only about 5 per cent of total lending. The state-owned banks, meanwhile, continue to serve the financial needs primarily of state-owned enterprises. However, the establishment of a Bank of Economic Development to provide credits and financial services to small and medium-sized enterprises has been proposed.

Science and technology

The acquisition of modern industrial technology is increasingly recognized as a critical requirement for Azerbaijan's industrial revitalization. This is underlined by the elevation in 1993 of the chairman of the Committee on Science and Technology to the post of adviser to the president of the Republic, which is expected to result in greater emphasis being given to scientific and technological development in the coming years. The committee is also entrusted with the integration of science and technology policies and plans into the overall development plan of the country.

Considerable infusions of foreign technology in particular will be needed to upgrade the technological base of the manufacturing sector in Azerbaijan. Although the country has a relatively important petroleum equipment sector, the products and methods of production tend to be obsolete by international standards. According to some estimates, the production technology in the heavy-industry sector is approximately ten years behind the level of industrialized Western countries, with particularly serious lags in the area of instrumentation and control equipment. If this subsector is to raise its exports to previous levels under the prevailing free-market conditions, its competitiveness will need to be substantially improved through technological upgrading.

Similarly, other subsectors with a significant export potential, such as the silk and cotton industries, will also need to have access to the latest technologies to be competitive on world markets. The acquisition of such technologies should therefore constitute an important part of the technology development process in the country.

Promotion of foreign direct investment

The government has sought to encourage the inflow of foreign direct investment (FDI), both for the establishment of new industries and for the modernization of existing enterprises. A new Law on Foreign Investment was adopted in January 1992, and a Foreign Investment Central Board entrusted with the promotion of FDI was established in 1993. The foreign investment law prescribes the conditions for FDI in Azerbaijan and stipulates its objective as the attraction of capital, technology and advanced administrative techniques.

The foreign investment law is generally favourable to foreign investors, although it has a number of weaknesses. While it guarantees the protection of the rights of foreign investors, it does not provide for the equal treatment of national and foreign investors, nor does it guarantee the absence of discrimination against foreigners. Similarly, while providing for international arbitration in case of litigation, the law also refers to the applicability of several other legislative measures, which are themselves not well-defined and could allow ambiguity in their interpretation.

In early 1993, the responsibility for FDI was transferred from the Ministry of Economy to the Foreign Investment Department of the Centre for Economic Policy and International Cooperation. One of the first steps taken by the Foreign Investment Department was the commissioning of several sectoral studies to assess the opportunities for foreign investments. Apart from the oil sector and oil-related industries, the machine-building industry was specified among the priority sectors.

Foreign investors are expected to play an important role in the exploration and development of new oilfields, involving an outlay of approximately $20 billion over the next ten years.[26/] Several oil companies and firms providing related equipment and services from the USA and western Europe have offices in Azerbaijan. The negotiation of investment agreements has not been easy, however. After several years of talks, and re-negotiations prompted by each change of government, a consortium of Western companies reached a preliminary agreement with SOCAR, the state-owned oil production enterprise, in October 1993. Negotiations were re-opened several times, however, and the final deal was not signed until September 1994, and ratified by the Azerbaijan parliament in November 1994. Negotiations have also been held with the Russian company Lukoil for the exploration of the large Guneshli field.

To date foreign investments outside the oil sector have been small, and channelled predominantly into trading activities. This reflects to a large extent the strong deterrent effect which political uncertainties and the war with Armenia have had on foreign investment in the less lucrative non-oil sectors. A particularly important role in discouraging potential foreigners investors has been played in this context by the frequent changes of government, and by the fact that such changes have usually involved wide-ranging renegotiations of the terms and conditions of agreements in the oil sector.

The successful conclusion of the oil deals and the ceasefire with Armenia have resulted in a sharp increase in foreign investor interest. Several groups of interested investors have already visited the country in 1996, and several more groups are expected. Companies from the UK and USA in particular have expressed interest in investing, as have several Swedish firms. Interest is also extending beyond the obvious oil support sectors to fields such as consumer products and truck assembly. Over 150 foreign firms were represented in Azerbaijan as of April 1996.

Enterprise restructuring

In view of the slow progress of Azerbaijan's privatization programme, most of the existing medium-sized and large state-owned enterprises are likely to remain under state ownership for a considerable period. Consequently, their reform through legal, financial and managerial restructuring is one of the most important economic issues. Given the frequently unclear ownership structures and relationships of the various plants and units, this restructuring process will almost certainly be a major task.

The administration of industrial enterprises has already undergone major changes since independence. During a first stage of this transition the enterprises were removed from the control of the Soviet ministries which had operated them in the past, and by early 1992 several of the large enterprises were granted a high degree of decision-making autonomy with regard to their production, marketing and procurement policies. Subsequently, industrial enterprises operating in the same subsector were grouped into concerns, with holding companies assuming the decision-making function in a manner similar to the previous branch ministries. These large state concerns report directly to the deputy prime minister in charge of enterprises. The labour collectives of these enterprises also participate in their management, and enjoy the right of veto on certain major issues.

II. THE MANUFACTURING SECTOR

A. GROWTH AND STRUCTURAL CHANGE

As noted above, Azerbaijan's economy has been centred on the production of oil for well over 100 years, and the country was one of the world's largest oil producers at the turn of the 20th century. As part of the former USSR, it was developed specifically as a refining centre, with little done to maintain its crude oil production capacity. Azerbaijan's annual output of crude oil has dropped steadily from a peak of 21.5 million tonnes in 1965 as investment was directed to the development of new fields in Siberia, even though its refining capacity has been maintained at 20 million tonnes per year. Until recently, Azerbaijan was an exporter of oil products rather than crude oil.

Table 11. Azerbaijan: Structure of manufacturing industry, 1992-94
(Percentage of total)

	Employment	Output		
	1992	1992	1993	1994
Processed foods	14	14.4	16.9	16.6
Light industry	24	14.3	14.8	11.5
Wood, wood products, pulp and paper	3	0.6	1.3	0.5
Chemicals and petrochemicals	6	5.3	7.7	5.4
Building materials	6	1.6	5.0	3.0
Heavy industry	47	56.1	65.3	71.9
Electricity	5	5.5	11.0	16.7
Fuel	6	21.8	18.7	33.5
Metallurgy	5	6.5	5.3	2.0
Metal processing and machine building	26	11.9	16.0	7.3

Source: World Bank, *Statistical Handbook 1995 – Former States of the USSR*, Washington DC, 1995.

Increased priority was also given to the production of oil industry equipment from the mid-1960s onwards. This development, which was intended to take advantage of the strong technical skills of Azeri engineers, has resulted in heavy industry being dominated by the manufacture of extraction and refining equipment for the petroleum industry. In 1992 the sector accounted for 16 per cent of Azerbaijan's industrial output, while the country produced 60 per cent of the equipment for the oil and gas industry of the entire former USSR.

This heavy dependence on the former USSR as an output market caused the manufacturing sector of Azerbaijan to suffer a near-collapse in recent years. While it has great potential for finding new markets, it is based on the technology of the former USSR, which is very different from that used in the rest of the world. The future development of the industrial sector in Azerbaijan will therefore depend critically upon its ability to adopt new technologies and conform to international needs and standards.

Light industry has centred on food processing, textiles and wine making. The latter suffered a serious setback as a result of the anti-alcohol campaign of the 1980s, but appears to be recovering. Despite the fact that light and food industries accounted for close to one-half of the republic's output in 1991, Azerbaijan imported almost 60 per cent of its consumer goods. Between 1991 and 1992 the share of agro-industries in the total value of industrial output fell from 31 per cent to only 14.4 per cent, due largely to the rise of world prices for petroleum. In 1993 and 1994 that share increased, but only marginally, to 16.9 and 16.6 per cent respectively.

B. INDUSTRIAL EMPLOYMENT

Quantitative trends

Industrial employment in Azerbaijan has declined steadily since 1980, when it represented 18.4 per cent of the total employed population, to 13.1 per cent in 1994. The available data indicate that those leaving the sector did so in favour of construction and non-material sectors, such as healthcare, housing and municipal services.

Education and skills

The level of education in Azerbaijan is very high. Of the country's students, 90 per cent complete the full educational curriculum of ten years.[27/] Eight years, from the ages of seven to 16, consist of mandatory general education, with the additional two years comprising further general eduction or professional, technical or vocational studies. Some 2,600 schools offer the full ten-year curriculum and 1,150 offer eight years, while approximately 180 schools offer vocational training and a further 80 offer specialized technical instruction at secondary level. Almost 60 per cent of the graduates completing ten years of education do so in general secondary schools, 21 per cent attend professional or technical schools, and 20 per cent go to vocational schools. All graduates are given access to the country's universities. Approximately 15 per cent attend.

Azerbaijan has a literacy rate of 99 per cent. The main language of instruction in primary schools has been Azerbaijani. Secondary education has tended to be in Russian but is now likely to be in Azerbaijani as well. In 1991, 17 institutions of higher education enrolled about 60,000 day students, 17,000 night students and 28,000 correspondent students. All universities in the country are specialized by subject. Of the 1991 graduates, 38 per cent were women.

Despite the high general educational level, the country lacks many of the skills necessary to make the transition to a market economy. Few students are enrolled in management and business courses, and foreign language skills are scarce. The Foreign Language Pedagogical Institute had only 2,500 students in mid-1993. The country will have to make a concerted effort to remedy this situation. Curriculum changes will also have to take place at the Oil University, as the country hopes to find new Western markets which use vastly different technology from that of the oil production and refining industries of the former USSR to which it has been geared.

The role of women

Women's participation in all sectors of the labour force climbed steadily throughout the former USSR during the 70 years of its existence, with female participation in industry rising from 38 per cent in 1940 to 49 per cent in 1975. This pattern is repeated in Azerbaijan, where women's participation in the non-farm labour force increased significantly during the Soviet era. While women accounted for only 14 per cent of the total labour force in 1928, for example, their share had risen to 34 per cent by 1940 and 40 per cent by 1950.

Table 12. Azerbaijan: Female labour force participation rates, 1928-76, selected years
(Percentage of total)

	1928	1940	1950	1960	1970	1975	1976
Workers and employees	14	34	40	38	41	43	42
Collective farm workers	..	..	..	47	46	48	50

Source: Lewytzkyj, Borys, *The Soviet Union: Figures-Facts Data*, K.G. Saur, Munich, 1979.

C. PRODUCTIVITY AND PERFORMANCE

Enterprise profitability

The measurement of both labour productivity and enterprise profitability is extremely difficult, if not impossible, in any of the republics of the former USSR. Firms operating under the Soviet system were more concerned with the achievement of production plan targets than with profitability. The concept of profit centres was alien to the system, and accounting procedures were geared towards counting production rather than costs. Neither product nor enterprise profitability is revealed in the available financial data, which are further distorted by the fact that many inputs such as energy were highly subsidized. Even if it could be estimated, therefore, the corporate profitability revealed by such data would not reflect profitability in a market environment.

While profitability is hard to measure under the existing accounting system, it is readily discernible if an enterprise is making a loss. In Azerbaijan, the number of enterprises recording losses has increased dramatically in recent years. In 1993 about 8 per cent of all industrial enterprises were making losses, while the corresponding figure for agricultural enterprises had risen to 28 per cent from 7 per cent in 1990.

Labour productivity

The measurement of productivity in a Soviet-style enterprise poses similar difficulties to the measurement of profitability since enterprises are highly integrated, often produce several completely unrelated products, and are generally also involved in a large number of ancillary activities such as the running of day care centres, medical clinics, fire brigades and others. The situation is complicated further by the soft budget constraints faced by many effectively bankrupt enterprises, which have enabled them to maintain their staffing levels while dramatically reducing output.

Table 13. Azerbaijan: Proportion of loss-making enterprises, 1990-93
(Percentage of total number of enterprises in each sector)

	1990	1991	1992	1993
Agriculture	7.0	19.0	23.0	28.0
Industry	9.0	6.0	8.0	8.0
Construction	8.0	14.0	8.0	5.0
Transport	5.0	2.0	6.0	10.0
Trade	..	..	19.0	36.0

Source: UNIDO national consultant.

D. OWNERSHIP AND INVESTMENT PATTERNS

Ownership

As in the other republics of the former USSR, industrial ownership has been almost exclusively in the hands of the state. Although the privatization process was initiated in 1993, it has not yet made much headway. By the end of 1993 only some 30 per cent of the country's small enterprises had in fact been privatized, mostly in the trade and service sectors, and data compiled by the EBRD suggest that privately-owned enterprises, including "informal" businesses, accounted for only 15-25 per cent of GDP in 1995.[28/] The new plans to speed up the privatization process announced in 1995 are expected to result in the transfer to the private sector of several publicly-owned industrial plants producing such goods as oil exploration equipment, refrigerators, cooling units and textiles.

Investment

The heavily state-oriented ownership structure of Azerbaijan's economy meant that capital investment in the country has also been dominated by the state. The bulk of such investment during the past five or six years was geared towards state enterprises and organizations in the material sphere. Investment in the private sector grew dramatically in 1987 and 1988, but remains limited.

Foreign investment in Azerbaijan is governed by a mixture of old laws inherited from the former USSR and new laws passed since independence, the most important of which is the Law on Foreign Investment passed in January 1992. Under these laws foreign investment is permitted to take the form of joint ventures, wholly-owned subsidiaries and representative offices, but all foreign companies undertaking business in Azerbaijan must register with the government, and certain activities require a licence. The registration of representative offices is handled by the Ministry of Foreign Economic Relations, while joint ventures and wholly-owned subsidiaries are registered with the Ministry of Finance.

To date the interest of large Western investors has been concentrated in the oil sector, and several deals have recently been signed for billions of dollars. Interest has also been expressed in the tobacco industry by Western concerns. Smaller investors, especially from Turkey and the Islamic Republic of Iran, have entered into joint ventures in the textile and leather industries. However, little money has so far been firmly committed, let alone actually flowed into the country. The finalization of the oil deal with a consortium headed by British Petroleum is expected to change this and could result in as much as $7 billion in further investment.

E. INDUSTRIAL LOCATION

Manufacturing industry is located mainly in the country's three major cities: the ports of Baku and Sumgait and the inland city of Gyanja. Baku is the centre of the important oil exploration equipment and chemical industries, and also has a strong light industrial base. Azerbaijan's shipbuilding facilities are also located in Baku, as are producers of electrical and electronic goods. Sumgait, which together with Baku makes up the largest industrial region, is the location of the country's most important aluminium production facility and its second oil refinery. Gyanja is Azerbaijan's second largest manufacturing centre with enterprises in the metallurgical, machine-building, textile and footwear sectors.

F. ENVIRONMENTAL ISSUES

Like most other members of the former Council for Mutual Economic Assistance (CMEA), Azerbaijan has suffered severe environmental damage in recent decades. Serious market distortions generated by the excessive subsidy of energy prices have stimulated the establishment of highly energy-intensive industries and the adoption of similarly energy-intensive production methods. Primary energy consumption per unit of value added is frequently more than three times higher than in western Europe.[29/]

Industrial pollution of Azerbaijan's water resources represents a serious problem. The Araks river is heavily polluted by industrial sources, mostly from outside Azerbaijan, and is ranked as unsuitable for any use. The industrial pollution of the ground water on the Apsheron Peninsula has begun to cause serious health problems to residents of the country's two major towns, Baku and Sumgait, who partly rely on it for drinking water. The Caspian Sea is also highly polluted: Azerbaijan alone dumps between 250 million and 300 million cubic metres of industrial and municipal sewage into it yearly.[30/] The oil industry also causes considerable additional pollution, not least through the common practice of flooding oilfields with seawater and then discharging the untreated brine back into the Caspian Sea. Baku Bay now has an estimated 12 milligrams of oil compounds per litre of water.[31/] Aware of the seriousness of the water pollution problem, the government has recently introduced charges for water and water pollution, but has not yet been able to establish a firm mechanism for enforcing these controls.

During the Soviet period solid waste management was also largely ignored, and it is now presenting the country with a serious environmental threat. More than 160,000 tonnes of hazardous and toxic wastes are generated annually in Azerbaijan, of which 50,000 tonnes are stored on industrial sites, 10,000 tonnes go into official landfills, and the rest is dumped into unofficial landfills. The full extent of the problem is not yet known and the government is currently undertaking an inventory of the solid wastes produced and stored in the country.

A more rigorous environmental policy is now being established in Azerbaijan, with several important laws having been passed in 1992 in particular. Many critical issues still need to be dealt with, however, ranging from the setting of realistic standards to assigning liability and the establishment of an appropriate institutional infrastructure to enforce compliance with established standards. Even more importantly, there is an urgent need to upgrade the existing technology and production processes at almost all of the country's industrial enterprises, which will take time and will involve a substantial degree of investment and technology transfer.

G. TRADE IN MANUFACTURES

Imports

As an economy based principally on the processing of hydrocarbons, Azerbaijan is highly dependent on imports of raw materials such as crude oil and natural gas. It also relies on imports to cover about 60 per cent of its demand for consumer goods, and for food in particular. Machinery has also traditionally accounted for a significant proportion of the country's import trade: 21.2 per cent in 1994 and 15.6 per cent in 1995. With the shift to world prices for commodity imports, and to Western suppliers for its machinery and food requirements, the value of the country's imports surged dramatically from Rb11 million in 1991 to Rb131 million in 1992, but then dropped significantly. On a dollar basis, imports were $890 million in 1992 and $750 million in 1994.

Exports

Azerbaijan has traditionally been an exporter of processed oil, gas and related products to the other republics of the former USSR. In recent years the country has made a determined attempt to penetrate Western markets for these products. Oil, gas and chemical and petroleum products accounted for 37.4 per cent of total manufactured exports in 1994, with chemical and petroleum products alone accounting for 45 per cent. The exports of these products to Western markets amounted to almost 24.8 per cent of total industrial exports.

With the prices of Azerbaijan's oil-based exports rising to world levels, the hydrocarbon sector accounted for 94 per cent of the country's trade surplus in 1992. Now that a number of oil agreements with Western companies have been signed, Azerbaijan will become a major exporter of crude oil and the share of manufactured exports in total exports will decline. Exports of refined goods will increase in volume terms, however, as the country is also upgrading and expanding its refining capacity.

Oil extraction and refining machinery has also been an important export component, with Azerbaijan formerly providing about 60 per cent of the oil equipment used in the entire USSR. In 1990 the exports of such machinery alone accounted for about 17 per cent of total exports. In addition, Azerbaijan was the centre of household air-conditioner production in the former USSR. In 1994 the share of machinery in total exports had dropped slightly to 15.5 per cent.

Table 14. Azerbaijan: Exports by commodity groups, 1987-94, selected years
(Percentage share)

	Inter-republic						Extra-republic						Total exports					
	1987	1990	1991	1992	1993	1994	1987	1990	1991	1992	1993	1994	1987	1990	1991	1992	1993	1994
Agriculture	4.9	2.2	2.3	0.8	..	..	0.2	0.9	1.9	0.1	..	..	4.6	2.1	2.3	0.4	..	..
Industry	94.9	95.8	97.7	99.2	93.4	100.0	98.7	98.2	98.1	99.9	100.0	100.0	95.2	95.9	97.7	99.6	99.7	100.0
Energy	0.5	0.8	1.0	2.9	2.4	2.2	-	-	-	-	..	..	0.5	0.7	1.0	1.4	..	..
Oil and gas	15.9	12.2	10.9	-	16.4	22.3	9.1	31.4	26.9	14.2	39.7	41.1	15.4	13.3	11.9	7.3	27.7	33.0
Coal	-	-	-	-	..	..	-	-	-	-	..	..	-	-	-	-	..	..
Processed foods	23.5	28.6	33.9	29.9	25.9	22.6	12.0	9.2	1.3	1.1	1.6	0.8	22.7	27.7	31.9	15.3	14.1	10.2
Light industry	24.0	22.4	16.2	2.9	7.4	11.0	63.1	18.8	55.0	8.5	12.3	25.9	26.8	22.2	18.6	5.7	9.8	19.5
Sawmill and lumber industry	0.4	0.2	0.1	-	-	0.4	-	-	-	1.1	2.4	1.1	0.4	0.2	0.1	0.6	1.2	0.8
Chemicals and petroleum	9.8	8.5	9.9	29.3	11.2	8.4	1.9	1.8	4.0	60.6	2.8	1.4	9.3	8.1	9.5	45.2	7.1	4.4
Building materials	0.8	1.0	0.3	0.3	0.4	0.7	-	-	-	0.2	0.3	-	0.7	1.0	0.3	0.3	0.4	0.3
Ferrous metallurgy	1.5	1.2	2.3	3.8	1.0	..	0.2	2.2	0.3	2.3	28.7	24.2	1.4	1.2	2.2	3.1	14.4	..
Non-ferrous metallurgy	1.9	1.3	3.3	5.6	10.1	0.4	2.5	0.3	0.7	2.2	5.9	2.5	2.0	1.3	3.1	3.9	8.1	1.6
Machinery and metal works	14.8	15.3	18.0	24.3	31.0	32.2	9.7	34.5	7.5	9.8	4.8	3.0	14.5	16.3	17.3	16.9	18.3	15.5
Other	1.7	4.2	1.6	-	2.6	-	-	-	2.6	-	1.6	-	1.6	4.0	1.7	-	2.1	-
Other material production	0.1	2.0	-	-	0.6	..	1.1	0.9	0.4	-	..	..	0.2	2.0	-	-	..	..
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**	**100.0**	**100.0**	**100.0**	**100.0**
Memo item:																		
Share of total trade	93.0	94.9	93.9	49.2	51.6	43.0	7.0	5.1	6.1	50.8	48.4	57.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: State Statistics Committee.

Table 15. Azerbaijan: Imports by commodity groups, 1987-94, selected years
(Percentage share)

	Inter-republic						Extra-republic						Total imports					
	1987	1990	1991	1992	1993	1994	1987	1990	1991	1992	1993	1994	1987	1990	1991	1992	1993	1994
Agriculture	2.1	3.4	1.0	1.3	2.5	3.3	12.0	8.7	18.2	13.6	6.9	4.1	4.4	4.8	4.4	5.6	4.4	3.6
Industry	97.8	93.8	99.0	98.7	97.5	96.7	88.1	91.2	81.8	86.4	93.1	95.9	95.5	93.2	95.7	94.4	95.6	96.4
Energy	0.7	0.4	-	-	..	..	-	-	-	-	..	..	0.5	0.3	-	-	..	..
Oil and gas	10.5	10.1	8.8	7.9	26.2	47.3	0.1	0.1	5.9	-	0.7	0.3	8.0	7.5	8.2	5.1	15.0	29.4
Coal	0.1	0.1	0.1	-	-	0.2	-	-	-	-	0.1	..	0.1	0.1	-	-	0.1	..
Processed foods	14.7	11.8	21.1	10.2	18.8	15.2	27.6	26.8	46.1	47.8	32.8	35.6	17.7	16.2	26.0	23.5	24.9	22.9
Light industry	16.2	16.7	10.3	5.3	0.7	0.8	34.0	26.8	14.1	6.3	4.1	2.7	20.3	19.3	11.0	5.7	2.3	1.5
Sawmill and lumber industry	3.6	2.8	3.3	4.0	1.9	2.9	3.1	1.7	3.2	0.5	2.3	2.7	3.5	2.5	3.3	2.8	2.1	2.8
Chemicals and petroleum	10.2	11.5	6.8	15.6	8.9	5.6	7.0	5.8	2.0	5.8	17.1	8.2	9.5	10.0	5.8	12.1	12.5	6.6
Building materials	2.8	2.2	1.6	1.3	1.1	1.5	1.1	0.9	0.3	1.1	0.3	1.0	2.4	1.9	1.4	1.3	0.7	1.3
Ferrous metallurgy	7.4	5.2	9.2	28.2	11.6	13.6	5.1	3.3	4.3	0.4	1.0	2.4	6.9	4.7	8.2	18.4	7.0	9.4
Non-ferrous metallurgy	2.6	2.4	13.9	2.7	5.5	0.4	-	-	3.1	0.1	2.1	2.1	2.0	1.8	11.8	1.8	4.0	1.0
Machinery and metal works	26.2	26.3	22.0	22.9	18.8	7.8	9.7	23.2	2.7	22.4	24.2	28.4	22.3	25.5	18.2	22.7	21.2	15.6
Other	2.8	4.5	2.1	0.6	4.1	3.3	0.5	0.7	0.1	2.0	8.6	6.5	2.3	3.5	1.7	1.1	6.0	4.5
Other material production	0.1	2.8	-	-	-	..	-	-	-	-	..	..	0.1	2.1	-	-	..	..
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**	**100.0**	**100.0**	**100.0**	**100.0**
Memo item:																		
Share of total trade	76.5	73.9	80.3	64.6	56.2	62.5	23.5	26.2	19.7	35.4	43.8	37.5	100.0	100.0	100.0	100.0	100.0	100.0

Source: State Statistics Committee.

Food products are the next most important category of manufactured exports, accounting for 15 per cent of the total in 1992 and 10.2 per cent in 1994. The republics of the former USSR remain the most important markets, and absorbed 95.4 per cent of Azerbaijan's processed food exports in 1994.

H. INTERNATIONAL COOPERATION FOR INDUSTRIAL DEVELOPMENT

Since attaining independence in 1991 Azerbaijan has received technical and financial assistance from a wide variety of multilateral and bilateral sources. The principal multilateral donors have included the European Union through its programme of Technical Assistance for the Commonwealth of Independent States (TACIS), the United Nations through the Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Development Programme (UNDP), the Organization for Economic Cooperation and Development (OECD), the International Monetary Fund (IMF) and the World Bank. The main bilateral sources have included India, the Islamic Republic of Iran, Japan, Pakistan and Turkey, although the major European countries such as the UK and Germany have also expressed an interest in providing assistance since 1994.

Most of the assistance provided so far has been channelled into sectors other than manufacturing industry, with the main priority areas including macroeconomic management and institution-building, human resource development, energy, agriculture, transport, telecommunications, water development and environmental measures. The main assistance programme launched so far in the industrial field involves a project for the reconstruction of the petrochemical and petroleum-equipment manufacturing industries included in the TACIS priority programme for 1993-95. Some other assistance programmes have an indirect affect on the industrial sector, however, such as a TACIS project to support the privatization programme, an ESCAP project to promote non-oil exports consisting primarily of manufactured goods, and a UNDP project to assist in the promotion of foreign direct investment.

A support programme for the industrial development of the Sumgait region was initiated in August 1995 under the auspices of the UNDP, with UNIDO acting as the implementing agency. The $330,000 project is being implemented in three phases. The first phase, which involved the preparation of a detailed regional development survey, the provision of advice on policy and institutional measures to the government, local authorities and enterprise managements for the revitalization of the Sumgait region, and the identification of industrial investment opportunities and technical assistance requirements, has been completed. The second phase is now proceeding with the implementation of the appropriate policy measures, including the designation of Sumgait as a special economic zone, institutional infrastructure development and investment promotion. Phase three is planned for 1997 and will include further investment promotion activities as well as enterprise restructuring.

III. INDUSTRIAL BRANCH PROFILES

A. FOOD PROCESSING AND RELATED AGRO-INDUSTRIES

The resource base

The agricultural sector of Azerbaijan is organized around 1,200 state and cooperative farms which specialize in the production of cotton, grapes, fruits and vegetables, tobacco, tea and animal products. Crops account for over 60 per cent of output, with cattle-based dairy and meat products making up the bulk of the remainder. The IMF estimates that private plots produced about 15-20 per cent of Azerbaijan's total crop output in 1992 even though they account for only a relatively small proportion of the total area under cultivation. The role of the private sector is much more significant in the animal husbandry industry, however, where private breeders account for more than half of the country's total output of livestock products.

After dropping dramatically during the preceding decades, the area devoted to cereal production increased by 37 per cent between 1987 and 1992. By contrast, the areas planted to cotton and grapes dropped by 23 per cent and 38 per cent respectively during the same period, with the latter being due mainly to the anti-alcohol campaign of the 1980s.

Table 16. Azerbaijan: Area under cultivation, 1940-92, selected years
(Thousand hectares)

	1940	1965	1970	1987	1992
Grain	797	658	621	461	633
Grapes	30	41	70	175	109
Tea	5.1	6.4	7.9	7.0	9.0
Cotton	188	215	193	303	234

Sources: Lewytzkyj, Borys, *The Soviet Union: Figures-Facts-Data*, K.G. Saur, Munich, 1979; World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 9, 1993.

Azerbaijan's high summer temperatures and the low levels of rainfall across most of the country necessitate extensive irrigation. Official statistics suggest that of the total of 1,763 hectares classified as agricultural land, 1,401 hectares are irrigated, and that about 70 per cent of Azerbaijan's agricultural output is produced from irrigated areas.

Azerbaijan's agricultural output suffered a serious setback in 1992 for several reasons, including adverse weather and the loss of production due to the civil war in the Nagorno-Karabakh region, comprising one-third of the country's agricultural land. The production of silk and tobacco in particular was disrupted by fighting in the prime growing areas. The impact of these short-term difficulties was exacerbated by more serious long-term problems, including soil erosion, inefficient irrigation and water pollution, all of which have contributed to the long-term decline in output and soil productivity.

Table 17. Azerbaijan: Agro-industrial production, 1980-92, selected years

	Units	1980	1985	1987	1988	1989	1990	1991	1992
Cotton fibre	Thousand tonnes	248	251	240	219	207	167	171	148
Meats and sausages	Thousand tonnes	59	77	87	87	82	61	48	28
Butter	Tonnes	4,733	4,808	5,197	5,666	4,689	3,829	3,069	2,858
Cheese	Thousand tonnes	17	21	21	20	18	17	16	9
Milk products	Thousand tonnes	188	220	236	239	224	203	175	81
Canned foods	Million pieces	470	620	790	845	728	653	628	508
Margarine	Thousand tonnes	16	20	23	22	21	19	18	10
Tea	Thousand tonnes	11	19	21	22	24	17	15	9
Vodka	Thousand bottles	1,821	1,692	1,050	1,270	1,686	1,770	2,407	1,812
Brandy	Thousand bottles	1,388	861	1,295	1,635	1,791	1,771	1,954	891
Wine	Million bottles	10.3	8.2	6.5	8.1	11.4	9.4	8.6	5.4
Sparkling wine	Million bottles	5.8	18.7	14.7	20.9	20.2	18.2	16.1	17.1
Confectionery	Thousand tonnes	80	95	103	106	111	106	88	38
Flour	Tonnes	678	799	843	892	825	796	804	698
Fodder	Thousand tonnes	623	898	915	924	988	835	689	365
Bread	Thousand tonnes	565	598	591	546	543	586	699	872
Fermented tobacco	Thousand tonnes	50	53	55	56	51	49	47	47
Cigarettes	Million pieces	7,673	9,791	8,618	7,327	7,089	6,520	7,311	4,886

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

Tea

Past trends

One of the main tea-producing areas in Azerbaijan is the Lenkoran district. Its tea has a high caffeine content and a full flavour and aroma. Poor cultivation practices and attempts to maximize output in the past have caused extensive damage to the area, however. The tea packaging facilities have also suffered from inadequate investment, and tend to have obsolescent equipment.

Constraints and prospects

One of the main problems facing the tea industry in Azerbaijan is the lack of availability of sufficient water for irrigation, as a result of which only about 52 per cent of the land planted to tea is adequately irrigated.[32/] Regardless of the poor quality of much of the tea produced at present, however, the tea industry has considerable potential and has already attracted foreign investment. In 1991 the US firm Max Cross entered into a 30-year cooperation agreement with the Lenkoran Tea Production Association to form a joint-venture to produce quality tea for the

US market.[33/] Existing facilities were modernized and re-equipped and production concentrated on quality leaves. About 600 hectares were replanted initially, and some land was converted from vegetable production to tea cultivation, expanding the total area of the joint venture's plantations to 8,000 hectares.

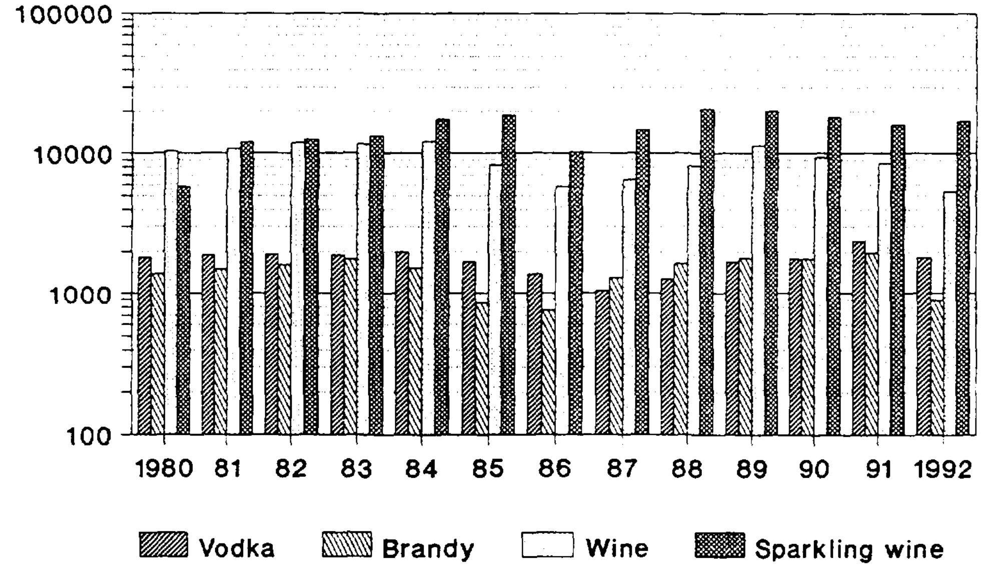
Wine

Past trends

The wine-making industry in Azerbaijan was severely disrupted by the anti-alcohol campaign of the 1980s. By the early 1990s, however, a concerted effort was being made to restore the vineyards and upgrade the quality of Azerbaijani wines. Unfortunately, these attempts coincided with a threat to the country's established markets in the former USSR due to growing problems in the payments processing system between the states of the former USSR. This has prevented wine producers in Azerbaijan from fulfilling export orders from the Russian Federation for their wine and vodka, and has resulted in an undue growth of inventories.

Prior to 1991 most of Azerbaijan's wine-growing regions produced cheap must and pressed grapes to supply other producers in the former USSR. For example, almost all the output of the Dzhalilabad region, which has seven production units with a total capacity of 350,000 tonnes of grapes per season, is geared to supply other vineyards.[34/] More recently, however, there has been a shift towards the production of higher quality wine, and the production of sparkling wine has also tripled since 1980 to 17,141 thousand bottles in 1992.

Fig. 6. Azerbaijan: Output of selected beverages
(Million bottles)



Source: State Statistics Committee.

Constraints and prospects

The wine industry faces a number of problems, which include the need to raise the standard of local grapes and to overhaul and replace much of the equipment used for pressing, blending and ageing the wine. The standards of bottling, labelling and general packaging also need to be improved. In the past not all vineyards had bottling facilities, and wine often had to be shipped in tank trucks to bottling plants in other parts of the country. This situation is being remedied as several wine producers have begun to install on-site bottling facilities in recent years.

The industry has also been plagued by a shortage of bottles, due in part to the mass breaking of bottles that took place as part of the anti-alcohol campaign of the 1980s. In one Baku facility, wine and brandy was being bottled in fruit juice bottles in the early 1990s because the facility had just switched back from its forced change-over to juice production in the mid-1980s. The same enterprise also reported that it faced shortages of corks, paper and foil, which were normally supplied by Russian enterprises, because of the breakdown in the payments mechanism.

Despite its various problems, the outlook for the wine industry in Azerbaijan is relatively good. Considerable potential exists for the penetration of new markets in the West, for example, if measures can be taken to improve the bottles and packaging to reflect Western standards and tastes. Some progress has already been made in this connection, with local firms beginning to repair the damage caused by the anti-alcohol campaign, and to modernize and expand their production facilities. One such firm in Dzhalilabad is reported to have registered a net profit of Rb4 million in 1991, which it re-invested in nearby vineyards with the intention of increasing the region's production from 55,000 tonnes to 100,000 tonnes. The enterprise then entered into an association with eight other producers in the area with a total capacity of 250,000 tonnes of grapes per year.[35/]

Tobacco

Past trends

Tobacco is an important agricultural crop in Azerbaijan, although production has declined in recent years due to the disruption caused by the occupation of one of the country's major tobacco-growing areas by Armenian troops. However, the bulk of the country's output consists of a fairly bland leaf with little local popularity, and Virginia is only grown in relatively small quantities, largely in response to the signing of an agreement with the US firm Philip Morris to produce Marlboro cigarettes under licence. In 1992, Virginia leaves were grown on only 100 hectares.

Table 18. Azerbaijan: Production of tobacco, 1985-93, selected years
(Thousand tonnes)

1985	1990	1991	1992	1993
60.0	52.9	57.3	49.4	44.6

Source: UNIDO national consultant.

Only a relatively small proportion of Azerbaijan's tobacco output has been used for domestic cigarette production in the past, with the bulk of the remainder being exported in the form of cured leaves to cigarette factories in other republics of the former USSR. Of the domestically produced cigarettes, moreover, some 65 per cent have traditionally been exported to the other republics of the USSR. Several developments in the recent past suggest, however, that these patterns are likely to change.

In one case, the large discrepancy in the price of cured tobacco and cigarettes prompted a group of officials and tobacco growers in one of the main growing regions, Zakataly, to draw up a plan to begin local cigarette production in 1992. To this end, increased quantities of Virginia, Burley and Samsun varieties required for blending with the local tobacco have begun to be planted in the 28 farms in the region, whose output had traditionally been processed at a local curing plant. In another case, a joint venture was established in 1992 between Azerbaijani and Turkish businessmen with the intention of improving the quality of the country's output of tobacco and cigarettes to the point where they could be exported outside the republics of the former USSR. The Turkish partner is bringing in technology and Samsun tobacco. The venture will also produce cigarettes using a blend containing a locally grown Virginia leaf for export.

Constraints and prospects

Apart from the disruption caused by the war with Armenia, Azerbaijan's tobacco processing industry faces many of the same problems encountered by its counterparts throughout the central and eastern European region. These include the poor quality of the tobacco itself, continued reliance on poor curing processes, and poor packaging. The continuing high demand for tobacco products in the region will render the industry attractive to foreign tobacco companies faced with declining demand in the West, however, and should ensure that it will continue to receive a great deal of foreign interest and attract Western funds and technology.

B. TEXTILES AND CLOTHING

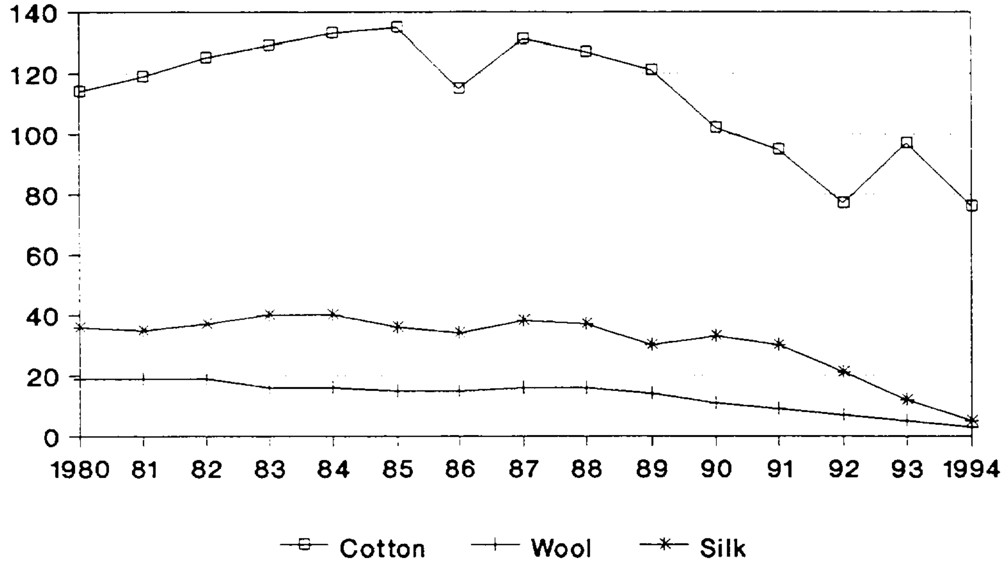
The resource base

Azerbaijan's textile industry is based principally on the processing of raw cotton and the production of silk fabric, but it also manufactures woollen goods and leather products. The textile industry accounts for the bulk of the country's non-food processing light industry, and offers one of the most promising areas for the development of small and medium-sized enterprises and the private sector.

Past trends

The development of Azerbaijan's textile industry took place mainly in the years from 1940 to 1965, during which the production of cotton fabric more than doubled, the production of woollen fabrics increased tenfold, and the production of silk fabric increased by more than 50 times[36/]. In recent years, however, the output of most of the country's textile goods has declined due to a lack of inputs, obsolescent equipment and the general decline in the economy. The production of cotton fabrics, for example, has fallen from a high of 135.4 million square metres in 1985 to 75.6 million square metres in 1994, while the production of woollen fabrics dropped from 19 million square metres in 1980 to less than 3 million square metres in 1994. Meanwhile, the production of silk fabrics fell from 36 million square metres in 1980 and a peak of 40 million square metres in 1983/84 to only 4.5 million square metres in 1994, largely as a result of fighting in the main mulberry tree growing areas of the country.

Fig. 7. Azerbaijan: Output of selected fabrics
(Million square metres)



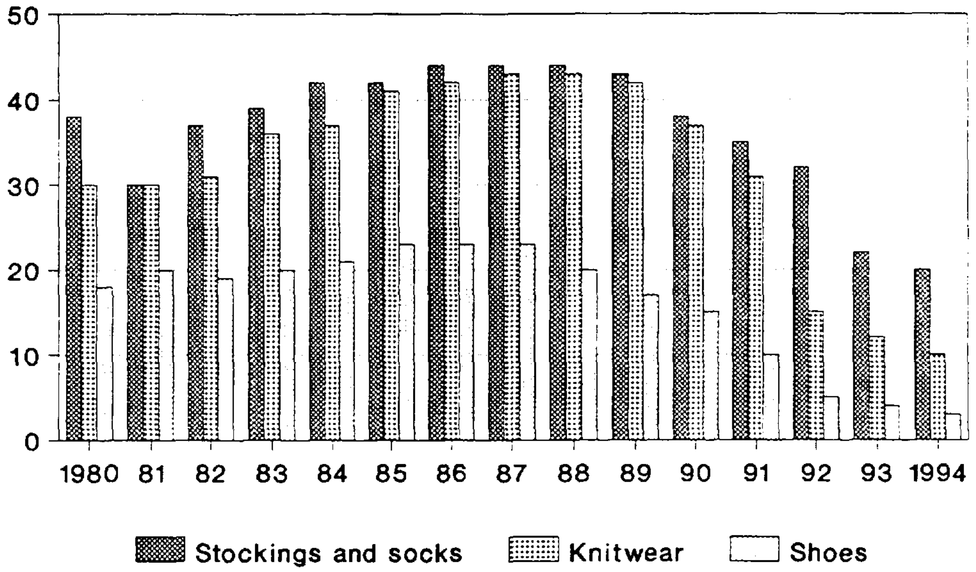
Sources: State Statistics Committee; World Bank, *Statistical Yearbook 1995 - States of the Former USSR*, Washington DC, 1995.

The production of finished textile goods has also dropped during the same period. The output of stockings dropped to 38 million pairs in the early 1980s, for example, before recovering to 44 million pairs in 1986-88 and dropping again to 20 million pairs in 1994. The production of knitwear also collapsed during the same period.

Since the end of central planning, the textile industry is emerging as one of the most attractive industries for private investors. One of the first private enterprises in Azerbaijan was established in the town of Yevlakh by the former deputy director of the local wool-carding factory. Begun as a trading concern dealing in such raw materials as wool and hides, the company invested its initial profits in textile equipment, and is now producing knitwear from wool and wool mixtures as well as T-shirts and underwear. In addition, the group has established a factory for the production of woollen yarn for carpet weaving. In 1995 the enterprise, which employed more than 1,000 people, expected to have produced a range of 65 different products with a total production value of Rb1 billion.

In 1992 the silk sector in Azerbaijan employed approximately 150,000 people and involved 800 collective or state farms. The further development of the natural silk industry, which had long dominated the former USSR market, has been promoted by the Ministry of Agriculture and Food from 1992 onwards. Targets for the annual production of silk cocoons were raised to 10,000 tonnes in 1992/93, and plans were drawn up to plant mulberry trees along roads and canals and between fields, and to establish specialized nurseries. As noted, however, the hostilities with Armenia have seriously disrupted the production of silk.

Fig. 8. Azerbaijan: Output of selected wearing apparel and footwear
(Million pieces, million pairs)



Sources: State Statistics Committee; World Bank, *Statistical Yearbook 1995 - States of the Former USSR*, Washington DC, 1995.

Table 19. Azerbaijan: Production of textiles and clothing, 1980-94, selected years

	Units	1980	1985	1987	1988	1989	1990	1991	1992	1993	1994
Cotton fabric	Million square metres	114	135	131	127	121	102	95	77	97	76
Wool fabric	Million square metres	19	15	16	16	14	11	9	7	5	3
Silk	Million square metres	36	36	38	37	30	33	30	21	12	5
Stockings and socks	Million pairs	38	42	44	44	43	38	35	32	22	20
Knitwear	Million pieces	30	41	43	43	42	37	31	15	12	10

Sources: State Statistics Committee; World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993; UNIDO, *Azerbaijan: Sumgait, The City of Tomorrow – Support Programme for the Industrial Regeneration of the Sumgait Region of Azerbaijan*, Vienna, March 1996.

The production of cotton fabric and the processing of the waste into medicinal cotton are also areas that have already received interest from Western investors as the products of these industries have begun to enter foreign markets.

Constraints and prospects

Having attracted the interest of foreign investors and buyers as well as the support of the government, the future of Azerbaijan's textile industry looks promising. With a well-developed resource base for the production of a wide range of cotton, woollen and silk textiles, the country can support a highly diversified processing industry provided that adequate capital resources and appropriate technological know-how can be obtained from external sources. Based on estimated sufficiency norms and the size of the local market, Azerbaijan could probably support the production of 235.5 times more cotton fabric production, 32 times more woollen fabric, 82 times more silk fabric, 94 times more knitted underwear, 31 times more knitted outerwear, and 93 times more socks.[37/] The development of these industries could further support an expansion of the output of ready-made garments, for which there appears to be considerable demand in both the domestic and external markets.

C. LEATHER AND FOOTWEAR

Past trends

Shoe production in Azerbaijan collapsed during 1988-92. From about 23 million pairs per year in 1986 and 1987, the output of the country's shoe industry fell to 5 million pairs in 1992 and has continued to drop. Production was just under 3 million pairs in 1994. Although corresponding data are not available for leather clothing, it appears reasonable to assume that the output of this industry has also fallen in line with the decline in production of other finished textile goods described above.

Table 20. Azerbaijan: Production of shoes, 1980-94, selected years
(Million pairs)

1980	1985	1987	1988	1989	1990	1991	1992	1993	1994
18	23	23	20	17	15	10	5	4	3

Sources: State Statistics Committee; World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993; UNIDO, *Azerbaijan: Sumgait, the City of Tomorrow – Support Programme for the Industrial Regeneration of the Sumgait Region of Azerbaijan*, Vienna, March 1996.

Constraints and prospects

The production of such leather clothing as jackets, dresses and skirts has attracted the interest of foreign investors and buyers, and could constitute a basis for the development of small enterprises.

A number of Turkish companies in particular have shown an interest in leather apparel produced in Azerbaijan, and several joint ventures have been established. In 1991, for example, the Turkish firm Pet Holding entered into a joint venture with the Azerbaijani firm Azerittifak to produce a range of leather garments, bringing in management teams and re-equipping an existing factory.

D. WOOD AND WOOD PRODUCTS

The resource base

Azerbaijan's resource base for the further development and expansion of its wood processing industry is limited. Only 10 per cent of its area is forested, and the country is already feeling the effects of deforestation in the form of agricultural land erosion.

Past trends

In line with its diminishing resource base, the timber logging industry in Azerbaijan has been contracting steadily since 1965, although the output of sawn timber remained steady from 1965 to 1975. By 1991 the wood and wood products subsector accounted for 1.5 per cent of industrial output and included 247 enterprises. By 1994 its share of industrial output had dropped to just 1.2 per cent.

Constraints and prospects

Despite the restricted natural resource base, the wood and wood products industry provides a limited opportunity for the development of small and medium-sized enterprises. The demand for furniture in Azerbaijan significantly exceeds the available supply at present, providing local enterprises with favourable prospects for the foreseeable future. Over the longer term, however, the development of the wood and wood products industries will clearly be constrained by the lack of domestic resources. Azerbaijan is already a net importer of sawmill and lumber products, and any expansion of this sector would require the securing of external supplies. In view of the prevailing payments system problems with other republics of the former USSR and the limited availability of hard currency, however, such an increase in raw material imports may not be easy to achieve.

E. PETROLEUM AND GAS PRODUCTION AND REFINING

The resource base

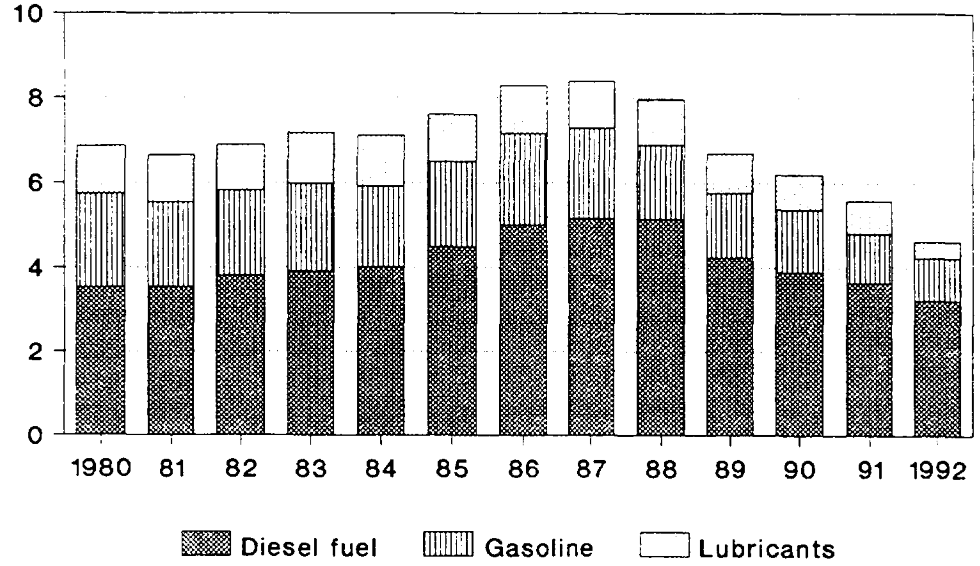
Despite a long history of oil production, Azerbaijan still has substantial reserves and development potential. While initial field development was largely onshore, there has been a shift in recent years towards the exploitation and development of offshore sites in the Caspian Sea. The available offshore technology is very basic, however, and three of the four fields so far discovered have remained beyond the reach of local technology. The help of Western partners has thus been enlisted to develop them, with Amoco and other companies being contracted to develop the Azeri field, Pennzoil to develop the Guneshli field, and British Petroleum to develop the Chirag field.

As well as the known fields, several other sites have been identified as being suitable for exploratory drilling, and it is estimated that they may contain an additional 2.5 billion tonnes of oil. Many onshore fields also have significant residual reserves that are recoverable with new technology. The main oil-bearing areas of the country are the Apsheron Peninsula and the regions surrounding the towns of Siyar, Neftechala and Ali-Bayramli.

Past trends

Azerbaijan's domestic oil production fell steadily from 21.5 million tonnes to 12.5 million tonnes between 1965 and 1990, and has collapsed since then. In 1995 it amounted to only 9 million tonnes. A primary goal of the government is thus to revive the oil sector and to increase production of both crude and refined products, with the former being raised to 30-40 million tonnes by the year 2000 through partnerships with the Western oil companies listed above.

Fig. 9. Azerbaijan: Output of selected fuels
(Thousand tonnes)



Source: State Statistics Committee.

Until 1991 Azerbaijan's oil production industry consisted of two state-owned enterprises, Aznefte and Kaspmorneftegaz, which dealt with onshore and offshore production respectively. Blaming years of colonial exploitation for the declining production and other problems in the oil sector, the then president of Azerbaijan, Ayaz Mutalibov, combined the two enterprises, along with the research and exploration organizations Azneftegeofizika, Kaspmorneftegazgeofizrazvedka and Kaspneftegeofizika and the offshore construction and installation organization Shelfproyektstroy, into a new concern, Azerineft SA, in 1991.

Table 21. Azerbaijan: Output of refined oil products, 1980-92, selected years
(Thousand tonnes)

	1980	1985	1987	1988	1989	1990	1991	1992
Diesel fuel	3,581	4,500	5,159	5,145	4,236	3,899	3,635	3,211
Gasoline	2,204	1,989	2,121	1,743	1,523	1,472	1,174	1,035
Lubricants	1,138	1,118	1,104	1,061	934	818	763	391

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

The petroleum refining industry is based in Baku and is dominated by two large enterprises, Azneftyag and the New Baku Oil Refinery of Novobakinsky. Highly dependent upon the oil industry of the former USSR, which it was developed to support, the sector relies on imports of crude oil for almost 50 per cent of its capacity. Its traditional suppliers were the Russian Federation and Ukraine, but a deterioration in relations with these countries and a rise in prices to world standards, payable in hard currency, have significantly reduced deliveries.

The physical facilities at the refineries are old and generally in poor condition, especially at the larger of the two refineries, Arzneftyag. The New Baku refinery has recently been expanded, with an additional annual capacity of 20 million tonnes per year. The new capacity will also improve the efficiency of the process by 20 per cent, and includes scrubbing equipment to remove sulphur compounds from the waste gases.[38/] The government of Oman has discussed the extension of $200 million in credits to the country for the upgrading of the oil industry in general and the expansion of this enterprise in particular.

Constraints and prospects

Azerbaijan's unsettled political situation in recent years has caused considerable delays in the implementation of the country's new oil projects. With each change in government, for example, the arrangements agreed with the country's Western partners on the development of the oil industry have had to be renegotiated. The agreement with the consortium led by British Petroleum and the Norwegian firm Statoil on the development of Azerbaijan's Caspian Sea fields was renegotiated once and postponed several times between 1991 and 1994, for example, and then became bogged down again in the spring and summer of 1994 over the issue of whether the sharing of profits should commence before or after the consortium recoups its investment. The final deal, worth $7.4 billion, was signed in September 1994 and ratified in November of that year. The conclusion of this deal and several smaller ones should now lead not only to regeneration of this sector, but also substantial investment in support sectors.

The conflict with Armenia has been another source of delay in the further development of the oil industry, not only through its direct effects on Azerbaijan's political stability but also because it hampered the taking of decisions on the construction of pipelines required to market the petroleum. Several different proposals were made by various Western partners for routes across the Transcaucasus, Ukraine and the Russian Federation to Europe, and through the Islamic Republic of Iran and Turkey to the Mediterranean, but all the parties involved expressed concern over any choice of route through Azerbaijan, Armenia or Georgia, all of which were experiencing armed conflict.

In October 1995 an agreement was finally reached to build two pipelines, one routed through the Russian Federation and one through Georgia and Turkey. Financing for these projects is now being arranged.

F. CHEMICALS AND PETROCHEMICALS

The resource base

The chemical industry in Azerbaijan was initially developed to process cheap local oil into petrochemicals for distribution throughout the former USSR. Over time, however, greater reliance began to be placed on the processing of crude oil imported from other parts of the former USSR, so that the industry became increasingly dependent on these external sources of raw material supply.

Past trends

At the time of Azerbaijan's independence in 1991, the country's petrochemical industry consisted of 35 enterprises, which together accounted for almost 7 per cent of industrial output and employed 25,000 people. Its main products are fertilizers, pesticides, sulphuric acid and caustic soda.

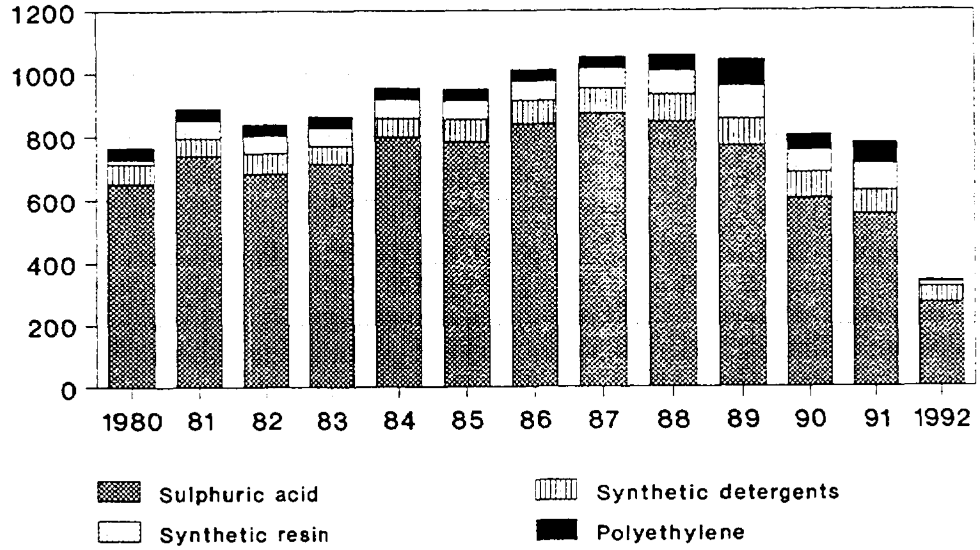
Table 22. Azerbaijan: Output of the chemical industry, 1980-92, selected years

	Units	1980	1985	1987	1988	1989	1990	1991	1992
Mineral fertilizer	Thousand tonnes	220	306	313	320	275	212	188	81
Sulphuric acid	Thousand tonnes	652	782	872	846	768	603	552	269
Synthetic rubber	Tonnes	127	146	130	121	107	85	78	28
Synthetic resin and plastics	Thousand tonnes	55	59	63	76	105	68	85	14
Polyethylene	Thousand tonnes	37	37	37	51	82	49	66	6
Caustic soda	Thousand tonnes	167	227	245	236	219	160	171	92
Tyres	Thousand	1,681	1,666	1,592	1,483	1,327	1,123	870	479
Sulphanol	Thousand tonnes	117	131	141	141	136	130	118	62
Synthetic detergents	Thousand tonnes	61	71	79	84	85	82	76	52

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

The dissolution of the former USSR resulted in a serious disruption of this industry, which had previously been coordinated from Moscow, and by the beginning of 1993 the majority of enterprises in the industry were operating at only 50 per cent of capacity. To overcome these problems the government established the state-owned firm Azerichimia, which manages these enterprises and is entrusted with the short-term task of coordinating the industry's commercial relations with enterprises in the Russian Federation to secure raw materials (often by arranging for its Russian customers to pay its Russian suppliers), and the longer-term task of establishing new capacity, improving the industry's product range, and reducing its dependence on the former USSR. To achieve this latter goal, funds have been allocated for the repair of a damaged EP-300 ethylene, propylene and polyethylene complex, and investment is also planned for plants utilizing local raw materials, such as the Neftechala iodine and bromine works, which it is believed will be able to generate substantial export revenues for Azerbaijan once its technology and production management have been improved.

Fig. 10. Azerbaijan: Output of selected chemicals
(Thousand tonnes)



Source: State Statistics Committee.

In addition, Azerichimia has been charged with the responsibility of improving the environmental standards of the petrochemical industry. Many of the most obsolescent and most heavily polluting operations have already been shut down, including several producers of lindane, aluminium chloride, some herbicides, ethyl alcohol and sulphuric acid. The production of lindane posed a particularly serious problem, creating 10,000 tonnes of waste for every 2,000 tonnes of the pesticide produced.

Constraints and prospects

The chemical and petrochemical industry faces a range of problems, the resolution of which will depend not only on a substantial increase in domestic petroleum production but also on a significant degree of enterprise restructuring. Many enterprises need to be upgraded and fitted with more efficient and environmentally sound technologies. With such restructuring, however, the chemical industry offers a greater potential for development than most other industries in Azerbaijan.

Western demand for Azerbaijan's chemical and petrochemical products has already been established, and has proved to be an important source of hard currency. In 1992 the country's exports of chemical and petrochemical products to the West accounted for 31 per cent of its total exports. With further improvements in production methods and marketing, and increased access to Western markets, the sector is likely to remain one of the leading engines of Azerbaijan's economic growth.

G. CONSTRUCTION MATERIALS

The resource base

In 1992 there were deposits in Azerbaijan of more than 213 identified minerals which can be used in the construction materials industry. Only 87 of these deposits were being exploited, however, and many of those at only 20-50 per cent of capacity. This strong raw materials base provides the basis on which to develop further the construction materials industry in Azerbaijan.

Past trends

The past few years have witnessed a sharp fall in the production of construction materials, with output having declined to well below the levels reached in the mid-1980s. These production declines have been attributed in part to the lacklustre performance of the construction industry during this period, although other factors are also likely to have played a part, since imports have assumed an increasingly important role in the domestic market for a number of building materials. One recent report suggests, for example, that 40 per cent of the slate and cement needed by the construction industry had to be imported in 1992, as did 70 per cent of the asbestos-cement piping and 30 per cent of plumbing fixtures.[39/]

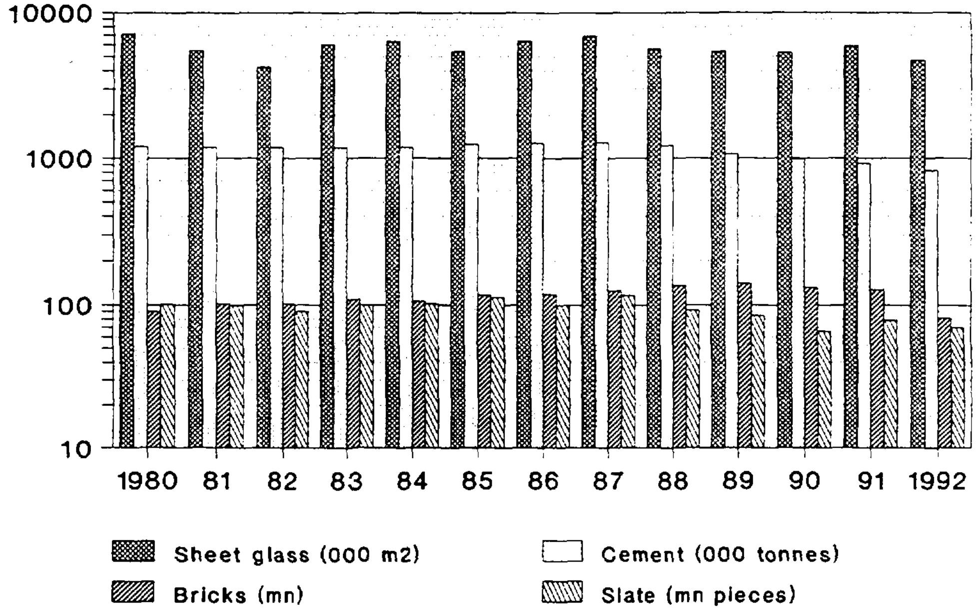
Table 23. Azerbaijan: Output of building materials, 1980-92, selected years

	Units	1980	1985	1987	1988	1989	1990	1991	1992
Slate	Million pieces	101	112	116	92	85	66	78	70
Brick	Million pieces	90	117	126	136	141	132	129	81
Construction glass	Thousand square metres	7,192	5,448	6,838	5,683	5,413	5,320	5,895	4,708
Cement	Thousand tonnes	1,196	1,253	1,290	1,220	1,058	990	923	827

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

In view of Azerbaijan's good raw materials base, it should be able to reduce its import dependence significantly. To this end, the sector has been targeted for the development of small enterprises, and several have already been established in various regions, with a number of mineral deposits having been identified and turned over to such small producers in 1991. The total number of enterprises engaged in the production of construction materials was estimated at 350 in 1992.

Fig. 11. Azerbaijan: Output of selected building materials
(Units as stated)



Source: State Statistics Committee.

Table 24. Azerbaijan: Demand and expected output of building materials, 1994

	Units	Demand	Capacity	Output	Imports
Cement	Thousand tonnes	1,142	1,439	530	612
Roofing slate	Million pieces	88	133	20	68
Ceramic wall tiles	Thousand square metres	702	740	345	357
Ceramic sanitary ware	Thousand pieces	104	63	45	59
Linoleum	Thousand square metres	2,236	10,430	450	1,786
Glass	Thousand square metres	3,835	7,700	1,000	2,835

Source: Ministry of Economy.

Although pollution control is rudimentary in much of the building materials industry, an awareness of the industry's potential hazards is beginning to take hold. In 1991, two gypsum plants were shut down and scheduled for modernization because of the excessive levels of their dust emissions. A third plant, which had been fully automated and had introduced emission controls, was also closed due to its continued high emission levels.

Constraints and prospects

Azerbaijan's rich endowment with mineral resources of various kinds provides a firm foundation for the development of a construction materials industry based on privately-owned small and medium-sized enterprises. This would help to meet the growing demand for such materials generated by the increasing housing shortage and the need to construct more hotel and office complexes following the signing of oil production agreements with foreign companies. The industry's expansion has hitherto been hampered by a shortage of funds and by the high rates of interest payable on bank credits. Its growth would also have to be accompanied by measures to resolve the construction materials industry's environmental problems and to ensure that the new enterprises operate to safe standards.

H. FERROUS AND NON-FERROUS METALLURGY

The resource base

Azerbaijan has more than 250 known deposits of ferrous and non-ferrous metals, including significant reserves of iron ore and two medium-sized deposits of gold. These extensive reserves of metallic minerals could form the basis for the development of a thriving metallurgical industry in the country.

The Dashkasan Group, a state-owned holding company, is the principal producer of iron ore, and operates several mines in the Dashkasan region as well as a concentration plant with an annual capacity of approximately 2.14 million tonnes of crude ore. In 1990 the reserves of these mines were estimated to be sufficient for 94 years at the then prevailing rates of production. In addition, the Dashkasan area has rich deposits of alumite estimated at 1.5 million tonnes, which are being exploited, and of barytes and clays, which are not.

Table 25. Azerbaijan: Output of the metallurgical industries, 1980-92, selected years
(Thousand tonnes)

	1980	1985	1987	1988	1989	1990	1991	1992
Steel tubes	575	582	566	604	584	493	411	260
Primary aluminium	58	56	55	55	36	27	26	20
Alumina	239	385	415	400	380	239	276	240

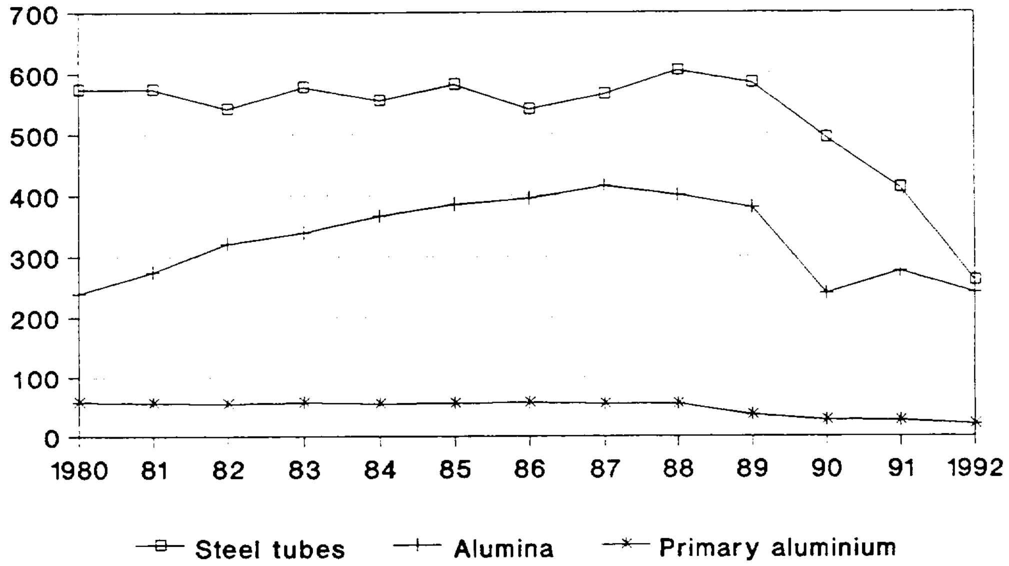
Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

The second most important mineral region in Azerbaijan is Filizchay, in the north-west of the country. It is rich in polymetallic deposits: copper, zinc, lead, sulphur, gold, bismuth, cobalt, cadmium, indium, selenium and tellurium. Western technology will be required to exploit these resources, however.

Past trends

Azerbaijan's metallurgical industry consists of 16 enterprises producing well over 100 products. One of the most important of these enterprises is the Azerbaijan Tube-Rolling Mill, which accounted for 80 per cent of the country's metallurgical production in 1991. The country's steel industry has suffered a significant decline in output since 1990, having remained relatively steady over the previous decade at 575-600 million tonnes, and had fallen to well below the 1988 level by 1992. The aluminium industry, centred around a smelter in Sumgait and a production plant in Gyanja, is the main non-ferrous metallurgical industry. Its output has also fallen in recent years, albeit not as steeply as that of the steel industry, but an upgrading and expansion of the Sumgait smelter has been proposed and a foreign partner is being sought for the project.

Fig. 12. Azerbaijan: Output of selected metallurgical products
(Thousand tonnes)



Source: State Statistics Committee.

Constraints and prospects

The wealth of metallic mineral resources at its disposal could provide Azerbaijan with an important source of foreign exchange from the export of both processed and unprocessed metals. The exploitation of these resources will depend to a considerable extent on the ability of Azerbaijan to attract Western investment, however, since the technology required to develop these resources is not available locally. An example of such a partnership is an agreement signed in May 1994 for the reconstruction of the Sumgait aluminium plant with the UK firm Kaiser Engineering. Increases in the cost of domestic energy may threaten the economic viability of the sector, however.

I. MACHINERY AND ENGINEERING

The resource base

As noted above, Azerbaijan has vast mineral wealth and large enterprises producing both steel and aluminium. While they have recorded a declining output in recent years because of their poor technology and old equipment, they provide a strong base for the further development of the engineering industry. The reconstruction of the Sumgait aluminium plant is already under way, and other plants are likely to be modernized in due course. The engineering industry will also benefit from the high skill level of Azerbaijan's workforce as a result of past Soviet policies to develop Azerbaijan into the union's leading source of petrochemical equipment.

Machinery and equipment

Past trends

Machine-building is one of the most extensive sectors of the Azerbaijani economy, covering no less than 32 different subsectors from refinery equipment to precision instruments. In 1991 the sector consisted of 881 separate enterprises, accounting for 18 per cent of industrial production and 27.4 per cent of industrial employment.

The most important subsector within the machine-building industry is the manufacture of oilfield equipment. At least 60 per cent of well-service, production and work-over equipment for the oil industry of the entire former USSR was produced in Azerbaijan, which has the largest concentration of enterprises producing such equipment outside the USA. In 1992 this subsector employed approximately 13,000 people and generated 4 per cent of manufacturing output. The subsector consists of 14 plants operated by one holding company, Azerneftmash.

Table 26. Azerbaijan: Main machine-building subsectors, 1992

	Share of industrial production (Percentage)
Oil industry equipment	32.4
Electro-technical industry	18.5
Consumer electronics, equipment for light industry and food processing	10.6
Instrument-making	4.9
Agricultural machinery and tractors	3.2
Industrial plant	2.1
Construction machinery, roads and community services	1.9

Source: Institute of Economics, Ministry of Economy.

While the output of the machine-building sector has fallen in recent years, as has output in most other sectors, the production of oil equipment has begun to adjust to new markets, with several orders for the supply of such equipment having been placed by Western firms. In 1991, for example, British Petroleum signed an agreement with the Ministry of Oil and Gas to buy steel platforms manufactured in Baku for use in the North Sea.

The oil equipment industry has also attracted considerable interest from Western investors. In May 1994 an agreement was signed with the engineering firm John Brown (UK), to cooperate in the designing of such equipment and to bid jointly for contracts on a number of projects, including the proposed development of the Azeri and Chirag fields.

Table 27. Azerbaijan: Output of the machine-building industries, 1980-92, selected years

	Units	1980	1985	1987	1988	1989	1990	1991	1992
Electric engines	Thousand	314	390	406	407	372	266	208	95
Transformers	Thousand kWh	1,991	2,411	2,502	2,082	2,410	1,996	1,616	657
Vehicles	Units	450	2,125	2,827	3,051	3,028	3,104	3,246	1,146
Oil industry equipment	Million Rb[a/]	255	388	414	428	602	583	8,486	6,900
Automation equipment	Million Rb[a/]	36	54	74	74	91	81	985	729

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

a/ In wholesale prices of enterprises as of January 1, 1982 until 1990; 1991 and 1992 are in current prices.

Constraints and prospects

The machine-building industry is one of the most immediately promising sectors in Azerbaijan. Not only does it have the potential to generate substantial hard-currency earnings in the future, but it also has a captive market in the former USSR, the oil industry of which is unable to source parts elsewhere since it has developed its own technologies. Over time, however, the sector will need to adjust in order to flourish. Products will have to be developed and modified to meet the technology requirements of the oil industry outside the former USSR, in order to be exportable not only to the West but also to the new and upgraded production sites in the former USSR which, under foreign influence, are moving to conform to the internationally used standards set by the American Petroleum Institute (API). In doing so, Azerneftmash will also face new competition from many enterprises in the former USSR which are being converted from military production.

Consumer goods

Past trends

While still a part of the former USSR, Azerbaijan was developed as the centre for the assembly of air-conditioning units, one of the few household goods produced by the country at that time. With imports accounting for about 60 per cent of Azerbaijan's consumer goods requirements, the government has acknowledged that priority needs to be given to the development of consumer goods industries. In pursuit of this aim, an association of consumer goods producers, the Taraggi Association, was established in 1991 by linking together several enterprises that had been under the Ministry of Local Industry. By mid-1992 the group had expanded to 30 enterprises with 2,300 employees and had become independent of the ministry. The existing enterprises have been re-equipped with Western technology, and a number of new small enterprises have been established. The profitability of these firms has increased significantly; their output includes plastic and metal products, glass and ceramics, cutlery and tableware, lighting, baby carriages, souvenirs and toys.

Table 28. Azerbaijan: Output of consumer goods, 1980-92, selected years

	Units	1980	1985	1987	1988	1989	1990	1991	1992
Refrigerators	Thousand	267	302	332	357	354	330	313	223
Furniture	Million Rb[a/]	59	82	93	95	127	134	818	626
Home air-conditioners	Thousand	401	429	429	421	400	309	295	268

Source: World Bank, *Azerbaijan, From Crisis to Sustained Growth*, Washington DC, July 1993.

a/ In wholesale prices of enterprises as of January 1, 1882 until 1990; 1991 and 1992 are current prices.

Constraints and prospects

Although the government has allocated only modest volumes of public funds and hard currency to its development, the consumer goods industry has considerable potential for growth. It is a particularly attractive industry for the private sector and for foreign investors because of its often relatively small scale of operations, the limited capital investment needed to enter the industry and the substantial backlog of unfulfilled demand for its products.

NOTES TO CHAPTER ONE

1/ Lloyd's List, *Prolonged War that Threatens Hopes of Reviving Oil Industry*, London, 8 June 1994.

2/ Although the manat was declared the sole legal tender for the new republic on 15 August 1992, at a rate of Rb10:Manat1, so few manats were issued that the rouble remained the effective currency until 1994.

3/ European Bank for Reconstruction and Development, *Transition Report Update,* London, April 1996.

4/ Organisation for Economic Cooperation and Development, *Short Term Economic Indicators: Transition Economies,* Paris, second quarter 1994.

5/ Lloyd's List, *Azerbaijan Tries to Beat the Hardship of War*, London, 20 May 1994.

6/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

7/ Foreign and Economic Relations Board, *DEIK Bulletin, Azerbaijan*, Istanbul, June 1994.

8/ World Bank, *Statistical Handbook 1995 – States of the Former USSR,* Washington DC, 1995.

9/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

10/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1995.

11/ Europa Publications Ltd, *The Europa World Yearbook 1993,* London, 1993.

12/ Foreign and Economic Relations Board, *DEIK Bulletin, Azerbaijan,* Istanbul, June 1994.

13/ International Monetary Fund, *Azerbaijan: Economic Review,* Washington DC, April 1993.

14/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 1993.

15/ Foreign and Economic Relations Board, *DEIK Bulletin, Azerbaijan,* Istanbul, June 1994.

16/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

17/ Reuters News Service, 3 June 1994.

18/ Estimates are by World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

19/ Business Information Service for the Newly Independent States, *Current agreements with the Government of Azerbaijan,* United States Department of Commerce, Washington DC, May 1993.

20/ Financial Times, *Survey of Azerbaijan,* Supplement, 7 March 1994.

21/ National Trade Data Bank, *Azerbaijan*, Market Reports, 17 March 1994.

22/ For a review of the major environmental policy issues in Azerbaijan see World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993, Chapter 11.

23/ Reuters News Service; BBC Monitoring Service, 8 July 1994.

24/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

25/ For a review of the banking sector in Azerbaijan, see International Monetary Fund, *Economic Review, Azerbaijan,* Washington DC, April 1993.

26/ Christian Science Monitor, *Oil fuels Azeris' hope for future,* 19 January 1993.

27/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

28/ European Bank for Reconstruction and Development, *Transition Report,* London, October 1995.

29/ European Bank for Reconstruction and Development, *Annual Report 1992,* London, 1993.

30/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

31/ World Bank, *Azerbaijan, From Crisis to Sustained Growth,* Washington DC, 9 July 1993.

32/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, November 1991.

33/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, November 1991.

34/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, September 1991.

35/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, April and August 1992.

36/ Lewytzkyj, Borys, *The Soviet Union: Figures-Facts Data,* K.G. Saur, Munich 1979.

37/ UNIDO, *Azerbaijan: Sumgait, the City of Tomorrow – Support Programme for the Industrial Regeneration of the Sumgait Region of Azerbaijan,* Vienna, March 1996.

38/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* November 1992.

39/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* November 1992.

CHAPTER TWO: TURKMENISTAN

I. THE MACROECONOMIC AND INDUSTRIAL POLICY ENVIRONMENT

A. RECENT ECONOMIC TRENDS

The historic and Soviet periods prior to 1991

The Turkmen people are descendants of the Oghuz tribes which arrived in central Asia in the 10th century. By the 15th century they had emerged as a distinct ethnic group, although they remained politically divided until the early 20th century by strong tribal loyalties and the division of their native territories between a number of neighbouring states, including Persia and the sultanates of Bukhara and Khiva in Uzbekistan.

The Russian conquest of the Turkmen region began in 1877 and led to the signing of a treaty with the British in 1895, the other major imperial power active in the region, acknowledging Russian sovereignty over the conquered territories. Internal opposition to Russian rule nevertheless remained strong, and the collapse of the Russian empire in 1917 resulted in an attempt, supported by British forces, to establish an independent government. This government was deposed by the Red Army in 1920 after the British withdrawal, and the Turkmen Soviet Socialist Republic was created on October 27, 1924. Soviet control was not firmly established until 1929, when the collectivization of agriculture and the forced settlement of the traditionally nomadic population began. A campaign against the practice of religion launched at the same time generated renewed resistance, however, and triggered a guerrilla war which lasted until the mid-1930s.

Only limited industrial development took place in the 1920s and 1930s as a result of the continued opposition to Soviet rule, and the little industrialization that did take place was carried out by Russian-speaking immigrants to the urban areas. Agriculture was encouraged and irrigation facilities expanded, however, culminating in the construction of the 1,200 kilometre Kara-Kum Canal from the Amu-Dar'ya river in the east almost to the Caspian Sea in the west. This permitted the rapid expansion of cotton cultivation, especially after 1945, albeit at a considerable cost to the environment, since the diversion of the Amu-Dar'ya for irrigation purposes has been one of the main causes of the desiccation of the Aral Sea.

After 1945 the production and processing of cotton became one of the mainstays of Turkmenistan's economy. By the 1980s the effects of over-irrigation and poor cultivation methods began to be felt, however, and output began to drop. This had a direct impact on the country's overall economic growth, which averaged 5 per cent per year between 1985 and 1988 but collapsed in 1989, when the national income produced declined by 7 per cent in real terms due to shortages of imported industrial inputs and intermediate goods. After a modest recovery in 1990, when national income produced rose by about 2 per cent, the downward trend continued in 1991, when a contraction of 4.7 per cent was recorded due primarily to a poor cotton harvest.

The worsening economic performance, combined with unease over Turkmenistan's excessively high dependence on the rest of the former USSR that had developed during the preceding decades, imposed a growing strain on the republic's relations with the central authorities. On October 27, 1991, the country declared its independence from the former USSR as one of the union's poorest and least developed republics.

The period since 1991

While beginning independence with one of the lowest standards of living among the republics of the former USSR, Turkmenistan has been affected far less seriously by the dissolution of the USSR and the resulting disruption of its trade links than many of the other republics. In 1992 the fall in output amounted to 5.2 per cent, relative to 23 per cent in Azerbaijan, 40 per cent in Georgia, 35 per cent in Latvia, 29 per cent in Tajikistan and 52 per cent in Armenia. Despite the completion of a new oil refinery in Chardzhou in 1991 which boosted industrial production, total output of the economy fell due to a serious decline in cotton output. In 1992 Turkmenistan's output of natural gas decreased by about 30 per cent in volume terms, as the country's customers found themselves unable to pay for their energy imports following the switch towards commercial pricing and hard-currency payment. Those price increases, coupled with a 23 per cent expansion in the construction sector's output kept the drop in total output limited and provided a surplus of financial resources which permitted the government to continue with several large projects, including the construction of a new airport in Ashgabat.

Statistical information on the economy's subsequent performance is extremely patchy, with few official statistics released since 1993. After positive initial indicators suggesting a growth in output of 8 per cent during the first half of 1993 the situation deteriorated, and for the year as a whole, output contracted by 1 per cent. Figures compiled by the EBRD[1/] show an even more severe contraction of the economy in 1994, with GDP falling by 20 per cent. By mid-1995 the economy appeared to be in chaos but, according to EBRD estimates, the contraction for the full year was only 5 per cent.

One of the most important reasons for this economic decline is Turkmenistan's heavy dependence on export revenues from its oil and natural gas industries, the output from which was shipped to a number of other republics of the former USSR prior to 1991 and accounted for a substantial proportion of the country's total export earnings. With the shift of inter-republic trade to world prices and hard-currency payments in 1992, most of Turkmenistan's existing customers were unable to pay for their imports while new outlets in hard-currency markets proved extremely difficult to find. By the end of 1994 Ukraine was reported to have outstanding arrears of almost $715 million, while Georgia owed more than $450 million, Azerbaijan $100 million, and several other countries smaller amounts down to $4.2 million for the Kyrgyz Republic.[2/] By the end of 1995 several countries had reportedly paid their arrears or devised a financing scheme, but payments problems continue to plague Turkmenistan.

This inability to pay, and the attendant fall in demand, has resulted in a sharp decline in the production of hydrocarbons. While Turkmenistan's output of natural gas amounted to an average of almost 90 billion cubic metres per year in the five years preceding the country's independence, the volume had fallen to a mere 35.6 billion cubic metres by 1994. The situation was exacerbated further in the first half of 1995 by a decision to cut exports temporarily to Armenia, Azerbaijan and Georgia as a punitive measure. Though dramatic, this gesture had little impact, and the arrears due to Turkmenistan remain substantial, with Georgia owing $473 million and Armenia $48.6 million at the end of 1995. Gas production for 1995 is estimated at 34.6 billion cubic metres.3/

The impact of the downturn in the hydrocarbons sector has been reinforced by a similarly disappointing performance in the cotton sector, which represents Turkmenistan's only other significant source of export income. Both local and international sources indicate a noticeable decline in the country's production since 1990, due to a combination of causes including unfavourable weather conditions and the economic and political disruptions resulting from the dissolution of the USSR and the subsequent civil war. The latest firm data available show that the output of raw cotton declined from almost 1.46 million tonnes in 1990 to 1.3 million tonnes in 1992. The World Bank reports a stabilization in output at this level.

Table 29. Turkmenistan: Raw cotton production, 1989-95
(Thousand tonnes)

1989	1990	1991	1992	1993	1994	1995
1,382	1,457	1,433	1,306	1,341	1,283	1,305

Sources: The Economist Intelligence Unit, *Country Report: Turkmenistan, 1st Quarter 1996*, World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Despite the deterioration in the performance of its two principal exports, Turkmenistan's external accounts have improved since the early 1980s, largely as a result of a sharp reduction in imports. Prior to independence, external trade accounted for 35 per cent of the country's GDP, with 92.5 per cent of this trade being conducted with other republics of the former USSR. This represented the highest dependence on inter-republic trade of any of the republics of the former USSR, with Turkmenistan customarily recording deficits on this trade. The shift to world prices and hard-currency trade after the break-up of the CMEA resulted in these balances becoming positive, with the value of natural gas exports in particular recording a significant increase. The trade surplus was estimated at 23 per cent of GDP in 1991, and in 1992 about two-thirds of Turkmenistan's gas exports were sent to countries outside the former USSR and denominated in hard currency. This share dropped in subsequent years, however, as exports to the countries of the former USSR resumed, but the payment problems faced by these countries caused a sharp drop in export revenues in 1994 and 1995, forcing a significant decline in the trade surplus despite a substantial contraction of imports.

Limited price reforms were begun in Turkmenistan in January-April 1991. These measures, and the generally lax monetary stance adopted by the Soviet Gosbank, resulted in an increase in retail and wholesale prices by 173 per cent and 296 per cent respectively. A further round of price liberalization was initiated by presidential decree in January 1992, and most prices were freed as of January 10. Only the prices of "socially important" goods continued to be controlled, but even they recorded a significant increase. By January 17, however, the list of controlled items was lengthened again and the price increases of many goods were scaled back.

Table 30. Turkmenistan: Trade flows, 1992-95
($ million)

	Former Soviet Union				Non-former Soviet Union			
	1992	1993	1994	1995	1992	1993	1994	1995
Exports	..	..	1,400.2	1,000.0	908.4	1,049.0	412.7	500.0
Imports	..	..	548.8	820.0	29.7	501.4	334.9	400.0
Balance	..	..	851.2	180.0	878.7	547.6	77.3	100.0

Source: The Economist Intelligence Unit, *Country Report: Turkmenistan, 1st Quarter 1996*, London, 1996.

A third round of price liberalization was initiated in February 1993, which left the prices of only 11 items under administrative control. These items accounted for a preeminent share of consumer spending, however, and in mid-1993 the IMF estimated that only 47 per cent of the value of retail sales was accounted for by goods traded at market prices.[4/] This notwithstanding, the prices of even the controlled commodities were increased by 200-300 per cent, resulting in an annualized increase of 9,750 per cent in retail price levels by the end of the year. During the course of 1994 retail prices rose by a further 1,100 per cent and by an estimated 2,500 per cent in 1995.

Table 31. Turkmenistan: Price developments, 1990-95
(Percentage change)

	1990	1991	1992	1993	1994[a/]	1995
Consumer prices						
Period average	4.6	103	493	3,102	2,400	1,800
End of period	..	155	644	9,750	1,100	2,500
Producer prices						
Period average	4.0	152	4,353	7,905[a/]	..	..
End of period	..	296	8,808	6,866[a/]	..	..

Source: European Bank for Reconstruction and Development, *Transition Report Update*, London, April 1996.

a/ Estimates.

As is the case with the other republics of the former Soviet Union, Turkmenistan left the rouble zone in an attempt to gain control of its monetary policy. To date it has not been successful. As a result, the new currency, the manat, has been on a downward spiral since its introduction in November 1993. Issued at Manat2:$1, by January 1994 it was trading at Manat24:$1. By October 1995 it was at Manat500:$1. After two devaluations in the last quarter of 1995, the unit began 1996 at the Manat2,100:$1 level, and shows no sign of stabilizing.

Turkmenistan was one of the main beneficiaries of union transfers prior to its independence, with such transfers amounting to as much as 20 per cent of public expenditure. Budget data for the second half of the 1980s and the opening years of the 1990s show that although the government recorded continuous surpluses during this period, they were substantially smaller than the transfers it received from the centre. Between 1989 and 1991 the budget thus recorded an average surplus equivalent to about 2.2 per cent of GDP, although union transfers amounted to an average of 8.6 per cent of GDP.

After Turkmenistan gained independence, the loss of these transfers was initially offset to some extent by the increased revenue generated by the sale of natural gas exports in hard currency at world prices, although the country nevertheless recorded a deficit equivalent to 6 per cent of GDP in 1992. In 1993 that figure had shrunk to 3.4 per cent of GDP and it contracted further in 1994 to 1.1 per cent of GDP according to EBRD figures. In June 1995 the government vowed to keep the deficit for the year to just 1.5 per cent of GDP. No actual figures have been released, but estimates are that this figure was exceeded. The 1996 budget calls for a deficit of just 1 per cent of GDP.

B. THE ECONOMIC STRUCTURE

The physical environment

The Republic of Turkmenistan is the second largest of the central Asian republics after Kazakstan, and has an area of 488,100 square kilometres. The country is situated in the south-west of the central Asian region, and is bordered by Uzbekistan to the north and east, Afghanistan to the south-east, the Islamic Republic of Iran to the south-west, the Caspian Sea to the west, and Kazakstan to the north-west. Some 90 per cent of the land area comprises the Kara-Kum (black sand) desert, which covers the entire central portion of the country and is bounded by two mountainous regions, in the south along the border with the Islamic Republic of Iran and in the north-west.

Turkmenistan has a continental climate with extremely hot summers and cold winters. The average temperature in January is -4°C but temperatures can fall to -33°C. Summer temperatures can reach 50°C in the desert and average 28°C in July for the country as a whole. Much of the area receives little rainfall, although yearly precipitation ranges from 80 millimetres to 300 millimetres in the mountain regions of the north-west.

The country's major rivers are the Amu-Dar'ya, which flows through its north-eastern region and then to Uzbekistan and the Aral Sea, and the Murghab, which flows south to Afghanistan. The western portions of the republic have no significant natural waterways and the Kara-Kum Canal was built in 1954 to carry water into these areas from the Amu-Dar'ya. This canal is one of the main causes for the drying up of the Aral Sea.

The demographic base

Turkmenistan had an estimated population of 3.9 million in 1994. The vast majority of the country's inhabitants are ethnic Turkmens, who account for 72 per cent of the total population. Russians make up 9.5 per cent, Uzbeks 9 per cent and Kazaks 2.5 per cent. Other minorities include small numbers of Tatars, Ukrainians, Azerbaijanis, Armenians and Baluchis. The republic is predominantly rural, with 55 per cent of the population living in rural areas, although most non-Turkmens live in urban areas. Thus, 41 per cent of the population of the capital Ashgabat, which had a total population of 517,200 in 1992, is Russian.

The country has a high population growth rate, which was estimated at 2.5 per cent per year in 1985-90 and is believed to have fallen only modestly to 2.1 per cent per year in 1990-95. Birth rates in the rural areas are extremely high at almost 4 per cent per year. The republic also has one of the lowest life expectancies at birth of 65.9 years, and one of the highest incidences of infant mortality. The latter is officially estimated at 54.2 per 1,000 live births, although these official figures are widely believed to understate the true rate by perhaps as much as 50-100 per cent.[5/]

The Turkmens continue to have a strong clan identity which is reinforced by differences of dialect. The largest group in the central portion of the republic is the Tekke, while the Ersary predominate in the south-east and the Yomud in the west. Most of the population are Sunni Muslims, many of whom practice various forms of Sufi mysticism.

As in most other central Asian republics of the former USSR, the declaration of independence in Turkmenistan has been followed by a significant emigration of Russians and other non-local peoples. Since large numbers of these people were employed in the industrial labour force and often held management positions, their emigration has had a serious impact on the economy, leaving severe shortages of skilled workers and professionals. To allay the fears of these minority populations and to persuade them to stay, a presidential decree was issued in December 1993 allowing dual citizenship.

Table 32. Turkmenistan: Origin of net material product, current prices, 1985-93, selected years
(Percentage share)

	1985	1990	1991	1992	1993
Agriculture	41.1	47.9	46.2	16.3	11.3
Industry	28.2	15.7	20.4	65.1	69.3
Construction	16.8	17.9	18.1	9.0	11.0
Transport and communications	4.7	8.5	6.6	3.9	3.0
Other	9,2	10.1	8.6	5.7	5.4

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Agriculture

Agriculture is the predominant economic activity in Turkmenistan. It accounts for more than 40 per cent of total employment and, until 1993, contributed almost half of its GDP. Although the increase in the price of oil and gas relative to agricultural goods has resulted in a sharp drop in agriculture's share of GDP since then, the sector remains the principal employer in the economy and one of its most important sources of export earnings.

Agricultural activity is focused mainly on the production of cotton, of which Turkmenistan was the second largest producer in the former USSR after Uzbekistan. The crop traditionally accounted for some 50 per cent of Turkmenistan's arable land, more than 50 per cent of the value of its agricultural production, and 42 per cent of its agricultural employment. Some efforts were made between 1990 and 1993 to diversify cropping patterns, and the share of arable land devoted to the cultivation of cotton decreased from 51 per cent to 45 per cent, reducing the volume of output by 11 per cent.[6/] The disappointing performance of Turkmenistan's natural gas exports since 1993 has forced the government to reverse this policy, however, and in February 1995 it announced plans to increase cotton production by 16.7 per cent relative to the previous year, with the area planted being increased by 3.2 per cent.[7/] Production for the year was up only modestly (0.4 per cent) over 1994, however, at 1.3 million tonnes.

Apart from cotton, Turkmenistan also produces a wide range of other industrial and food crops, although yields tend to be very low due to salinization and the over-irrigation of unsuitable lands. The most important of these other crops are grain, fruit (especially grapes), and vegetables. In recent years self-sufficiency in rice has been achieved and two crops of wheat have begun to be harvested, with 400,000 hectares being planted to winter wheat. The number of orchards and vineyards has also been increased. In addition to arable farming and horticulture, animal husbandry also plays an important role in the agricultural sector of Turkmenistan, and accounts for approximately 13 per cent of total agricultural production.

The concentration on cotton production has made the country dependent on substantial food imports, however. In 1991, for example, it had to import 65 per cent of its grain requirements and 70 per cent of its potato requirements from other republics of the former USSR. The extensive cotton cultivation and the high level of irrigation this has necessitated has also resulted in excessive water usage and substantial environmental damage.

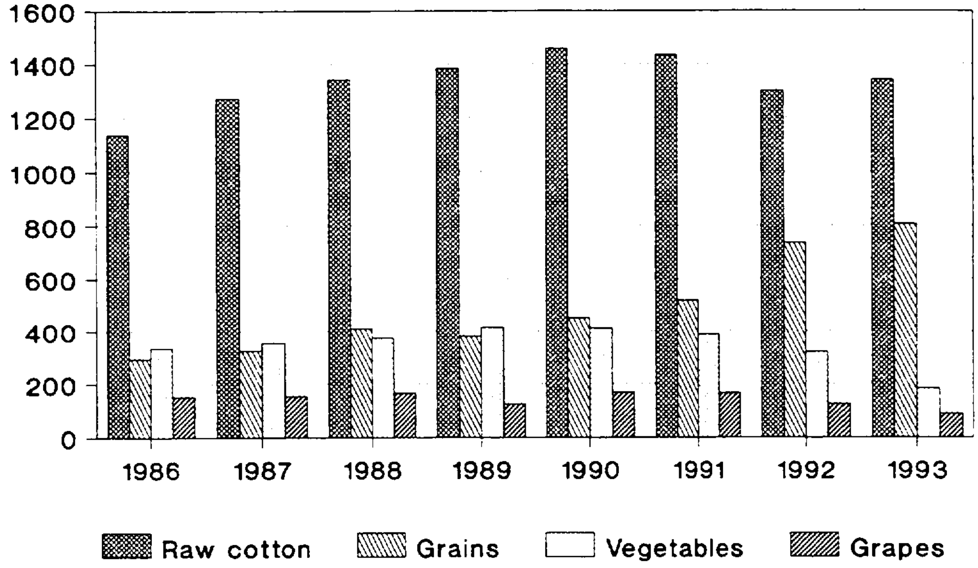
Table 33. Turkmenistan: Land use patterns, 1991

	Million hectares	Percentage
Total	**48.8**	**100**
Agricultural land	35.8	73
of which:		
Arable	1.2	2
Irrigable	1.2	100[a/]
Meadows and pastures	34.6	71
Non-agricultural	13.0	27

Source: United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), *Report of a mission to the Central Asian Republics,* Bangkok, October 8, 1993.

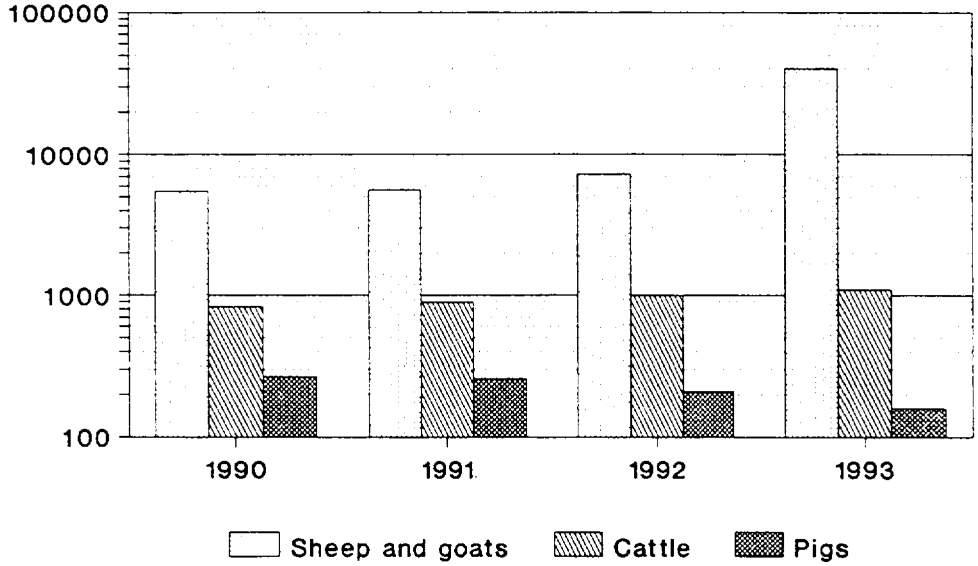
a/ As a percentage of arable land.

Fig. 13. Turkmenistan: Agricultural production
(Thousand tonnes)



Sources: State Statistics Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Fig. 14. Turkmenistan: Animal husbandry
(Thousand animals)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Table 34. Turkmenistan: Agricultural production, 1990-93
(Thousand tonnes)

	1990	1991	1992	1993
Grains	449	517	737	807
Raw cotton	1,457	1,433	1,300	1,341
Fruits	216	223	174	183
Vegetables	411	388	320	183
Wool[a/]	26	26	26	-

Sources: United Nations Economic and Social Commission for Asia and the Pacific, *Report of a mission to the Central Asian Republics*, Bangkok, October 8, 1993; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

a/ 1990-92 annual average.

Mining and energy

Turkmenistan's mining sector is dominated by the exploitation of extensive hydrocarbon resources. With an annual output of approximately 90 billion cubic metres per year at independence, the country was the world's third largest producer of natural gas after the Russian Federation and the USA. In addition to this it also produced significant volumes of crude oil, amounting to approximately 213 million tonnes in 1990.[8/] Domestic consumption is equivalent to about 12 per cent of production, and the balance is exported. In 1992 the foreign exchange earnings from gas and oil exports accounted respectively for 85 per cent and 4 per cent of Turkmenistan's non-agricultural export revenues.[9/] By 1994, however, Turkmenistan's hydrocarbon production had fallen by more than half to about 34 to 35 billion cubic metres.

The regeneration and further development and exploitation of Turkmenistan's oil and gas resources were key elements in the "Ten Years of Well-Being" programme launched by the government in 1992. This programme, which aimed to regenerate and restructure the economy, set production targets of 90 billion cubic metres of natural gas and 9 million tonnes of oil for 1996, rising to 120 billion cubic metres of gas and 28 million tonnes of oil in 2002. While the programme has been replaced, hydrocarbons remain the focus of the government as a way to support development of the economy in general. It is unlikely, however, that significant output increases will be possible by 1996/97.

The principal constraint facing the country in developing its oil and gas potential is the limited capacity of the Russian pipeline through which its exports of natural gas are currently shipped. In order to increase this capacity and reduce Turkmenistan's dependency on one country, the establishment of major new pipelines is being considered. One such project involves the construction of a pipeline at a cost of $3 billion from the Sovietabad gasfield across the Islamic Republic of Iran and Turkey. An alternative project also being considered is a 6,700 kilometres pipeline across China to the Sea of Japan, which the Mitsubishi Group of Japan offered to build in mid-1993 at an estimated cost of $6 billion. Plans for the construction of oil pipelines to the Persian Gulf coast, and to the Mediterranean Sea via the Islamic Republic of Iran and Turkey, are also under consideration, which would facilitate an expansion of the country's oil exports.[10/]

Manufacturing

Industry accounted for 20.4 per cent of Turkmenistan's net material product (NMP) in 1991 and, due to the large jump in gas and oil prices, over 69 per cent of NMP in 1993. The principal manufacturing activities comprise the processing of petroleum, natural gas and other minerals, the production of chemicals and the manufacture of cotton-based textiles. In 1991 the production of textiles accounted for one-third of industrial production, and the production of hydrocarbon-based fuels and chemicals for a further third.

Transport and communications

Transport and telecommunications services are of particular importance for Turkmenistan because of its geographical location, distance from major markets and dependence on international trade. The available transport and telecommunications infrastructure remains extremely inadequate, however, although this problem is being addressed by the government. Several projects have been undertaken in recent years to upgrade the country's road, rail and air transport facilities and linkages, as well as its telecommunications services.

In 1989 Turkmenistan's railway system had a total track length of 2,120 kilometres. The country's main rail line runs from Turkmenbashi (formerly known as Krasnovodsk) on the Caspian Sea via Ashgabat to Chardzhou. From Chardzhou, another line connects with the other central Asian republics. In January 1994 a new line was opened connecting Turkmenistan with Kazakstan and Uzbekistan, and a rail link with the Islamic Republic of Iran is under construction.

Turkmenistan has a total road length of 22,600 kilometres, of which 17,800 kilometres are paved. A new 600 kilometre link between Ashgabat and Tashauz was opened in 1991[11/]. The country's road links with its neighbouring countries, including the other republics of the former USSR, are less well developed, although a road to the Islamic Republic of Iran is under construction. The condition of many of the roads is poor, however, and substantial investment will be needed to upgrade them.

Air and water transport also play a significant role in Turkmenistan. Particular attention has been paid in recent years to the development of the air transport sector, and one of the largest infrastructure projects undertaken in the country in recent years has been the construction a new airport at Ashgabat. In addition, the national civil aviation company has purchased two Boeing 737-332 aircraft for use on its international long-haul routes. Shipping services connecting Turkmenistan with the other Caspian Sea countries operate from Turkmenbashi, and the Amu-Dar'ya is an important inland waterway.

The telecommunications infrastructure in Turkmenistan is highly inadequate, with one of the lowest line densities in the former USSR. In 1991 the country had a total of only 237,000 lines, equivalent to 6.5 lines per 100 persons.[12/] By 1993 it was reported that the number of lines had been expanded to 250,000, and that local direct dialling services were available to all subscribers. Inter-regional direct dialling was available to only 130,000 subscribers, however, and one-third of the exchanges and subscriber cables were 30-40 years old. No less than 550 villages had no telephone service at all.[13/]

Urban areas have a much higher line density than rural areas, which are estimated to have only 2.2 lines per 100 persons. Approximately 30 per cent of all lines are issued to business subscribers, and only about 28 per cent of households have a telephone. The capacity utilization of the system is high, however, reflecting its small size. International traffic is routed mainly through 11 outgoing and six incoming circuits via Moscow.

Recent efforts to upgrade the telecommunications network have included the building of telex and telegraph exchanges, cellular systems, new cable links to the Islamic Republic of Iran, connection to the Inmarsat satellite system, and a project now under way to connect the republic with Intelsat. The full modernization of the telecommunications system is planned to be accomplished in stages by 2005.

Banking and finance

The banking system in Turkmenistan was based on the same pattern as in the rest of the former USSR. In 1988 a two-tier structure was formed through the establishment of a number of specialized banks, leaving the State Bank to function as a branch of the Soviet Gosbank. With the introduction of the manat in November 1993, the State Central Bank of Turkmenistan became the country's central bank.

The banking sector includes the State Central Bank of Turkmenistan (SCBT), the National Savings Bank, the Foreign Trade Bank and some 20 commercial banks under private or cooperative ownership or constituted as joint stock companies. The largest banks are the former specialized banks. These include the Investbank (formerly known as the Industry and Construction Bank), which provided long-term industrial credit; the Agroprombank, which served the agricultural sector; the Foreign Trade Bank which handled all foreign exchange transactions; the National Savings Bank, which held all household deposits and continues to have 95 per cent of personal deposits; and the Turkmenbank (previously known as the Social Bank), which was initially established to serve municipalities, schools and hospitals, but has now taken on the function of a commercial lender and holds the foreign exchange accounts of some of the largest state enterprises.

The banking system has been slow to reform itself, and only limited modifications to the two-tier banking system established in 1988 have been made.[14/] After independence in 1992, the former branches of the Soviet specialized banks became independent, and continued their activities largely at the republic level. As the central bank, the SCBT became responsible for money and credit policy, clearing arrangements and bank licensing. Its autonomy to pursue an independent monetary policy and manage the republic's foreign exchange reserves was limited until recently, however, with control over credit allocation, reserve requirements and refinancing policy serving as the main instruments of monetary policy. The level of banks' access to central bank credit was determined by the Ministry of Economics and Finance, which set interest rates and provided banks with credit guidelines.

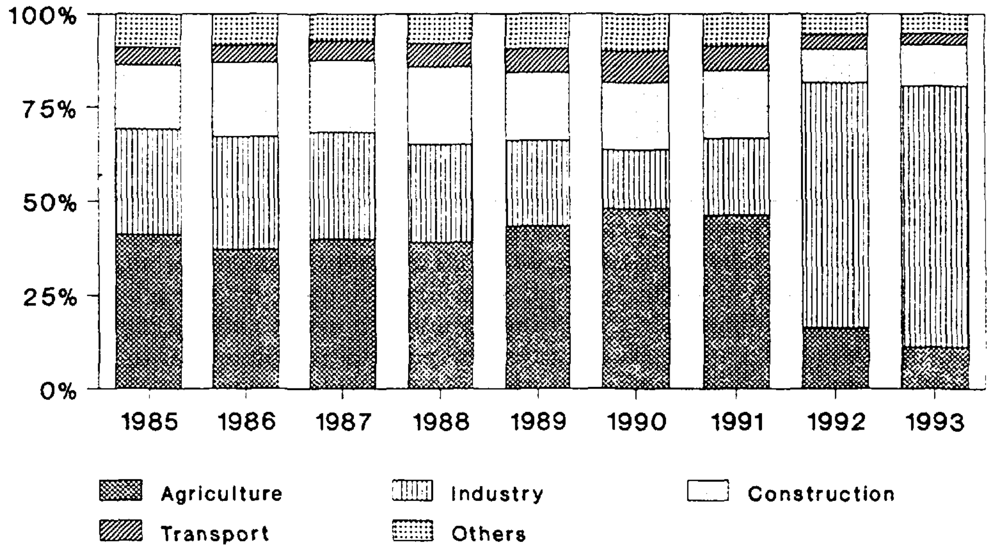
It was not until mid-1993 that significant reforms to the banking system were initiated and attention began to be given to credit policy and supervisory issues. From August 1993 onwards steps were taken to develop an inter-bank credit market, the refinancing rate was raised and reserve requirements began to be enforced. In October 1993 a new Commercial Bank Law and Central Bank Charter were adopted by parliament, giving the SCBT independence over monetary and foreign exchange policy. The reform process suffered setbacks in both February 1994 and February 1995, however, when budgetary constraints and the political need for consumer subsidies prompted the government to issue decrees requiring the undercapitalized banks to provide substantial volumes of forced loans to state-owned enterprises at strongly negative interest rates and to surrender all excess profits to the state. In both cases this triggered a substantial increase in the money supply and high rates of inflation. As of the end of 1995 there were 21 registered commercial banks in Turkmenistan, some owned by state enterprises. Eight of these banks are privately owned and two are 50-50 joint ventures with foreign banks.

Trade, tourism and other services

Trade, tourism and other services have not played a significant role in the economy of Turkmenistan. As the move towards a market economy progresses and foreign direct investment enters the republic, however, they will assume increased importance. The creation of an adequate infrastructure for business travellers to the country will be especially important. Proposals for the construction of new hotels in Ashgabat have already attracted foreign interest, and as foreign investors become more active a wide range of business services, such as translation and typing services, will need to be developed.

The uniqueness and rich history of the Kara-Kum desert also lends potential to the development of "eco-tourism" and "cultural tourism" in the country, although the severity of the climate will be a limiting factor. The government is interested in developing tourism, however, and has established a state tourist organization, Turkmenseyahat, for this purpose.

Fig. 15. Turkmenistan: Net material product
(Percentage share)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Demand structure of GDP[15/]

Data collected and estimated by the IMF suggest that consumption accounted for almost 80 per cent of Turkmenistan's NMP during the late 1980s. Investment accounted for 25 to 30 per cent, and domestic absorption was a good deal higher than output, resulting in significant trade deficits. These were financed through union transfers.

By 1991 the share of consumption had declined to 58.2 per cent of NMP, and the share of net investment had increased to 54.4 per cent. The proportion of losses, defined as increases in unfinished construction, theft, destruction of plant and equipment, and statistical discrepancies, had risen to 10 per cent. Net imports, meanwhile, were estimated at 22.6 per cent of NMP.

In 1992 the share of consumption declined further to 16.2 per cent of NMP while that of investment was 42.5 per cent. Consumption as a share of NMP declined further in 1993 to 11.6 per cent, and investment dropped substantially to 13.5 per cent. Net exports jumped to 74 per cent, up from the 1992 figure of 39.7 per cent. More than half of the investment in 1992 was financed by the budget, with almost 45 per cent being carried out by state enterprises, collective farms and other public organizations. Agriculture received 28 per cent of investment, industry 23 per cent, and housing and services 41 per cent. Several large infrastructure projects begun in 1991 were continued into 1992, and in 1993 investment received an additional boost from the construction of the new airport at Ashgabat, the renovation of the port of Turkmenbashi, and the laying of a rail line to the Islamic Republic of Iran.

Table 35. Turkmenistan: Structure of demand, 1985-93, selected years
(Percentage of NMP)

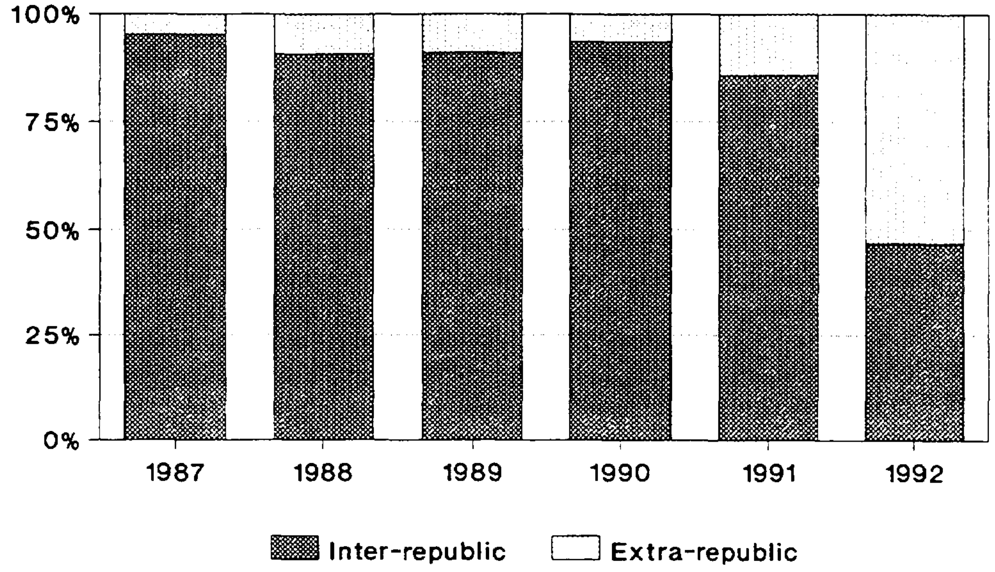
	1985	1990	1991	1992	1993
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Consumption	78.4	81.1	58.2	16.2	11.6
Personal	66.6	70.7	51.8	10.9	6.3
Social	9.8	10.4	..	..	..
Investment	36.8	22.3	54.4	42.5	13.5
Fixed capital	20.4	12.8	2.7	2.1	1.0
Changes in inventories	16.4	9.5	51.7	40.4	12.5
Losses	3.2	14.8	10.0	1.6	0.8
Net exports	-18.4	-18.3	-22.6	39.7	74.0

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

External trade and payments

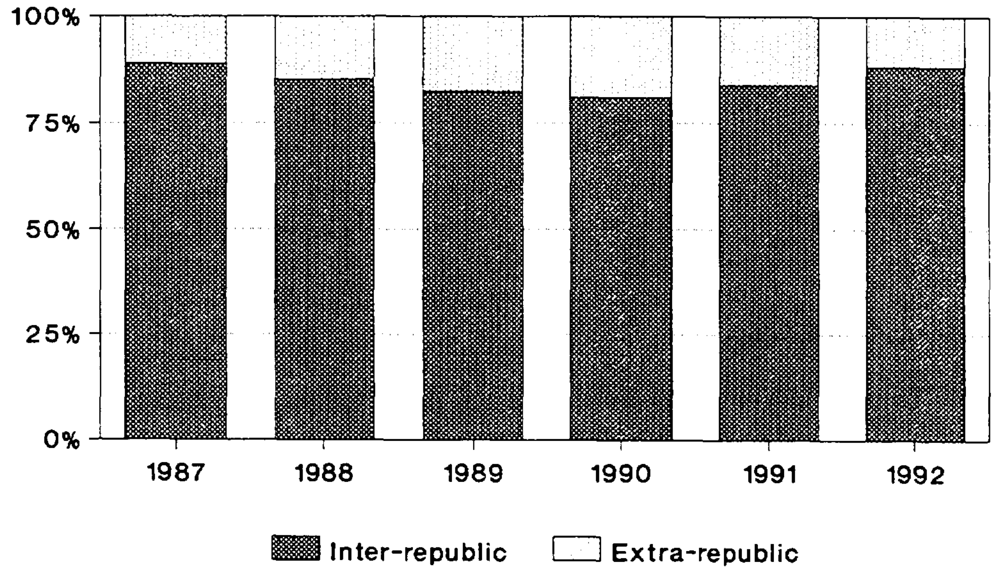
Turkmenistan's principal export products are gas and cotton. With the shift to international prices in 1992, natural gas became the overwhelming export in value terms. While some shift to Western export markets has taken place (three of the country's top trading partners are Western countries), a significant proportion of gas exports has continued to be shipped to other republics of the former USSR, and to Ukraine and Georgia in particular, which have faced increasing difficulties in meeting the hard-currency payment obligations and have run up substantial arrears. This has prompted Turkmenistan to scale down its gas exports to these countries, resulting in a reduction of the share of gas in the country's total exports.

Fig. 16. Turkmenistan: Distribution of exports
(Percentage share)



Source: State Statistics Committee.

Fig. 17. Turkmenistan: Distribution of imports
(Percentage share)



Source: State Statistics Committee.

Table 36. Turkmenistan: Top ten foreign trading partners, 1994
($ million)

	Imports	Exports	Total trade
Ukraine	210.0	603.9	813.9
Kazakstan	42.5	267.6	310.1
Turkey	227.0	62.2	289.2
Russia	164.3	101.5	265.8
Azerbaijan	65.4	182.5	247.9
Georgia	27.6	194.9	222.5
Uzbekistan	21.2	144.2	165.4
Armenia	42.1	62.2	104.3
Germany	68.0	32.3	100.3
Iran	74.2	21.1	95.3

Source: The Economist Intelligence Unit, *EIU Business Report, 4th Quarter 1995,* London, 1995.

Table 37. Turkmenistan: Commodity distribution of external trade, 1992
(Percentage of total)

	Imports		Exports	
	Inter-republic	Extra-republic	Inter-republic	Extra-republic
Agriculture	17.46	24.37	..	-
Industry	81.14	66.04	79.81	84.98
Energy	0.17	..	5.62	..
Fuels	17.46	0.02	64.28	84.93
Processed foods	19.76	19.49	5.15	0.03
Light industry	7.98	7.70	1.40	0.01
Sawmills	1.24	..	0.01	-
Chemicals	3.12	16,28	2.28	-
Building materials	1.14	..	0.54	0.01
Ferrous metallurgy	3.57	0.21	0.06	-
Non-ferrous metallurgy	4.43	..	0.02	-
Machine building	22.27	22.34	0.45	-
Other	1.40	9.59	20.19	15.02

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR,* Washington DC, 1995.

Despite some initial attempts to reduce Turkmenistan's dependence on cotton exports after it achieved independence, the troubles with the country's natural gas exports have caused it to resort once again to cotton as a leading export. The share of Turkmenistan's trade with countries outside the former USSR accounted for by cotton thus dropped significantly to a mere 18.9 per cent in response to the increase in the price of gas in 1992, but has since begun to rise and amounted to 26.1 per cent in 1993. In early 1995 the government announced plans for a further increase in cotton production, and hence in cotton exports, during the course of the year but failed to meet the production targets as mentioned earlier.

Turkmenistan's imports consist mainly of machinery and metalworking products, light industrial goods and food.[16/] As a result of the emphasis of its agricultural sector on the production of cotton and the rearing of livestock, the country has traditionally been a major importer of grain and processed foods. In 1991 it imported 65 per cent of grain and 70 per cent of the potatoes consumed by its population.

Table 38. Turkmenistan: Distribution of trade by major trading partners, 1987-92
(Percentage of total)

	1987	1988	1989	1990	1991	1992
Former USSR	95.1	90.7	90.9	93.5	85.8	46.9
Other countries	4.9	9.3	9.1	6.5	14.2	53.1

Source: State Statistics Committee.

C. THE MACROECONOMIC POLICY ENVIRONMENT

Economic reforms

The Economic Committee of the Presidential Council is entrusted with the formulation of economic policy in Turkmenistan. The general framework for economic reform and stabilization was laid down in January 1991 in a document which identified the required legislative, fiscal and monetary measures which would have to be adopted to implement such reforms as price liberalization, privatization and industrial development, and the deregulation of the agricultural sector. The country's development objectives were initially prescribed in a decree of the Supreme Soviet of Turkmenistan issued in 1992, which contains specific indicators and targets for national economic performance, as well as some budgetary allocations.

While the government of Turkmenistan has recognized the need to adopt a reformist economic policy aimed at inducing a gradual shift to a socially-oriented market economy, it has been slow to introduce the necessary market reforms or to create the conditions needed for the development of the private sector. The privatization process, for example, has made very little headway even though the necessary legislative framework was established in 1992. Similarly, the banking system continues to be state-owned, and the lending policies of the banking institutions are still determined by the national authorities. Domestic production and trade also continues to be officially determined by means of the state-order system, which allocates production quotas to state-owned enterprises, while external trade with the other republics of the former USSR is directed predominantly through bilateral inter-governmental trade agreements which specify the quantities and prices of the traded goods. Nevertheless, in December 1995 President Niyazov declared the first round of reforms complete and laid out an ambitious second economic reform programme, which aims to strengthen the existing market-oriented reforms, provide for internal convertibility of the manat and introduce market-oriented monetary and fiscal measures. Plans also call for the encouragement of foreign investment and the upgrading of the transportation infrastructure, particularly the north-south railway corridor.

Fiscal policy

Prior to 1991 fiscal policy decisions for Turkmenistan were taken at the central level of the former USSR, and as a constituent republic of the union the country was one of the major beneficiaries of union transfers, which amounted to as much as 20 per cent of public expenditure or 10 per cent of GDP. The country's internal revenues were generated mainly through the retention of all domestically collected personal and turnover taxes. The revenues so collected, as well as the transfers received from the USSR authorities, were shared between the republic and local authorities.

After the dissolution of the USSR the old revenue sharing schemes were discontinued, and significant changes to the domestic tax system were introduced in 1991. These included the adoption of an enterprise profit tax with a flat rate of 35 per cent, the replacement of the turnover and sales taxes with value-added tax (VAT) at a rate of 28 per cent, and the levying of new excises on several goods. In addition, the personal income tax system was refined through the introduction of progressive marginal rates.

In 1992 the major sources of tax revenue comprised the VAT, which accounted for 26 per cent of total revenues, and the enterprise profit tax, which accounted for a further 20 per cent. Other major revenue sources included fixed payments from the state-owned cotton and gas enterprises over and above the profits tax, which provided 29 per cent of total revenues. A mandatory surrender requirement for hard currency was another important revenue generator.

In 1994 a number of new measures were introduced to increase the transparency of Turkmenistan's fiscal mechanisms. These included the integration of the government's foreign exchange transactions, valued at the market exchange rate, into the budget accounts; the taxation of gas exports to hard-currency areas in the national currency in the same manner as similar exports to rouble areas; and a restructuring of the budget to ensure that most implicit subsidies, grants and enterprise loans were reflected in the budget. Despite this promising start, the government proved unable to maintain the required budgetary restraint during the course of the year, which ended with a deficit which was significant, albeit largely unquantifiable in the absence of relevant official data.

The 1995 budget, which projected a substantial surplus, was widely regarded as unrealistic, especially since it provided for the free distribution of bread and flour to the country's population. By late February the difficulty of maintaining the fiscal balance had already become evident, prompting the government to introduce a decree forcing the banking sector to provide large volumes of unprofitable loans to state-owned enterprises and to transfer all excess profits to the government. At mid-year it was announced that there would be a deficit of 1.5 per cent of GDP for the year. While no figures are available, it appears likely that target has been exceeded.

Monetary policy

Prior to the introduction of the manat in November 1993 Turkmenistan's monetary policy was made by the Central Bank of Russia, which pursued relatively liberal policies and proved unable to control the inflationary pressures building up within Turkmenistan and most of the other republics of the former USSR. Following Turkmenistan's withdrawal from the rouble zone it was hoped that the State Central Bank of Turkmenistan would adopt a more conservative policy stance, and give high priority to maintaining domestic price stability and supporting the external value of the manat. These hopes have not been fulfilled, however, and inflation was 1,100 per cent in 1994, and an estimated 2,500 in 1995.

Trade policy

Because of its heavy specialization in cotton cultivation and the production of oil and gas, Turkmenistan is highly dependent on imports, with most light industrial products and processed foods being imported. After the country achieved independence, its new government initially placed great emphasis on increasing its self-sufficiency in a number of basic staple foods. In 1992 it substantially reduced the acreage allocated to the production of cotton in favour of crops such as sugar beets, and also proposed the establishment of local processing facilities for beet sugar.

The commodity composition and geographical distribution of Turkmenistan's exports is also highly concentrated, with cotton and energy constituting its main exports and the other republics of the former USSR representing its main markets. Since the introduction in 1992 of international pricing and hard-currency settlement of trade between the republics of the former USSR, however, the pricing of Turkmenistan's inter-republic gas exports has posed persistent problems. With these exports previously having been priced significantly below world market levels, Turkmenistan's efforts to bring the price closer to world levels has provoked considerable friction with its buyers and given rise to substantial payment arrears because of these countries' inability to pay the higher prices in hard currency.

In view of the restricted nature of Turkmenistan's export trade, the government's main trade policy objectives include not only an increase in export revenues but also a diversification of the country's export markets and an increased level of domestic resource processing to add value to the country's raw material exports. In order to meet the first of these objectives, the government set targets to increase Turkmenistan's production of natural gas from approximately 80 billion cubic metres in the early 1990s to 90 billion cubic metres by 1996. Since domestic consumption accounts for only about 12 per cent of production, this increased output was to be directed primarily towards export markets.[17/] Unfortunately, the production of hydrocarbons has collapsed by one half instead, largely in response to the inability of several of Turkmenistan's traditional clients to pay.

The government is also hoping to achieve diversification by developing new export markets, particularly in western Europe, where payments could be received in hard currency. The third objective of adding value to the country's exports will require considerable investment in processing facilities, which is likely to proceed only slowly because of the prevailing resource constraints. Some progress is being achieved in this regard, however, as indicated by the opening of a new propane and butane gas plant at Turkmenbashi in mid-1994.

Turkmenistan's foreign trade relies heavily on barter agreements. Trade with the other republics of the former USSR is conducted almost entirely through the state-order system, which is based on bilateral agreements, under which product exchanges are cleared bilaterally and prices are fixed with reference to world market prices prevailing at the time the agreement is entered into. Such barter transactions are used not only in merchandise trade but also as a means of covering the cost of foreign services. In 1993, for example, a contract amounting to $250 million was signed between the Italian company Tecnologie Progetti Lavori and the Turkmen authorities for the construction of a textile plant in Ashgabat, with payment being effected through delivery of goods.

The extent of direct controls on trade has varied. In 1992 the government banned the import and export of a variety of goods and services, and required trade in a large number of others to be officially licensed. Many of these restrictions were relaxed in 1993, however, with the licensing requirements being retained for only a relatively small number of luxury items or strategic goods.

The relaxation of direct trade controls in 1993 was accompanied by the imposition of a mandatory surrender requirement on exporters for a proportion of their foreign exchange earnings (50 to 60 per cent), which has remained in force. Until mid-1993 the surrender value was based on the corresponding rouble wholesale price, with exporters receiving the rouble wholesale price of the exported goods prevailing in the domestic market. If this price was lower than the relevant international price, these receipts also fell short of the exporter's actual foreign exchange receipts, effectively acting as an indirect tax on exporters and prompting them to conclude barter agreements rather than engage in monetized trade transactions. Although the mechanism has changed in the meantime, with exporters now required to convert their export earnings at the grossly overvalued official exchange rate to meet their surrender requirement, the disincentive effect has remained.

A renewed centralization of foreign trade took place in August 1994 following the establishment of a commodity exchange in Ashgabat. Since that time all trade transactions, both domestic and foreign, exceeding Manat250,000 must be conducted, or registered and endorsed, at this exchange. This permits the government to exercise closer control over such transactions, and to enforce the surrender requirement more effectively.

In an attempt to increase government revenues, in early 1993 export tariffs were introduced on goods exported for hard currency. The tariff for natural gas was set at 80 per cent, for oil and refined products at 20 per cent, and for chemical products at 15 per cent.[18/] These tariffs remain in place, and together with the surrender requirements at official exchange rates constitute a heavy tax on exporters.

Box 2. Turkmenistan: Major trade agreements

* GATT observer status (July 1992).
* EC Trade and Cooperation Agreement signed with the USSR (December 1989) remains in force.
* Other OECD countries have granted MFN and/or GSP status, some on an exceptional, temporary or *de facto* basis. The USA has not granted MFN/GSP status, but a bilateral trade agreement was signed in 1992.
* Economic union with the CIS countries signed December 1993. Bilateral barter and inter-governmental agreements in place with CIS countries.
* Member of the Economic Cooperation Organization (ECO) formed by Turkey, the Islamic Republic of Iran and Pakistan.

Foreign exchange policy

On November 1, 1993 Turkmenistan left the rouble zone and issued its own currency known as the manat. The currency was fully convertible in principle, and officially had only a single exchange rate, which was fixed against the dollar at a weekly foreign exchange auction and then set for other currencies on the basis of their cross-rates to the dollar. The rate of the manat at issue was Manat2:$1. This system was quickly replaced with one of three fixed rates as pressure mounted on the currency. These rates are: the official rate which is used for accounting and international transactions; the enterprise rate at which firms surrender their hard-currency earnings and which is used for inter-republic trading; and the commercial rate which applies to domestic transactions.

The real extent of the manat's convertibility has been questionable from the outset. Although its exchange rate rose slightly in the first week to Manat1.98:$1 by November 6, 1993, it has depreciated steadily since then. By March 1994 the official rate had dropped to Manat10:$1 while the black market rate had fallen to Manat60-70:$1, and as the downward pressure on the currency persisted the government was forced to set a new "commercial" rate of Manat60:$1 on May 2, 1994. The surrender rate, however, was kept at Manat1.98:$1 for gas companies and ten other major exporters.[19/]

The depreciation of the manat has continued since then, with the official rate having been devalued several times during the intervening period. Two devaluations in the last quarter of 1995 put the rate at Manat1,450:$1 and then Manat2,100:$1. As of February 1996 the rate was Manat2,400:$1. No information is available about where the surrender and official rates stand, but they have not kept up with the pace of fall in the commercial rate. None of the rates has kept pace with the decline on the black market, where the currency continues to trade at a significant discount to the commercial rate.

Policies towards human resource development

The education system in Turkmenistan is based on the Soviet model, and has been dominated by the need to produce specialists. In addition to elementary and general secondary schools, the country has 36 special secondary schools linked to various ministries, which have curricula based on such subjects as mathematics, chemistry and other topics of interest to the ministry with which they are affiliated.

Students are required to attend school for at least eight years. Approximately 80 per cent of students leaving school at this time join the workforce, with about 10 per cent proceeding to technical schools, and another 10 per cent to high schools or specialized secondary schools. Turkmenistan has nine institutions of higher education in addition to the University of Ashgabat, which have a joint enrolment of about 50,000 students in day and evening courses. These institutions provide training for many white-collar jobs and cover such fields of study as medicine, languages, culture, music and economics.

Most education at the primary level is conducted in Turkmen, with some 77 per cent of primary school children attending institutions where it is the medium of instruction. Until 1990, most institutions of higher education used Russian. Since independence, however, there have been attempts to increase the number of courses offered in Turkmen.

While facilities for further training exist in Turkmenistan, they are inadequate to provide the qualifications needed to manage the country's transformation to a market economy. Both pre-employment training programmes and re-training programmes should be redesigned to reflect the new needs. As the level of unemployment rises in response to the restructuring of the economy, the number of programmes provided and people served must also be increased.

Table 39. Turkmenistan: Educational institutions, 1993

	Number	Students
Pre-schools	1,600	220,000
Primary and secondary schools	1,730	831,000
Specialized secondary	36	52,000
Institutions of higher education	10	50,000

Source: The Economist Intelligence Unit, *Business Report: Turkmenistan, 2nd Quarter 1994,* London, 1994.

Environmental policies

Environmental protection in Turkmenistan has continued to be based on legislation enacted during the Soviet period, which set high standards and requirements that were seldom observed or enforced. In fact, therefore, Turkmenistan had suffered a similarly high degree of environmental degradation as its neighbours in central Asia. In October 1991 the government issued a national law stipulating stricter penalties for environmental offences in response to an increased awareness of the environmental problems facing the republic, in particular the desiccation of the Aral Sea.

Environmental permits are required for both public and private projects. About 60 per cent of projects fail to get approval on first submission.[20/] The enforcement of these regulations is rendered difficult, however, by a lack of human resources and proper equipment for the monitoring process.

D. POLICIES TOWARDS INDUSTRY

Privatization

The legal framework for privatization was established through the Law on Destatization and Privatization of Property in Turkmenistan, adopted on February 19, 1992.[21/] The law is intended to develop various forms of property ownership, to give citizens the economic freedom to choose their occupation and sphere of employment, and to create new economic structures. It provides for the conversion of state property to collective enterprises, joint-stock companies, cooperatives and other enterprises. The basic principles of privatization, as identified in Article 6 of the law, are that:

- preference is given to conversion of enterprises to labour collectives;
- the social protection of all citizens is guaranteed during the privatization process;

- there is a commitment to the transfer of property, both free and on payment; and
- provision is made for state and public supervision of the process of privatization.

The law appoints the State Committee of Turkmenistan for State Property to represent the interests of the republic in the privatization process. Article 9 stipulates the permissible methods of privatization, which include the leasing of state property with an option to buy by labour collectives, the conversion of state enterprises to joint-stock companies, and the sale of state enterprises to private citizens. Article 13 provides for the fulfilment of certain obligations by the new owners for an agreed period, which may include the obligation to maintain the product lines of the enterprise concerned, to deliver its products to specific consumers, to maintain its socio-economic facilities, and to observe ecological safety and environmental protection measures.

While the legal framework for the privatization of state assets was adopted in February 1992, the privatization process itself has moved slowly and has not been implemented at all in the industrial sector. In 1993 the government declared that the country was seeking to develop a market economy which would maintain a role for the state in industry, science, health and national culture, and that state ownership and control would be retained for three to five years in the oil, gas, minerals and agricultural sectors, which constitute approximately 80 per cent of GDP. Notwithstanding this policy of continued state ownership of existing enterprises, foreign private-sector participation has been permitted on a minority basis in new projects in the oil and gas exploration sectors.

A further presidential decree issued in May 1994 foresees a voucher privatization programme under which workers are given preference. In the meantime, the policy has been to begin with small privatizations such as shops and other small entities. Plans had called for 4,000 sales to be completed by the end of 1995 but only an estimated 1,400 were reported, and in many cases the status of these units remains unclear.

Local officials in Mary, Turkmenistan's second largest city and its main industrial centre, have begun some preparatory activities for the privatization of several major enterprises.[22/] A gas-fuelled power station in the city was subdivided into three strata of activity, with the lowest layer, consisting mainly of producers of services, being further subdivided into nine subsidiaries. While they were part of the electricity generating complex, these lower layers included carpet-weaving activities, barbers and a tannery. They are now regarded as having been privatized in so far as they are entitled to organize themselves, negotiate their own salaries, set their own prices and enter into agreements with other entities. The second tier of the company includes a leather factory, which is also being prepared for privatization with the potential participation of a Canadian company.

Private-sector development

The intention of the government to reform the economy and establish the basic institutions of a market economy is reflected in the adoption of several legislative measures. These include laws governing the resolution of economic disputes, labour relations, insurance, consumer cooperatives, foreign investment and privatization. One particularly important piece of legislation is an enterprise law enacted in November 1992, which prescribes the legal and social principles for the creation, reorganization and liquidation of enterprises under all kinds of ownership. The objective of this law is to secure the independence of enterprises, determine their right to property and establish a framework for relations between enterprises and governmental administrative institutions. It also provides for the right of private ownership and the right of individuals to choose spheres of activity.

The growth of the private sector has been limited though. The EBRD estimates it accounts for only 9 per cent of GDP (1995) and 22 per cent of employment.[23/] Government figures estimate that 18 per cent of GDP is generated in the private sector if the informal home industries and Sunday trade are included. Estimates for the number of private production or service units is 21,000.

Institutional framework for industrial development

In 1992 the State Planning Committee and the Ministry of Finance were merged to form a new Ministry of Economics and Finance, which aims to coordinate the formulation and implementation of economic policies with the mobilization of financial resources. Private-sector development and privatization is under the authority of the Turkmenistan Business Support Organization and the Ministry of State Assets.

Financial support for industrial development

The only access that the slowly emerging private sector has to bank financing is from the new commercial banks created from the former branches of the Soviet-era Gosbank. These commercial banks have inherited the large non-performing loans of state-owned enterprises, however, and are also considerably undercapitalized, with limited access to new funds. They lend only on a short-term basis for up to six months, and charge interest at rates significantly above the subsidized rates charged to state-owned enterprises, which are commonly negative in real terms. Credit allocation is in the hands of the central bank, and is based on the priorities established for various sectors by the government.

Promotion of foreign direct investment

The legal, economic and organizational requirements for foreign direct investment in Turkmenistan are stipulated in the laws on foreign investment and foreign economic activity, both of which were issued in May 1992. They provide equal protection for the rights of foreigners and nationals, regardless of the form of ownership, and regulate the basic principles governing foreign economic activities in Turkmenistan. While expressing an interest in attracting foreign direct investment in selected areas, these laws also prescribe that such investments have to be joint ventures with the government.

In 1993 draft legislation was prepared allowing foreign investors to maintain rouble and hard-currency accounts. So far, however, foreign investors have largely resorted to barter transactions to settle trade and business matters and repatriate profits. Moreover, although foreign companies have access to domestic credit in principle, they are encouraged in practice to make their own external credit arrangements for both their long-term and short-term credit requirements.

Foreign investment interest has so far centred on the exploration of oil and gas reserves, for which the government has issued international tenders to multinational companies. The Argentine firm Bridas has acquired the right to develop the Koturdepe oilfields, while the Dutch firm Larmak Energy, the US firm Noble Drilling Corporation and the UAE-based firm Estpac International have been awarded exploration rights to a number of Turkmenistan's offshore deposits. These activities are all undertaken in joint ventures with the government, which retains 73 per cent of the profits of each venture.[24/] Agreements for further oil and gas exploration are under negotiation with several other multinational oil companies.

Foreign investment in the manufacturing sector has been limited. Examples of such investments are joint ventures between the Turkmenistan Ministry of Agriculture and two US companies for the construction of two cotton processing facilities. Foreign firms also participate in local construction and infrastructure projects. An Iranian company has submitted a bid to develop Turkmenistan's satellite-based communications, while the state-owned Turkish telecommunications enterprise PTT will be installing a digital exchange. Several air, rail and port construction and upgrading projects are under negotiation with Iranian and Turkish construction companies. In 1992 a $500 million project was approved to build a rail link between north-eastern Iran and Turkmenistan, to be financed largely by the Islamic Republic of Iran.

In order to attract foreign investment in priority sectors, the government in 1993 identified a number of activities in which foreign participation in joint ventures with the government is sought.[25/] These include:

- the construction of a water desalinization plant;
- the renovation of an oil refinery;
- an increase in the depth of current oil drilling in the Caspian Sea;
- the improvement of Turkmenistan's port infrastructure through the construction of container handling and expanded railyard facilities;
- the capacity expansion of an electric power station;
- the expansion of salt processing facilities;
- the establishment of facilities for the processing of Karakul wool into fabric; and
- the development of the tourism industry.

In early 1993 the government announced the establishment of seven free economic zones. Companies located in these zones with a foreign ownership of more than 30 per cent will enjoy tax holidays, free rental of office space and subsidized utilities. Import and export formalities in the zone are streamlined and exempted from the regular procedures. To date only some 15 companies have taken advantage of a zone location.

Enterprise restructuring

Enterprise restructuring has started only recently and has progressed to a limited degree. It is being undertaken largely in order to prepare selected enterprises for privatization. Several of the major enterprises and conglomerates, which have hitherto engaged in non-related activities, are being restructured along product lines.

This process can best be illustrated with reference to the case discussed above of the power plant in Mary, Turkmenistan's second largest city. The plant, which employed about 10,000 people in activities including carpet weaving, hairdressing, farming and the tanning of leather as well as power generation, was restructured in 1993, with many of the ancillary activities being given autonomy. On the other hand, however, a chemical plant producing fertilizers but with a capacity utilization of only about 30 per cent aims to diversify into the production of other chemicals in order to maximize its capacity utilization.

Major restructuring will also be required in Turkmenistan's machine-building sector, where the machinery is often more than 50 years old and the technology is highly obsolete. Machine building has been concentrated on a few products and ranges, such as water-cooling plants and pumps, and the production in these plants significantly exceeds local demand. With the breakdown of inter-republic trade and the growing liberalization of imports, demand for these products will continue to decrease drastically.

II. THE MANUFACTURING SECTOR

A. GROWTH AND STRUCTURAL CHANGE

Growth

Prior to the period of Soviet domination, Turkmenistan was a predominantly nomadic and agricultural area. After the construction of the Kara-Kum Canal and the opening of vast new territories for cotton cultivation, cotton production became an increasingly important activity in the post-1945 period. The industrial sector has remained embryonic, with much of the modest industrial base that does exist having been built up in the 1920s.

Structural change

Little structural change has taken place in the economy, or the industrial sector. Agriculture and the extraction of natural gas continue to dominate the economy. The dramatic increase in the price of natural gas relative to the price of cotton and other agricultural goods has, however, resulted in a significant shift in the respective shares of these sectors in GDP in recent years.

Table 40. Turkmenistan: Industrial enterprises by subsector, 1991

	Enterprises	Workers	Percentage	Average number of workers
Total	**1,381**	**139,934**	**100.0**	**101**
Electricity	23	6,958	5.0	303
Fuel	6	9,177	6.5	1,530
Processed foods	255	17,530	12.5	69
Light industry	197	45,054	32.2	229
of which:				
Textiles	61	23,923	17.1	392
Wood and paper products	119	4,750	3.4	40
Printing	10	1,495	1.1	150
Chemicals and petrochemicals	9	8,915	6.4	991
Pharmaceuticals	1	301	0.2	301
Glass	1	968	0.7	968
Building materials	287	19,519	13.9	68
Machines and metallurgy	434	22,607	16.2	52
Other	39	2,660	1.9	68

Source: State Statistics Committee.

The latest available data indicate that Turkmenistan had 1,381 industrial enterprises in 1991. Of these, 38 were energy-based, and employed about 18 per cent of the industrial workforce, which itself represented only 10.6 per cent of the total labour force.[26/] The average size of an industrial enterprise in Turkmenistan is small by comparison with most other republics of the former USSR, at slightly more than 100 employees.

In the pre-independence period Turkmenistan produced only seven of the 60 goods classified in the former USSR as "most important", i.e. oil, gas, oil equipment, window glass, cotton fibre, cotton fabric and vegetable oil. The country's narrow specialization of both agricultural and industrial production has prompted the new post-independence government to seek to diversify the economy and reduce the country's dependence on imports. In the area of food production, the government has attempted to increase the degree of self-sufficiency by temporarily reducing the acreage allocated for the cultivation of cotton, and is proposing an expansion of the local agro-processing industry. This is intended to include the cotton processing industry, which can currently handle only about 4 per cent of the country's output of cotton.

Other proposals for developing the manufacturing sector include an expansion of the refining capacity for oil and gas, and the increased production of a larger variety of petrochemicals. In addition, an expansion of the metalworking and engineering industry is also proposed, with particular emphasis being given to the manufacture of machinery for the cultivation and harvesting of cotton, along with its associated components. Turkmenistan has traditionally been dependent on suppliers from elsewhere in the former USSR for these products, and is having difficulties obtaining them because of the disruption of inter-republic trade. The shortage of this equipment is having a significant impact on the country's crucial cotton industry.

B. INDUSTRIAL EMPLOYMENT

Quantitative trends

Table 41. Turkmenistan: Industrial employment by subsector, 1988-92
(Thousand persons)

	1988	1989	1990	1991	1992
Total	**130.5**	**129.3**	**131.5**	**138.3**	**141.5**
Processed foods	15.9	16.4	16.9	18.6	18.8
Light industry	43.3	44.2	44.4	44.1	46.4
Heavy industry	71.3	68.7	70.2	75.6	76.3
of which:					
Energy and fuels	14.2	14.8	16.1	19.2	19.9
Chemicals and lumber	13.2	12.9	13.1	12.8	14.5
Building materials	19.7	18.1	18.1	19.7	20.3
Machine building	19.3	18.3	18.0	19.1	17.0

Source: International Monetary Fund, *Economic Review: Turkmenistan*, Washington DC, 1994.

The most significant trend in Turkmenistan's industrial employment is a slowdown in the rate of growth of non-agricultural employment in general since the early 1980s.[27/] The effect of this development has been exacerbated by the fact that it has coincided with an annual rate of population growth of 2.5 per cent. From a total increase of 20 per cent in 1970-75, the growth of non-agricultural employment slipped to a mere 6 per cent by 1985-90. At the same time, however, agricultural employment also fell short of the increase in the working age population.

Industrial employment accounts for only about 17 per cent of non-agricultural employment. Moreover, almost 25 per cent of industrial workers are engaged in agro-related industries. This structure has not changed since 1980.

As in all of the countries of the former USSR, official estimates of unemployment have remained low. In mid-1994, open unemployment was recorded primarily in the high-skill fields such as the civil service and scientific institutes where work cutbacks have been implemented.[28/] As elsewhere in the former USSR, however, the official figures understate the true level of unemployment and mask the rampant underemployment in these countries.

Education and skills

Like many other central Asian and Caucasian republics of the former USSR, Turkmenistan has experienced a significant emigration of trained and skilled workers. Immigrant Russian speakers were responsible for the bulk of the country's industrial development and agricultural mechanization, so their return to their "home" republics since the dissolution of the union has left considerable skill gaps. Little has been done to fill these gaps, however, with no major programme having been initiated for the provision of specialized education or the development of technical skills. Most employees of state-owned enterprises have simply continued to be given on-the-job training. As the modernization of the industrial sector proceeds in the coming years and new technologies are introduced, moreover, it will become important to ensure that specialized industrial training and human resource development for industry is given adequate attention.

The role of women

While information on female employment is scarce, the best available indicators suggest that the participation rate of women in the formal labour force amounts to some 36 per cent, as compared to a corresponding figure of more than 45 per cent for men.[29/] The female workers tend to be concentrated in the agricultural and service sectors, including education and healthcare. In manufacturing activities they tend to be employed primarily as piece workers in such industries as carpet weaving and sewing.

C. PRODUCTIVITY AND PERFORMANCE

Labour productivity

The measurement of labour productivity in any of the republics of the former USSR is extremely difficult, since Soviet-style enterprises are highly integrated, often produce several completely unrelated products, and generally include a large number of ancillary activities such as day care centres, medical clinics, fire brigades and others. In general, however, productivity in Soviet-style enterprises is well below that found in comparable facilities in the West. Overstaffing is common, often by 100 per cent or more, and plant layout and production methods also generally involve far more materials handling than for similar production in the West.

Based on calculations of net domestic production per employee, labour productivity in Turkmenistan is revealed to be low, as it is throughout the central Asian region. In 1970, productivity in the region amounted to 83 per cent of the average for the USSR as a whole. By 1985 the figure for Turkmenistan alone had dropped to 70 per cent of the Soviet average, and by 1990 it had fallen further to only 62 per cent.

Enterprise profitability

The profitability of Soviet-style enterprises is as difficult to measure as their labour productivity since such enterprises did not employ the concept of profit centres and were geared toward counting production rather than costs. The situation is complicated further by the fact that many inputs, such as energy, were highly subsidized, and that any financial estimate of profitability would not reflect profitability in a market environment. Although there are no official data on the number of loss-making enterprises in Turkmenistan, the World Bank has suggested that most if not all enterprises in the country would be unprofitable if Western cost accounting methods were applied.[30/]

D. OWNERSHIP AND INVESTMENT PATTERNS

Ownership

At the time of Turkmenistan's independence almost all economic activities were controlled by the state. This situation has changed relatively little, with the privatization programme having made little progress. According to the latest available estimates, only about 1,400 small entities, mainly retail shops, had been privatized by the end of 1995, and no significant effort has yet been made to privatize the large-scale, predominantly industrial, enterprises. Despite the delay in the privatization of existing enterprises, however, the growth of small private enterprises has been strong. By mid-1993 some 9,000 small enterprises had been registered, of which about one-third were privately-owned.[31/] By 1995 the EBRD estimates 21,000 privately-owned production or service entities were in existence. Private-sector activity was estimated by the EBRD to account for almost 9 per cent of GDP in 1995, while it estimates private-sector employment at 22 per cent. However, few, if any, of these small enterprises were engaged in manufacturing activities.

Investment

Investment in Turkmenistan has been dominated by the government, which accounted for 55 per cent of the total in 1992, and the country's state-owned enterprises, which accounted for 45 per cent. In the past, the largest recipients of investment were the industrial sector and public housing. While the relative shares have remained fairly constant in real terms, at 23 per cent for industry, 28 per cent for agriculture and 41 per cent for housing, the agricultural sector edged out industry as the largest beneficiary of investment from state enterprises in 1992.

Government policy is to concentrate large amounts of investment in infrastructure development projects. New rail and road links are under construction, and a new airport has been built in Ashgabat. In addition, the country's entire telecommunications infrastructure is being upgraded and vastly expanded.

Foreign investment, while slower to arrive in Turkmenistan than in many of the other republics of the former USSR, is nevertheless an important source of investment funds and will remain so. In mid-1994, there were ten fully foreign-owned companies in the republic and 109 joint ventures with more than 30 per cent foreign equity.[32/] The largest investments are in the oil and gas sector, although the production of consumer goods, commerce and services have also attracted interest. In general, however, the flow of investment funds into the country has been limited. According to the Ministry of Finance direct foreign investment in 1995 amounted to $31.8 million.

E. INDUSTRIAL LOCATION

The level of industrialization in Turkmenistan is low. The country's major industrial centre is the second largest city, Mary, in the south-east. The city is the base for several textile mills, including three recently constructed cotton spinning facilities, and an ammonia plant. Byuzmeyin, the industrial suburb of Ashgabat, is the centre for the production of building materials.

A number of major chemical plants are located in the vicinity of Chardzhou, on the border with Uzbekistan in the east of the republic, which has a population 164,000. Several textile mills are located in the area of Dashkhovuz, which has a population of 114,000 and is also located on the Uzbek border but in the central part of the country. Petroleum is refined at Chardzhou and the Caspian port of Turkmenbashi.

F. ENVIRONMENTAL ISSUES

Despite its low level of industrialization, Turkmenistan has not avoided the environmental degradation common to all republics of the former USSR. The most serious problems are associated with over-irrigation and the over-use of pesticides, as well poor land management. Industrial pollution is a serious problem in a few areas such as Chardzhou, which has high levels of air pollution emanating from the mineral fertilizer industry as well as from traffic and power generation. The main airborne pollutants are hydrocarbons, carbon monoxide and suspended matter.

G. TRADE IN MANUFACTURES

Imports

As noted throughout this review, Turkmenistan's trade has been based on the export of cotton, gas and some food products, and the import of almost everything else. As a result, the republic's trade in manufactured goods has been limited almost entirely to the import side. The republic is a net importer of chemicals, machinery, light industrial goods and processed food.

Exports

The few manufactured exports of the republic include some refined oil products, chemicals, light industrial products (consisting mainly of cotton fibre and fabrics), food stuffs (comprising processed fruits and vegetables, and wine) and a small amount of machinery.

Table 42. Turkmenistan: Exports of manufactured goods, 1987-92
(Rb million)

	1987	1988	1989	1990	1991	1992
Processed food	92.9	98.9	86.6	213.0	316.5	6,250.0
Light industry	1,189.0	1,323.0	1,299.0	1,221.0	3,343.0	1,699.0
Chemicals and petrochemicals	141.1	151.9	152.3	153.4	434.7	2,756.0
Building materials	23.6	21.4	24.2	28.2	51.2	655.0
Machinery and metalworking	44.2	45.0	39.4	36.9	95.2	545.0

Source: State Statistics Committee.

Table 43. Turkmenistan: Imports of manufactured goods, 1987-92
(Rb million)

	1987	1988	1989	1990	1991	1992
Oil and gas[a/]	100.2	100.2	100.0	79.3	124.8	14,038
Processed foods	560.6	556.7	621.8	629.8	939.9	18,019
Light industry	603.2	590.7	696.6	805.2	1,197.0	7,253
Chemicals and petrochemicals	190.3	208.8	230.4	229.2	354.4	4,285
Ferrous metallurgy	115.7	115.3	102.4	113.1	175.5	2,892
Non-ferrous metallurgy	5.3	9.4	9.6	9.2	14.4	3,560
Machinery and metalworking	946.4	946.9	1,042.0	1,078.0	1,664.0	20,342

Source: State Statistics Committee.

a/ Refined oil products.

H. INTERNATIONAL COOPERATION FOR INDUSTRIAL DEVELOPMENT

Donors report to the OECD Register[33/] that 27 technical assistance projects for Turkmenistan had been completed by the end of 1994. The estimated cost is $1.4 million. Almost all of the projects have been regional in scope.

According to the register's data 100 projects, also mainly regional, are under way in the republic, with an estimated cost of $20.4 million. Most of the technical assistance to Turkmenistan originates from the OECD area. The European Union is the largest donor, followed by Turkey, Germany (in a bilateral capacity), the USA, and UNDP.

Table 44. Turkmenistan: Technical assistance, 1993 and 1994

	Completed		Under way		On offer	
	1993	1994	1993	1994	1993	1994
Number of projects	15	27	74	100	14	43
Value ($ million)	0.3	1.4	17.2	20.4	11.6	23.4

Source: *OECD Register.*

III. INDUSTRIAL BRANCH PROFILES

A. FOOD PROCESSING AND RELATED AGRO-INDUSTRIES

The resource base

Although Turkmenistan has limited agricultural land and relies heavily on irrigation, it has the ability to produce a wide variety of food crops. The most important of these are grains, fruit and vegetables, and grapes. The country has traditionally been a major importer of grain and an exporter of fruits and vegetables. The government has attempted to diversify agricultural production in recent years, however, with particular emphasis being given to the production of grains. This has resulted in the cultivation of winter wheat since the early 1990s and the achievement of self-sufficiency in rice.

Past trends

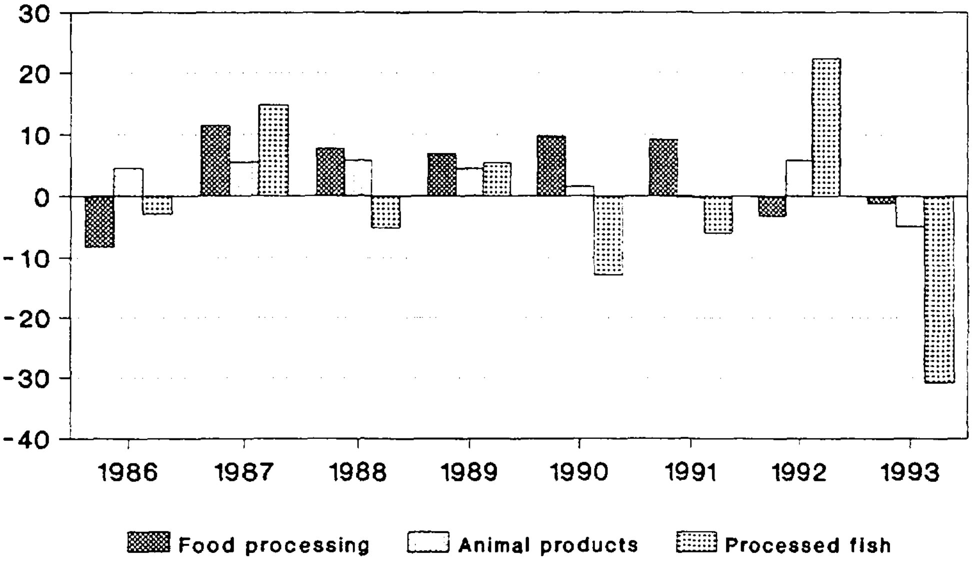
Despite its favourable resource base, Turkmenistan produces relatively few processed food products and has only a modest processing capacity. Wine and vegetable oil are the main processed products. Since 1992, however, a number of existing food processing facilities have been expanded and several new ones have been established, including mills and factories for the production of flour, pasta, confectionery, and pectin. The construction of new storage facilities has also been undertaken.

Table 45. Turkmenistan : Output of selected agricultural goods, 1990-93

	Units	1990	1991	1992	1993
Meat (slaughter weight)	Thousand tonnes	104	100	85	86
Milk	Thousand tonnes	436	458	467	501
Eggs	Million units	327	300	310	282
Grain	Thousand tonnes	449	516	776	997
Fruits	Thousand tonnes	47	56	59	..
Vegetables	Thousand tonnes	411	388	338	324

Source: The Economist Intelligence Unit, *Business Brief: Turkmenistan, 2nd Quarter 1994,* London, 1994.

Fig. 18. Turkmenistan: Gross output of the food industry
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington, 1995.

Table 46. Turkmenistan: Output of the food industry, 1980-92, selected years
(Rb million, 1982 prices)

	1980	1985	1986	1987	1988	1989	1990	1991	1992
Processed foods	187	255	234	261	281	300	329	359	348
Meat and dairy	120	157	164	173	183	191	194	194	205
Fish	33	35	34	39	37	39	34	32	39
Flour, groats and fodder	99	123	128	131	142	157	157	175	178
Total	**439**	**570**	**560**	**604**	**643**	**687**	**714**	**760**	**770**

Source: State Statistics Committee.

Constraints and prospects

The principal constraints faced by the food processing sector relate to the lack of handling, processing and packaging capacity. The country's produce is thus prone to rapid deterioration due to a lack of cold storage facilities and to poor handling in general, and cannot be processed before it perishes as the processing industry has no excess capacity into which to expand. The lack of packaging materials, including a shortage of bottles arising from the anti-alcohol campaign of the

1980s also poses a major problem necessitating, for example, the bulk shipment of wine to export markets in the rest of the former USSR.

Both domestic and regional demand is believed to be high for the processed foods produced in Turkmenistan. With the government giving priority to the development of the food processing industry, the necessary processing facilities are gradually being established.

B. TEXTILES AND CLOTHING

The resource base

Turkmenistan is a major producer of cotton, and was second only to its neighbour Uzbekistan in the former USSR, although the locally produced cotton is of rather poor quality. The country has a comparatively strong resource base for the production of woollen goods, with animal husbandry being the second most important agricultural activity and involving the rearing of large numbers of sheep.

Past trends

Despite its status as a leading producer of cotton, Turkmenistan has only a limited processing capacity, as a result of which only about 4 per cent of its output is processed locally. Many of the existing ginneries are up to 80 years old.

The textile industry consists of 60 small enterprises, which utilize some 5,000 tonnes of cotton per year. Local processing facilities are unable to meet this demand, however, which must be met by imports from elsewhere in the former USSR. In addition, the textile industry produces a small volume of silk and woollen goods.

Table 47. Turkmenistan: Output of textiles and clothing, 1980-92, selected years
(Rb million, 1982 prices)

	1980	1985	1986	1987	1988	1989	1990	1991	1992
Textiles	1,317	1,328	1,460	1,439	1,575	1,637	1,748	1,787	1,858
Clothing	121	171	186	192	217	225	237	258	270

Source: State Statistics Committee.

The output of the textile and clothing industry has remained relatively steady in recent years in volume terms, but has increased in real value. In 1992 this rise was due to a 6.2 per cent increase in the production of cotton yarn and a 25.7 per cent increase in the output of silk fabric. This favourable performance was largely due to Turkmenistan's ability to develop new markets and trade relations involving, *inter alia*, the spinning of locally produced cotton fibre into yarn in Switzerland for re-import, and the import of knitted fabric from Poland on barter terms.

Efforts have also been made to encourage investment in local processing capacity, and three new cotton spinning mills have been ordered from a Turkish company on a turnkey basis.

Table 48. Turkmenistan: Output of selected textiles and clothing products, 1990-93

	Units	1990	1991	1992	1993
Textiles	Million square metres	53.4	49.2	51.2	49.7
Knitwear	Million units	11.6	10.9	6.1	7.5
Hosiery	Million pairs	18.5	12.6	9.7	7.2
Carpets	Million square metres	..	1.4	1.1	0.9

Source: The Economist Intelligence Unit, *Business Brief: Turkmenistan, 2nd Quarter 1994*, London, 1994.

Constraints and prospects

The major constraint on the development of a modern textile industry based on cotton and wool is the lack of local processing capacity. The government has recognized this problem, however, and has begun to encourage the expansion of the processing industry.

Like the other central Asian republics, Turkmenistan is attracting considerable foreign investment interest in, and credits for, the textile industry. Investments have included the construction of new ginning and spinning mills and plants to produce carpets and cotton yarn.[34/] In addition, French companies have extended credits for the construction of processing factories, which are to be repaid from the receipts of future cotton exports.

The clothing manufacturer The Gap (USA) has also recently signed an agreement to form a joint venture, GAP-Turkmen, through its Turkish subsidiary. The US subsidiary will hold 30 per cent of the shares, the EBRD 20 per cent and the Turkmeni partner 50 per cent. The EBRD is also extending a $13.5 million loan to the venture.

C. LEATHER AND FOOTWEAR

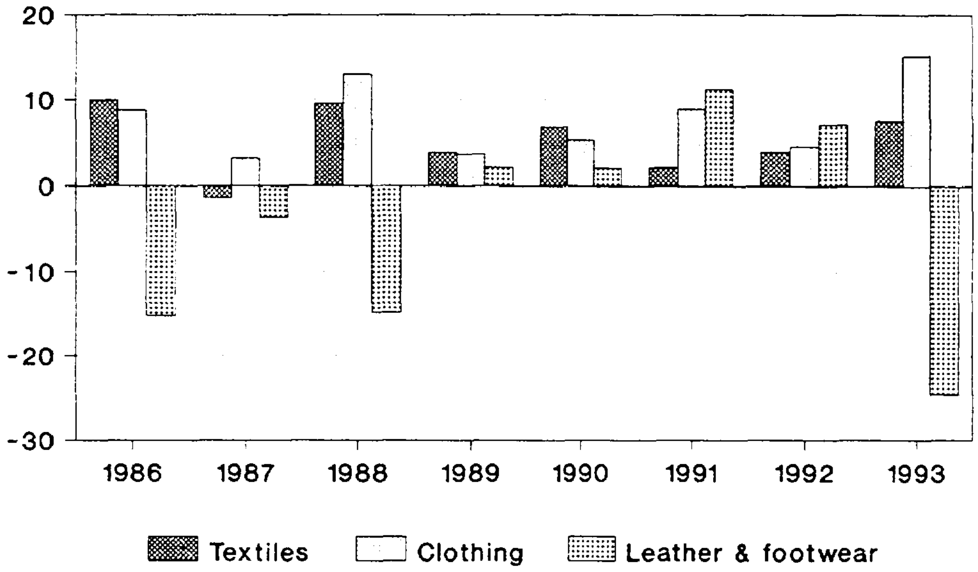
The resource base

The large number of sheep and cattle in Turkmenistan provide the basis for the development of a leather industry, based in particular on sheepskins. There has been strong foreign interest in this field as in the other central Asian republics.

Past trends

The output of Turkmenistan's leather industry has been on the increase in recent years after declining during the 1980s. One reason for this is the diversification of many enterprises into the production of consumer goods.

Fig. 19. Turkmenistan: Gross output of the textile, clothing and leather industries
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Table 49. Turkmenistan: Output of the leather and footwear industries, 1980-92, selected years
(Rb million, 1982 prices)

1980	1985	1986	1987	1988	1989	1990	1991	1992
74	66	56	54	46	47	48	53	57

Source: State Statistics Committee.

Table 50. Turkmenistan: Output of footwear, 1990-93
(Million pairs)

1990	1991	1992	1993
5.1	4.2	3.2	3.3

Source: The Economist Intelligence Unit, *Business Brief: Turkmenistan, 2nd Quarter 1994*, London, 1994.

In mid-1992 a small factory was built by the Mary heat and power station, using equipment to dress hides and produce leather. Its capacity is 20,000 hides per month. A second facility was constructed to produce leather apparel and other items. The power plant plans to use a part of this leather output to barter for other items for its employees.[35/]

As part of a diversification programme, the Cheleken carbon black factory established a facility for the production of sports shoes in 1993. The facility has an initial capacity of 200,000 pairs per year, and if successful may be expanded to produce up to 800,000 pairs per year.

Constraints and prospects

Given the availability of local resources and the strong international interest in leather goods, especially sheepskin products, the outlook for the sector is bright. Its future expansion will also benefit from the fact that it is an industry with comparatively low start-up costs. Past experience, both in Turkmenistan and in the other central Asian republics, indicates that it is also an industry for which international buyers are willing to provide initial capital in return for future delivery of product. For these reasons, it is one of the main sectors likely to witness the development of small private enterprises.

D. PETROLEUM AND GAS PRODUCTION AND REFINING

The resource base

Turkmenistan is well endowed with both natural gas and crude oil. Its reserves of natural gas are estimated at approximately 15 trillion cubic metres, of which 2.7 trillion cubic metres have been confirmed, while its reserves of crude oil are estimated at 6.3 billion tonnes, of which 1.1 billion tonnes are proven and probable. Most of the proven reserves of gas are in the south-east of the republic. They include ethane, butane and propane. Oil is found primarily in the central area of the republic and offshore in the Caspian Sea, where significant new discoveries are still expected to be made.

Past trends

The production of natural gas increased steadily from 1966 to 1989 when it peaked at 89.9 billion cubic metres. In the following years production declined slowly to 84.3 billion cubic metres in 1991, before dropping sharply in 1992 to only 60.1 billion cubic metres. The precipitous drop in 1992 reflected a change in policy from one of maximizing production to one of maximizing unit prices and total revenues from exports. After increasing modestly to 65.2 billion cubic metres in 1993, the production of gas was cut again to 35.6 billion cubic metres in 1994, largely as a result of a decline in import demand from Turkmenistan's customers in the former USSR, who were unable to pay for their imports. Production was only 34.6 billion cubic metres in 1995.

Turkmenistan has two oil refineries with a combined annual capacity of 11.5 million tonnes of crude. One of these, the Krasnovodsk refinery at Turkmenbashi, has an annual capacity of 5.5 million tonnes, but was built in 1950 and employs relatively obsolete and inefficient technology. It processes locally produced crude but is intended to be modernized in the near future to enable it to begin refining oil from the Amu-Dar'ya basin.

The second refinery, with an annual capacity of 6 million tonnes, is located at Chardzhou and was built in 1991 specifically to process crude oil imported from the west Siberian fields in the Russian Federation. Although it is much more efficient than the Krasnovodsk refinery, it has been running well below capacity recently because of Turmenistan's inability to pay for the required imports of crude. The government plans to expand the petrochemical production capacity of the Chardzhou refinery, which would enable production of liquefied natural gas for export to Europe.

Table 51. Turkmenistan: Fuel production, 1990-95

	Units	1990	1991	1992	1993	1994	1995
Gas	Billion cubic metres	87.8	84.3	60.1	65.2	35.6	34.6
Oil	Million tonnes	5.7	5.4	5.2	4.2	3.9	3.5

Sources: The Economist Intelligence Unit, *Business Brief: Turkmenistan, 4th Quarter,* London, 1995, and *Country Report: Turkmenistan, 1st Quarter 1996,* London, 1996.

Table 52. Turkmenistan: Output of selected oil and gas products, 1990-93
(Million tonnes)

	1990	1991	1992	1993
Refined oil	5.1	7.1	5.8	4.5
Gasoline	0.1	0.1	0.9	0.7
Diesel fuel	1.6	2.2	2.0	1.4
Heating oil	1.2	2.0	1.7	1.3

Source: The Economist Intelligence Unit, *Business Brief: Turkmenistan, 2nd Quarter 1994,* London, 1994.

Constraints and prospects

The development of Turkmenistan's hydrocarbon resources is one of the government's principal priorities, and forms the basis of its economic development plans. According to a major programme entitled "Ten Years of Well-Being" introduced in 1992, the output of natural gas was to be increased to 90 billion cubic metres in 1996, representing almost one-and-a-half times the 1993 level, and to 120 billion cubic metres in 2002. The output of oil and natural gas condensate, meanwhile, was targeted to rise to 9 million tonnes and 28 million tonnes over the same period.

The biggest constraints on the achievement of these objectives and on the expansion of oil and gas production in Turkmenistan are the inadequate technical capacity of the country to exploit its reserves and the need for large amounts of financing. The World Bank estimates that it will take $8 billion to develop the republic's reserves and build the pipelines necessary to enable the country to market its output.[36/]

The most serious constraint inhibiting the production of oil and gas products, meanwhile, is the limited refining capacity in the country. While one oil refinery processes domestically produced oil, the second uses imported oil, and Turkmenistan continues to import substantial quantities of refined products as well. As one means of solving the problem of transporting gas to international markets, the country is establishing a natural gas liquification plant in the Naip field, since liquified natural gas (LNG) can be transported by sea.

In view of the strong interest already expressed by foreign oil and gas companies in Turkmenistan and elsewhere in central Asia, it appears almost certain that the financial resources necessary to develop Turkmenistan's hydrocarbon resources will be found. A number of foreign companies have already signed agreements with the government to this effect, including the Argentine firm Bridas, the French firm Elf Aquitaine, the US firms Occidental Petroleum and Noble, the Lamarg Energy Group of the Netherlands, the UAE-based firm Estpac, and the State Oil Company of Turkey. The mobilization of the required financial resources will nevertheless involve major financial commitments from transnational oil companies and international financing institutions,[37/] which are only likely to be forthcoming once the government of Turkmenistan has established well-defined laws and regulations for foreign direct investment in the energy sector.

E. CHEMICALS AND PETROCHEMICALS

The resource base

Turkmenistan has large reserves of a number of inorganic chemicals and various salts, including iodine-bromine and sodium sulphate. In addition, the country's extensive hydrocarbon resources provide it with the capacity to develop a petrochemical industry.

Past trends

The chemical and petrochemical industries in Turkmenistan are relatively well-developed, and produce a wide range of products including mineral fertilizers, sulphuric acid, ammonia, sulphur, synthetic detergents, sulphate and chloride salts, iodine and bromine. The country's main chemical enterprises in 1994 are listed in Table 53.

Table 53. Turkmenistan: Enterprises producing base chemicals, 1994

Enterprise	Base chemical
Cheleken	Iodine/bromine
Nabit-Dag	Iodine/bromine
Gaurdak	Sulphur
Chardzhou	Sulphuric acid
Mary	Ammonia
Karabogazsulfat	Sodium sulphate
Saglyik (Ashgabat)	Pharmaceuticals
Ashkabad	Detergents

Source: The Economic Intelligence Unit, *Business Brief: Turkmenistan, 2nd Quarter 1994*, London, 1994.

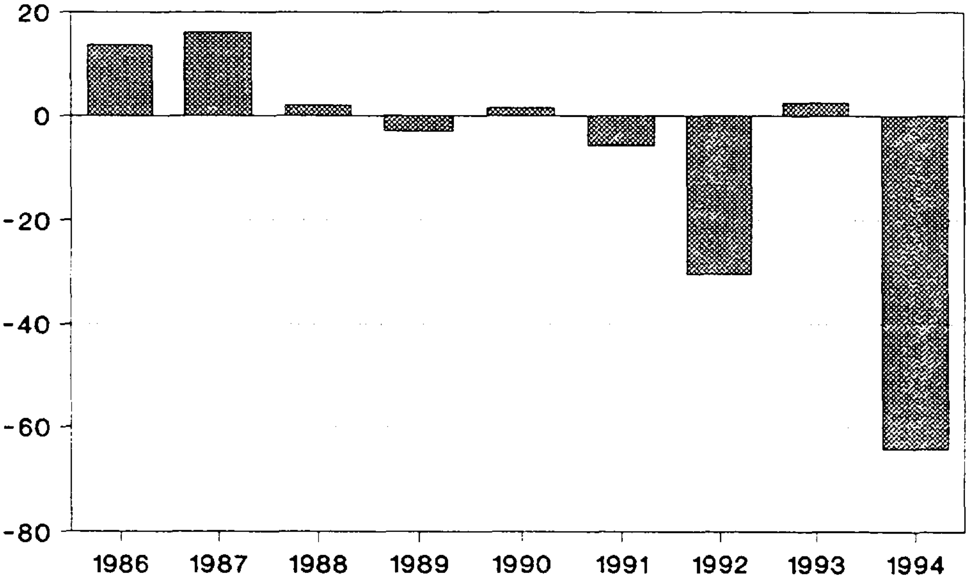
After experiencing strong growth in the 1980s, the output of the chemical industry fell sharply in 1991 and 1992. The production of epsomite, sulphur and sulphuric acid were particularly hard hit.

Table 54. Turkmenistan: Output of the chemical industry, 1985-94, selected years
(Rb million, 1982 prices)

1985	1990	1991	1992	1993	1994
145	192	181	126	129	46

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Fig. 20. Turkmenistan: Gross output of the chemical and petrochemical industries
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

A programme has been introduced in recent years to diversify the production of Turkmenistan's sulphur-based enterprises, due to the expected depletion of the country's sulphur resources by the end of the next decade.[38/] One project included in this programme has involved the building of a plant to produce calcium carbide at the Gaurdak sulphur enterprise. The Turkmenmineral production association, of which Gaurdak is a member, also plans to increase its production of building materials; it already produces celestine concentrate and gypsum.

Table 55. Turkmenistan: Output of selected chemical products, 1991-93

	Units	1991	1992	1993
Sulphur	Thousand tonnes	343.1	243.6	185.9
Ammonia	Thousand tonnes	21.9	38.9	..
Sulphuric acid	Thousand tonnes	788.8	352.6	205.9
Sodium sulphate	Thousand tonnes	259.4	214.5	166.2
Bishofit	Thousand tonnes	85.5	89.6	68.4
Epsomite	Thousand tonnes	22.5	26.0	11.0
Iodine	Tonnes	552.0	509.9	458.0
Bromine	Tonnes	7,212.0	6,657.0	4,666.0
Detergents	Tonnes	15,925.0	13,011.0	..
Pharmaceuticals	Million roubles	602.9	378.7	..

Source: The Economist Intelligence Unit, *Business Brief: Turkmenistan, 2nd Quarter 1994,* London, 1994.

Constraints and prospects

The future of Turkmenistan's chemical industry will depend to some extent on its ability to adjust its production to the new needs of agriculture and environmental safety. Agriculture needs better and more environmentally friendly fertilizers. Existing facilities need to be upgraded in terms of their environmental standards and future emissions and dumping policies. Finally, as noted above, some of the resources upon which the industry has been based are near depletion.

The most difficult problem to overcome may be upgrading the existing production facilities to clean standards in view of the lack of investment funds in the country. It will also be the biggest deterrent to foreign investment in the existing facilities.

However, the outlook appears bright for the development of a petrochemical sector based on the expected increase in the production of oil and gas. While petrochemicals have so far only accounted for 3 per cent of the output of the chemicals industry, a new polyethanol processing plant is due to begin operations in 1996 or 1997.[39/]

F. CONSTRUCTION MATERIALS

The resource base

Turkmenistan has several deposits of materials used in the production of construction materials, such as gypsum, asbestos, gravel, sand and limestone. Current production includes cut stone, bricks, tiles, cement, slate, gypsum, concrete blocks and several other products. Because of the shortage of wood in the country, chipboard produced from caustic dolomite, bischofite and cotton waste is also an important construction material.

Past trends

The output of construction materials has continued to grow in recent years in response to strong local demand, which itself has been boosted by a number of major infrastructure projects undertaken by the government, together with a housing construction boom.

Table 56. Turkmenistan: Output of building materials, 1985-94, selected years
(Rb million, 1982 prices)

1985	1990	1991	1992	1993	1994
260	288	305	325	327	229

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Several new initiatives have been undertaken by state enterprises, with and without foreign involvement, to increase the production of building materials and to develop new products. These have included a joint venture with a German firm to produce lightweight concrete blocks, and the production of a new type of mineral wool.

Many of these new initiatives have been part of a programme to diversify the output of enterprises involved in the production of sulphur-based chemicals because of the expected depletion of local sulphur resources by the end of the next decade.

Constraints and prospects

Demand for construction materials will be strong in the medium to longer term, as the economy recovers from its current transitional disruption and foreign investment in the oil and gas industry gathers pace. Office space will be required, as will the construction and upgrading of housing and industrial plants. Development will be constrained by the lack of finance, since it requires substantial investment in the exploitation of local mineral resources as well as the import of costly western technology and equipment.

G. MACHINERY AND TRANSPORT EQUIPMENT

The resource base

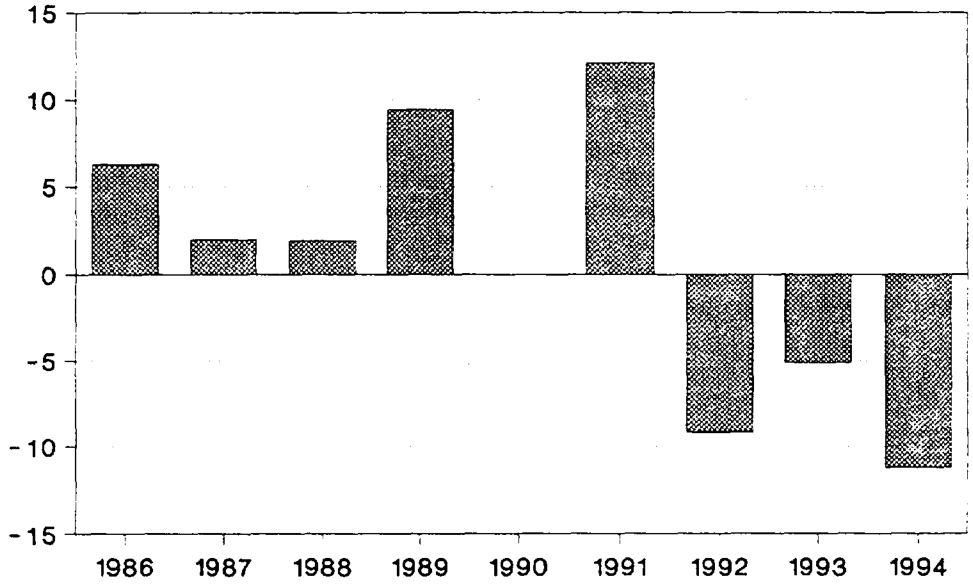
Turkmenistan has no specific resource-based advantages for the production of machinery and transport equipment, but was selected as a manufacturing location for some forms of machinery in line with the policy of inter-republic specialization prevailing in the former USSR.

Past trends

The machinery industry in Turkmenistan is centred on the production of equipment for the oil and gas industries, pumps and ventilators, and cables. The three largest machine-building concerns in the republic are Ashneftemash, which produces oil equipment; TurkmenKabel, which produces cables; and Krasnyi Molot, which produces equipment for the natural gas industry.

Although a significant producer of oil-industry equipment, Turkmenistan has not been able to cover its domestic demand and has relied on the Russian Federation and Azerbaijan for its equipment imports. In 1993, for example, 10,000 tonnes of steel pipes, 900 surface pumps and 40 pipe carriers were imported from Azerbaijan.

Fig. 21. Turkmenistan: Gross output of the machine-building industry
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Table 57. Turkmenistan: Output of the machinery industry, 1985-94, selected years
(Rb million, 1982 prices)

1985	1990	1991	1992	1993	1994
48	58	65	59	56	50

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

After a decade of growth, the output of the machine-building industry began to decline in 1992. This was due mainly to the general disruption of the country's input and output markets resulting from the dissolution of the former USSR. The decline continued in 1993, reflecting falls in output of all products except cables, the production of which recorded a modest increase.[40/]

Constraints and prospects

Demand will greatly increase for oil and gas industry equipment in the future, but since much of this will be generated by foreign investment-led projects, local production will have to adjust to meet the new technology needs. If it can make adjustments, its outlook will be promising.

The prospects for the development of a transport equipment industry are bright in view of recent foreign investment activity. While no such industry existed in the past, two international companies have signed deals to produce motor vehicles locally.

One of these agreements involves the Italian firm Fiat, which through its Turkish subsidiary has entered into a joint venture with Turkmenselkhozpromservis to produce tractors. These tractors, which are to be produced in two models of 55 horsepower and 80 horsepower respectively, are to be lighter than the model currently imported from Belarus, and will use 30 per cent less fuel. Fiat currently supplies the engines and components from abroad, but local components production is beginning. The new venture is scheduled to produce 6,000 tractors per year once it is fully operational in the near future.

The US firm Chrysler, meanwhile, has entered into a joint project with the Ministry of Automobile Transport to construct a plant to produce trucks. The plant, to be located in the industrial suburb of Bezmein outside Ashgabat, is to have an annual capacity of 2,000 trucks and will involve an investment of $15 million. Chrysler expects to sell 20 per cent of the trucks locally and the rest to the other central Asian republics, the Middle East and the Russian Federation.

NOTES TO CHAPTER TWO

1/ European Bank for Reconstruction and Development, *Transition Report Update,* London, April 1996.

2/ The Economist Intelligence Unit, *Country Report: Turkmenistan, 1st Quarter 1995, Country Report: 2nd Quarter 1995,* London, 1995.

3/ The Economist Intelligence Unit, *Country Report: Turkmenistan, 1st Quarter 1996,* London, 1996.

4/ International Monetary Fund, *Economic Review: Turkmenistan,* Washington DC, March 1994.

5/ Europa Publications Ltd, *Europa World Year Book 1993,* London, 1993.

6/ International Monetary Fund, *Economic Review: Turkmenistan,* Washington DC, March 1994.

7/ The Economist Intelligence Unit, *Country Report: Turkmenistan, 2nd Quarter 1995,* London, 1995.

8/ Estimates are by Walden Publishing, *Country Study, Turkmenistan,* 1993.

9/ Business Information Service for the Newly Independent States, *Commercial overview of Turkmenistan,* United States Department of Commerce, Washington, DC, 19 May 1994.

10/ For a review of these projects see "Turkmenistan issues ambitious oil, gas program", *Oil and Gas Journal,* PennWell Publishing Company, 8 November 1993.

11/ Europa Publications Ltd, *Europa World Yearbook 1993,* London, 1993.

12/ Kitson, Andrew, "Telecommunications Development in the former Soviet Union", *Foreign Trade and Investment Review 1994,* London, 1993.

13/ World Bank, *Turkmenistan: Country Study,* Washington DC, May 1994.

14/ For a review of the early development of the financial sector in Turkmenistan see International Monetary Fund, *Economic Review: Turkmenistan,* Washington DC, May 1992, Annex 3.

15/ The lack of consistent data makes analysis of domestic demand difficult and all information should be treated with caution. For this reason all information provided here is from analysis conducted by the IMF in 1994 and presented in their *Economic Review: Turkmenistan,* Washington DC, 1994.

16/ A large portion of former USSR trade is now done on a barter basis. Because of this the value placed on the goods delivered is arbitrary and makes it difficult to analyze the data.

17/ "Turkmenistan issues ambitious oil, gas program", *Oil and Gas Journal,* PennWell Publishing Company, 8 November 1993.

18/ For data on trade regulations in Turkmenistan, see National Trade Data Bank, *Market Reports, Turkmenistan,* United States Department of Commerce, Washington DC, various issues.

19/ European Bank for Reconstruction and Development, *Transition Report,* October 1994, London, 1994.

20/ World Bank, *Turkmenistan: Country Economic Memorandum,* Washington DC, 7 February 1994.

21/ See text of the law in *Turkmenskaia Iskra*, 5 March 1992.

22/ For data on trade regulations in Turkmenistan, see "Mary Economic Profile" in the National Trade Data Bank, *Market Reports, Turkmenistan,* United States Department of Commerce, Washington DC, 16 November 1993.

23/ European Bank for Reconstruction and Development, *Transition Report, October 1995,* London, 1995.

24/ For data on trade regulations in Turkmenistan, see National Trade Data Bank, *Market Reports, Turkmenistan,* United States Department of Commerce, Washington DC, 14 April 1993.

25/ For more detail see National Trade Data Bank, *Market Reports, Turkmenistan,* United States Department of Commerce, Washginton DC, 14 April 1993.

26/ Walden Publishing, *Country Reports - Turkmenistan,* 16 March 1993.

27/ World Bank, *Turkmenistan: Country Economic Memorandum,* Washington DC, 7 February 1994.

28/ World Bank, *Turkmenistan: Country Economic Memorandum,* Washington DC, 7 February 1994.

29/ World Bank, *Turkmenistan: Country Economic Memorandum,* Washington DC, 7 February 1994.

30/ World Bank, *Turkmenistan: Country Economic Memorandum,* Washington DC, 7 February 1994.

31/ European Bank for Reconstruction and Development, *Transition Report 1995,* London, 1994.

32/ European Bank for Reconstruction and Development, *Transition Report,* London, October 1994.

33/ The OECD Register is a compilation of multilateral and bilateral technical assistance. Because it relies on information provided by the donors it may be incomplete. Since not all projects are costed, the total value of technical assistance is understated.

34/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* October and November 1992, January 1993.

35/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, June 1992.

36/ World Bank, *Turkmenistan: Country Economic Memorandum,* Washington DC, 7 February 1994.

37/ "Turkmenistan issues ambitious oil, gas program", *Oil and Gas Journal,* PennWell Publishing Company, November 8, 1993.

38/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, September 1992.

39/ International Monetary Fund, *Economic Review: Turkmenistan,* Washington DC, March 1994.

40/ The Economist Intelligence Unit, *Business Report: Turkmenistan, 2nd Quarter 1994,* London, 1994.

CHAPTER THREE: UZBEKISTAN

I. THE MACROECONOMIC AND INDUSTRIAL POLICY ENVIRONMENT

A. RECENT ECONOMIC TRENDS

The historic and Soviet periods prior to 1991

Situated along the Silk Route between China and the west, Uzbekistan has a long history as a trading area. After a Mongol invasion in the 13th century, the region came under the Empire of Tamerlane. In the 15th century, the kingdoms of Uzbek were formed around the cities of Bukhara and Khiva. After a long interest in the region, Russia annexed the area between the Syr-Dar'ya and Amu-Dar'ya rivers in 1876.

Soviet power was established in the current capital, Tashkent, in 1917 and the Turkestan Autonomous Soviet Socialist Republic (ASSR) was proclaimed in April 1918, although the Bolshevik forces were unable to consolidate their control until September 1919. Bukhara and Khiva remained independent People's Soviet Republics until 1924, when they were also incorporated into the Turkestan ASSR. On October 27, 1924, the Uzbek Soviet Socialist Republic was established. It comprised the whole area of the former Turkestan ASSR until 1929, when Tajikistan was established as a separate ASSR. In 1936 the Kara-Kalpak region was transferred from the Russian Federation to the Uzbek SSR, but retained its autonomous status.

The establishment of Soviet rule led to the rapid industrialization of Uzbekistan, which began during the first two five-year plans in 1928-33 and 1933-38. This process was accompanied by the immigration of large numbers of skilled workers from Russia and Ukraine. During the Second World War the industrial base expanded further as a result of the transfer of industries from the war zone. Massive increases in cotton production provided the stimulus for the continued strong growth of the economy in the post-war period, but by the second half of the 1980s growth was beginning to stagnate and the environmental devastation caused by the over-irrigation of the cotton producing areas had become clearly evident. The Aral Sea was drying, soil salinity was high and soil fertility had declined considerably.

Concern over the damage to the environment and demands for the wider use of the Uzbek language gave rise to growing demands for a change in the republic's status. After the unsuccessful coup attempt in August 1991 the country declared its independence from the former USSR, and the Republic of Uzbekistan was officially established.

The period since 1991

Since declaring independence in 1991 Uzbekistan has suffered a much less severe economic contraction than the other central Asian republics. In 1991 gross output fell by only 0.9 per cent, followed by further contractions of 9.6 per cent in 1992 and 2.4 per cent in 1993. In terms of real GDP, the declines are 11 per cent in 1992, 2.4 per cent in 1993, 2.6 per cent in 1994, and an estimated 2 per cent in 1995. The sharp downturn in 1992 is attributed to a 7 per cent fall in cotton production, which was reversed in 1993 and helped to limit the decline in gross output and GDP in 1993. Problems in the agricultural sector make 1995 figures somewhat suspect. Preliminary indicators suggest that GDP will contract a further 1 per cent in 1996.

The decline in industrial production initially was greater than the contraction of the economy as a whole, amounting to 13 per cent in 1992 and 8 per cent in 1993. This was due to several factors, the most important of which were the loss of input and output markets resulting from the dissolution of the USSR, and the increase in input prices resulting from the gradual withdrawal of state subsidies and the shift to market-oriented pricing mechanisms. At the same time, the drop in the production of building materials was less severe than in the rest of the central Asian region due to an increase in residential construction following the privatization of the housing sector after independence.

In 1994 and 1995 industrial production recovered, increasing by 1 per cent and 0.2 per cent respectively. The figures for 1995 may be optimistic, however, because of the poor agricultural performance in that year.

Uzbekistan's external trade performance has also been more favourable than that of most of the other republics of the former USSR. Its inter-republic trade balance, which had been in deficit in 1989 and 1990 by almost Rb3.5 billion (representing more than 11 per cent of GDP), recorded a surplus in 1991 due to a sharp decrease in imports resulting from the breakdown in inter-republic trade. Faced with a particularly serious disruption of its traditional food imports from the other republics of the former USSR by the end of 1991, Uzbekistan resorted to an increased use of barter and began to trade cotton for food from suppliers outside the former USSR. As a result the overall trade deficit contracted to 3 per cent of GDP in 1991 from 4 per cent of GDP in 1990.[1/] In 1994 the total two-way non-CIS trade exceeded $1 billion, but the trade deficit rose to 6 per cent of GDP. Official figures for 1995 indicate the trade balance recovered to an estimated $281 million.[2/]

In 1992 the country experienced a deterioration in the terms of trade as the price of imported energy rose. To compensate for this worsening of the external environment, Uzbekistan increased its sale of cotton to countries outside the former USSR. By 1993 the price of cotton sold to the former USSR countries had risen close to world levels, resulting in an increase in the value of Uzbekistan's trade with them, but almost two-thirds of its exports continued to be shipped to countries outside the former USSR.

In January 1992 the government introduced the first round of price liberalization to coincide with similar steps being taken in the Russian Federation. In 1993 they were forced to undertake many administrative price increases to discourage shoppers from the Kyrgyz Republic from crossing the border to shop with their "useless" roubles. It was not until late 1994 and at the insistence of the IMF that large-scale liberalization took place.

Despite attaining independence in 1991, Uzbekistan remained in the rouble zone for several years, thereby becoming vulnerable to the expansionist monetary policy pursued by the Central Bank of Russia and suffering high rates of inflation. From 169 per cent in 1991, consumer price inflation accelerated to 910 per cent in 1992, 885 per cent in 1993 and 1,281 per cent in 1994 before dropping in 1995 as a result of tighter monetary policy. Producer prices rose even faster, largely due to the higher weight assigned to traded goods in the wholesale price index.

Table 58. Uzbekistan: Price developments, 1991-95
(Percentage)

	1991	1992	1993	1994	1995[a/]
Consumer prices (End of period)	169	910	885	1,281	115
Producer prices (Annual average)	82	645	534	1,568	315
Wholesale prices (Annual average)	147	3,275	2,545	1,428	..

Source: European Bank for Reconstruction and Development, *Transition Report Update,* London, April 1996.

a/ Estimates.

In response to the lack of monetary control resulting from its continued membership of the rouble zone, the government of Uzbekistan decided to withdraw from the zone in November 1993, and to issue its own currency and take control of the country's monetary and foreign exchange policy. As a first step in this direction, the government issued a transitional currency known as the som-coupon and repealed an earlier requirement for exporters to surrender 60 per cent of their foreign exchange earnings. This was followed by a short transitional period, during which a number of further changes were introduced. These included the reintroduction of a 15 per cent hard-currency surrender requirement in January 1994, and the banning of the Russian rouble in the following April, when the som-coupon became sole legal tender. The latter measure was accompanied by the opening of a currency exchange in Tashkent, where the som-coupon's value was determined in open trading. In July 1994, the transitional som-coupon was replaced with the country's new currency, the som.

The establishment of its own monetary institutions permitted the government to adopt a tighter monetary stance, which has helped it to rein in the inflationary pressures affecting the economy. The annual rate of consumer price inflation was thus reduced from 1,281 per cent in 1994 to an estimated 115 per cent in 1995. A further decline is expected in 1996 to around 40 per cent.

The increase in officially estimated unemployment has also been less than that elsewhere in the former USSR. As with the other republics, however, the official data grossly understate the real level of employment. The reduction in employment has been far below that of output, and the incidence of hidden and under-employment is considered to be high.

B. THE ECONOMIC STRUCTURE

The physical environment

Uzbekistan is the most populous of the central Asian republics, with a total population of more than 22 million, and the second largest in terms of physical size, with an area of about 447,400 square kilometres. It is bordered by Kazakstan to the north, Turkmenistan to the south, the Kyrgyz Republic to the east, and Tajikistan to the south-east, as well as sharing a small frontier with Afghanistan in the south. The country also includes the autonomous republic of Kara-Kalpak.

The climate in Uzbekistan is marked by long hot summers, with July temperatures averaging 32°C and often rising beyond 40°C, and short but extremely cold winters with temperatures as low as -38°C. More than 60 per cent of the republic consists of desert and steppe, and almost all agricultural land requires irrigation. The bulk of the water used for irrigation is derived from the country's two major rivers, the Amu-Dar'ya and the Syr-Dar'ya, which flow from the Tien Shan mountains in the south-east to the Aral Sea in the north-west. The extensive diversion of water from these rivers to irrigate the country's vast cotton plantations has caused a number of serious environmental problems, however, the most serious of which is the drying of the Aral Sea.

Like many of the other central Asian republics, Uzbekistan is endowed with an abundance of mineral resources. The country has particularly rich deposits of hydrocarbons, and natural gas is an important export commodity. In addition, it has large reserves of silver, uranium, copper, lead, zinc, wolframite, tungsten and gold. It is the world's eighth largest producer of gold and possesses the world's largest single gold mine, Murantau, which accounts for 70 per cent of its total gold output.

The demographic base

The vast majority (71.4 per cent) of Uzbekistan's 22.1 million inhabitants in mid-1994 were ethnic Uzbeks, while 8.3 per cent were Russian. The country has an extremely high population growth rate of 2.5 per cent per year, and a birth rate of 3.5 per cent. The average age of the population is 23.9 years.[3/]

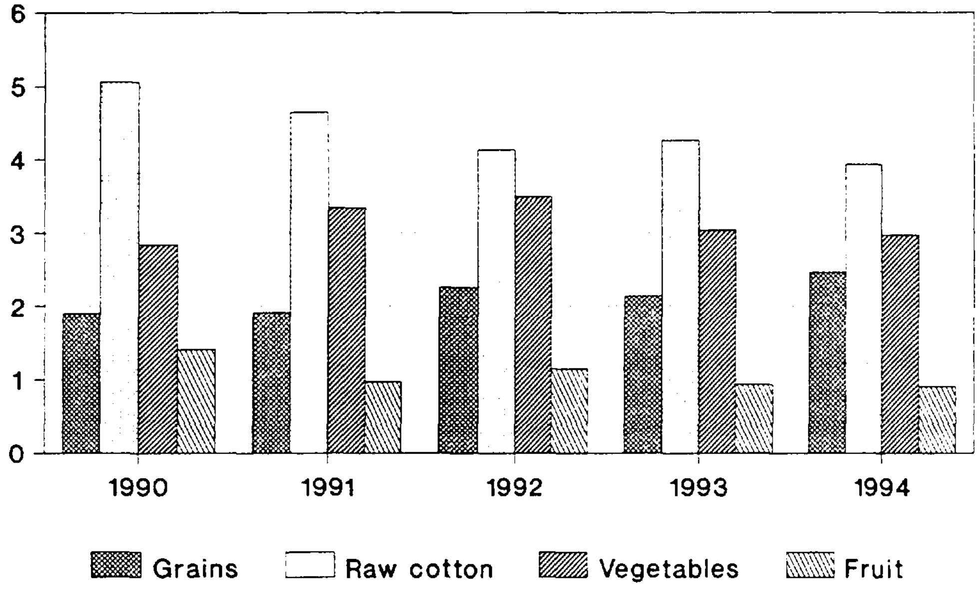
The country is heavily urbanized, with the latest available data showing that some 41 per cent of the population lived in urban areas in 1989. Tashkent, the capital, was the fourth largest city in the former USSR with a population of more than 2 million. Other important cities in the republic include Samarkand (with a population of 366,000), Bukhara (224,000) and the capital of the Kara-Kalpak Autonomous Republic, Nukus (169,000). In addition, the country has 12 other cities with populations of more than 100,000. As in many of the other central Asian republics, the indigenous population tends to be concentrated in the countryside while Russians and other Russian speakers are concentrated in the cities.

Until the early 1990s, the education system was based on the Soviet model. This pattern has begun to change in recent years, however, with a greater emphasis being placed on Uzbek history and literature and the study of the Arabic script. In 1989 more than 76 per cent of the pupils in day schools were taught in Uzbek, while 15 per cent used Russian.

Agriculture

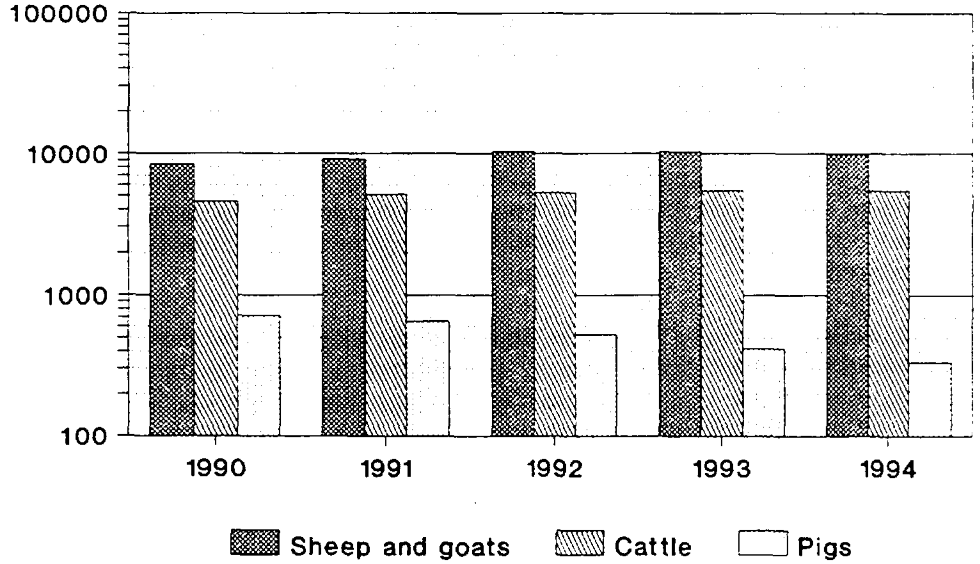
Agriculture continues to play an important role in Uzbekistan's economy, accounting for about one-third of the country's net material product (NMP) in 1994 and employing about 40 per cent

Fig. 22. Uzbekistan: Agricultural production
(Thousand tonnes)



Sources: State Statistics and Forecasting Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Fig. 23. Uzbekistan: Animal husbandry
(Thousand animals)



Sources: State Statistics and Forecasting Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

of the workforce. Almost all of the country's agricultural land requires irrigation, however, and some 4.2 million hectares are currently irrigated through a series of canals with a total length of 170,000 kilometres, using water diverted from the Amu-Dar'ya and the Syr-Dar'ya rivers. The extent of this diversion has been so great, and the resulting decline in the amount of water flowing into the Aral Sea so severe, that the sea has shrunk to almost one-half of its original size.

The most important crop is cotton, of which the country has become the fourth largest producer and second largest exporter in the world, following a determined effort to increase production through the development of irrigation in the post-Second World War period. The crop accounts for approximately 40 per cent of the value of agricultural production, and for a similar share of the land under cultivation. Although there has recently been a shift in government policy towards reducing the acreage sown to cotton in favour of food crops, cotton will remain a major source of Uzbekistan's export earnings for the foreseeable future following the recent emergence of Western Europe as an important market for the country's cotton lint.

Other major crops grown in Uzbekistan include grains, vegetables and fruits. Their importance has grown in recent years, moreover, in line with the government's policy of shifting the focus of agricultural production from cotton to alternative crops. The output of grain and fruit increased by 18.2 per cent and 35.8 per cent respectively in 1992, while that of vegetables increased by 17.8 per cent in 1991 and 4.4 per cent in 1992. By the end of 1994 grain production had risen 29.3 per cent while production of fruit and vegetables had actually fallen 7.1 and 11.1 per cent respectively.

Despite the fact that grain is a major crop, Uzbekistan continues to import about 75 per cent of its domestic requirements. In September 1994 the government announced plans to make the republic self-sufficient, and allocated 1 million hectares of land to grain production in 1995. Yields are projected to range from 35 to 40 tonnes per hectare.

Silkworm breeding and animal husbandry are also important agricultural activities in Uzbekistan. Much of the country's livestock rearing industry is geared to the production of wool, and Uzbekistan is the second largest producer of astrakhan wool in the region after Kazakstan.

Mining and energy

Uzbekistan possesses substantial mineral and energy resources including natural gas, oil, gold, silver, copper, zinc, lead, tungsten, wolfram and several rare metals. While a net importer of oil, the republic was one of the world's largest exporters of natural gas and produced over 47 billion cubic metres in 1994.[4/] Oil production doubled during the 1980s even though the output of some of the older fields declined in the latter part of the decade, due to a shortage of production equipment and spare parts. The main sources of energy consumed domestically are gas and hydroelectric power.

Uzbekistan's energy consumption expanded rapidly in the 1980s, outstripping the expansion of domestic production by a substantial margin. This resulted in a sharp decline in the volume of gas exports by some 50 per cent, and a quadrupling of the country's net energy imports.[5/] The development of Uzbekistan's energy resources is thus one of the highest priorities of the government. Existing wells are being upgraded and a number of agreements have been signed with foreign oil and gas companies for the increased exploration of oil and for an enhancement of the country's refining capacity.

These measures have resulted in the discovery of significant new fields, and the ongoing exploration of several known fields. Uzbekistan's estimated reserves of oil now stand at 244 million tonnes, and are likely to rise further as the exploration activity proceeds. It is believed that the Kokdumalak field alone, located to the west of the Surkhan-Dar'ya river, contains several hundred million tonnes of oil. Production has also increased significantly, from 2.8 million tonnes in 1991 to 6.5 million tonnes by 1994, and with a new well at the Minbulak field expected to come on stream the country hopes to become self-sufficient in oil in the foreseeable future. The known reserves of natural gas, currently estimated at 1,883 billion cubic metres, are also expected to increase as a result of the enhanced exploration activity, although more than 90 per cent of the new production is likely to have to be specially processed because of the high sulphur content of the gas.[6/]

Uzbekistan is the world's eighth largest producer of gold, with current production amounting to some 60-70 tonnes per year and total reserves estimated to exceed 4,000 tonnes. The Murantau mine, located in the Kyzylkum desert, is the largest in the world and accounts for 70 per cent of the country's gold production. Foreign interest in developing Uzbekistan's gold resources is high, and several ventures have already been entered into with foreign partners.

The country also produces over 80,000 tonnes of copper per year, almost 85 per cent of which comes from the Kalmakir open pit mine near the town of Sari Checku. Although the quality of the ore extracted from this mine is comparatively low, the industry does appear to be capable of profitable operations under market conditions. Considerable investment in new machinery and technology will be required to enable it to realize its full potential, however, since the copper mining industry, like much of the rest of the mining sector, is currently constrained by equipment shortages.

While Uzbekistan currently produces lead and zinc, the outlook for future production is not bright. According to a survey conducted by the World Bank in 1993, it is unlikely that the existing mines for either mineral would be profitable in a market environment. The ore contents are too low, and the distances from the mines to the concentrator are too large to make them economically viable.[7/]

Uzbekistan was also a significant producer of uranium. In recent years, however, the mining of this ore has declined and several mines have been closed due to a fall in demand. In its place the production of other minerals, such as those used in the production of construction materials, has been encouraged.

Manufacturing

Manufacturing in Uzbekistan remains limited. The bulk of the industrial sector, which accounts for approximately 30 per cent of NMP and 18 per cent of employment, is centred on the processing of agricultural raw materials. In 1990 light industry accounted for 39 per cent of industrial production, with agricultural processing accounting for 13 per cent. By 1994 the share of light industry had risen to 46.5 per cent of industrial production. Even so, only 12 per cent of the raw cotton, 20 per cent of the sheepskins and 60 per cent of the silk cocoons produced in Uzbekistan are processed locally. The other major branches of manufacturing, heavy industry and the fuel sector, accounted for 40 per cent and 9 per cent of total industrial production respectively.

Agricultural machinery, cotton harvesters and textile mill equipment are produced locally, and Uzbekistan is the home of the largest aircraft manufacturing enterprise in the former USSR. Much of the rest of Uzbekistan's manufacturing sector is resource-based, comprising mainly chemicals (especially fertilizer) and metallurgy. Of the 60 goods classified as "most important" in the former USSR, Uzbekistan produced only 12: natural gas, bridge cranes, mineral fertilizer, soft roofing materials, cotton fibre, cotton fabric, silk fabric, socks and stockings, other textiles, shoes, vegetable oil and conserves.[8/]

As in the other constituent republics of the former USSR, much of Uzbekistan's manufacturing industry has been geared to the production of intermediate goods for use in other republics. Under the system of inter-republic specialization adopted by the former USSR, Uzbekistan was regarded principally as an exporter of raw materials. At independence it thus produced 61.4 per cent of the former USSR's cotton, but only 5.8 per cent of the union's cotton fabric.[9/] Approximately 50 per cent of the republic's industrial production was for military use.[10/]

A study conducted by the World Bank in 1993 found that Uzbekistan's industry was still dependent on the former USSR for 75 per cent of its inputs and 60 per cent of outputs, as well as 70 per cent of its capacity utilization. As a result of this dependency on the former USSR, the dissolution of the union and resulting disruption of inter-union trade and payments systems has had a serious effect on the output of many of the country's industries.

Table 59. Uzbekistan: Dependence of industry on the former USSR, 1993

	Percentage of inputs from the former USSR	Percentage of output to the former USSR	Share of capacity utilization (Percentage)
Total	**75**	**60**	**70**
Processed foods	35	45	65-70
Light industry	30-35	30-35	..
Forestry, woodworking, pulp and paper	95	5	90
Chemicals and petrochemicals	70	70	88
Building materials	30	45	80
Metallurgy			
Ferrous metallurgy	55	50	65
Non-ferrous metallurgy	50	70	45
Metal working and machine-building			
Agro-machinery	80	60-65	41
Machine-building	90	90	80-85
Cotton machinery	90	80	80
Radio electronics	70	70	81

Source: World Bank, *Uzbekistan: An Agenda for Economic Reform*, Washington DC, September 1993.

Within the domestic economy Uzbekistan's manufacturing sector has traditionally been marked by a high degree of concentration, and several of the country's enterprises were monopolies even at the union level. Anti-monopoly legislation passed in March 1993 defined any enterprise, or specific product, with a market share of more than 35 per cent as a monopoly. By October of that year, the Ministry of Finance had identified 349 monopolistic enterprises and 649 monopoly products at the regional and national level.[11/]

Transport and communications

Uzbekistan has a relatively well-developed transportation system, although it faces serious problems due to lack of maintenance and the age of much of the existing infrastructure. The telecommunications system is also grossly inadequate to meet the demands likely to be placed upon it in the foreseeable future as efforts are made to develop the economy. Large amounts of investment will therefore be needed to upgrade the existing transport and communications facilities to enable them to meet the expected changes in demand.

The road network in Uzbekistan consists of some 42,000 kilometres of main roads, 96 per cent of which have a hard surface, and about 90,000 kilometres of local roads. Most parts of the country are connected by road, and the road density is relatively good in the cities. The rail system consists of 3,500 kilometres of track, of which 270 kilometres are electrified; there are 600 mainline locomotives. The air transport system includes nine civil airports, four of which can accommodate Boeing 747s. According to a recent survey of the transport system, however, 1,000 kilometres of rail track need to be rehabilitated, and almost 40 per cent of the locomotive fleet and one-third of the country's trucks have exceeded their service lives.[12/] Most of the equipment and technology in use dates from the 1950s and 1960s.

Uzbekistan has historically had a relatively high transport intensity, with one estimate suggesting a figure of 2.8 tonne/kilometres of freight transport per dollar of GDP, which exceeds the corresponding figures for the USA and western Europe by factors of 3.5 and 10 respectively.[13/] As the price of transportation services rises to reflect their true costs more closely, however, the demand for transport services will inevitably decline. The structure of demand will also shift, with the demand for long-distance transport likely to decrease and the demand for short-haul transport likely to increase. This will result in an increased usage of road rather than rail transport.

The inadequacy of the telecommunications system in Uzbekistan is already being addressed. Upgrading the system to international standards will not be easy, however. While not as low as in some of the other central Asian republics, telephone density in the country is quite low at 7.2 lines per 100 inhabitants. International services are particularly difficult to obtain, since all external connections were previously routed through Moscow.

Table 60. Uzbekistan: Telephone service, 1990

Total telephone lines (Thousands)	
Urban	809
Rural	193
Home telephone distribution (Per thousand residents)	
Urban	98.5
Rural	16.1

Source: The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, October 1990.

Several projects are already under way to improve Uzbekistan's telecommunications infrastructure. The construction of a cellular network with a capacity for 60,000 lines was commissioned in 1991.[14/] Since then several other projects have been initiated, including a satellite connection to international services via Turkey, and a Turkish/French/Uzbek joint venture to produce and install digital switches. The joint venture will result in the addition of 70,000 lines in eight cities.

Banking and finance

In 1988 the then USSR introduced a two-tier banking system across the union. Further steps toward a reform of the banking sector were taken in the Uzbek Republic in 1991 with the passage of the Banking Law, which was followed by the approval of the statutes of the Central Bank in 1992.[15/] Central banking and commercial banking functions are, however, not yet clearly delineated, and in reality little restructuring has taken place. The sector is still largely governed by the All Union Law on State Banking and continues to be dominated by four large state-owned banks – the Agro-Industrial Bank, the Industrial-Building Bank, the Savings Bank of Uzbekistan (SBU) and the National Bank for Foreign Economic Activity (BFEA) – despite the fact that the existing legal framework permits the operation of commercial, private and cooperative banks.

The Central Bank of Uzbekistan (CBU) was established from the local branch of Gosbank. The role of the former foreign trade bank, Vneshekonombank, was assumed to a large extent by the National Bank. The CBU formulates the country's monetary policy and exercises supervisory functions over the banking system, but its ability to conduct an independent monetary and exchange rate policy is curtailed by the government. The country's international reserves are held by the National Bank for Economic Activity. The CBU also assumes important financial intermediary functions, obtaining about 70 per cent of the deposits of the Savings Bank which it lends to the commercial banks.

Uzbekistan's two large sectoral banks, the Agro-Industrial Bank and the Industrial-Building Bank, were restructured as commercial joint-stock banks in 1991. With a wide network of branch offices, these two banks account for almost 90 per cent of the credits channelled to state-owned enterprises. These banks are funded by the Central Bank and the Savings Bank and their lending is almost entirely directed to state-owned enterprises. Considerable control is exerted on both of these banks by the government which, *inter alia,* establishes their lending policies and sets their borrowing and lending rates.

The branches of the Savings Bank have been reorganized under the Savings Bank of Uzbekistan, which is owned by the government but is directed by the Central Bank. As noted above, the SBU is required to pass on 70 per cent of its deposits to the Central Bank, but it can lend the remaining 30 per cent to other borrowers. So far, these funds have mostly taken the form of housing construction loans.

The National Bank for Foreign Economic Activity was established in 1991 as a joint-stock commercial bank to implement the foreign business activities of the government, and to replace the Soviet Vneshekonombank. The bank holds the government's foreign exchange reserves and plays an important role in domestic investment and financing, and has correspondent relationships with almost 80 foreign banks. Its lending policy has been established by the government and is primarily directed towards the financing of the state-owned enterprise system.

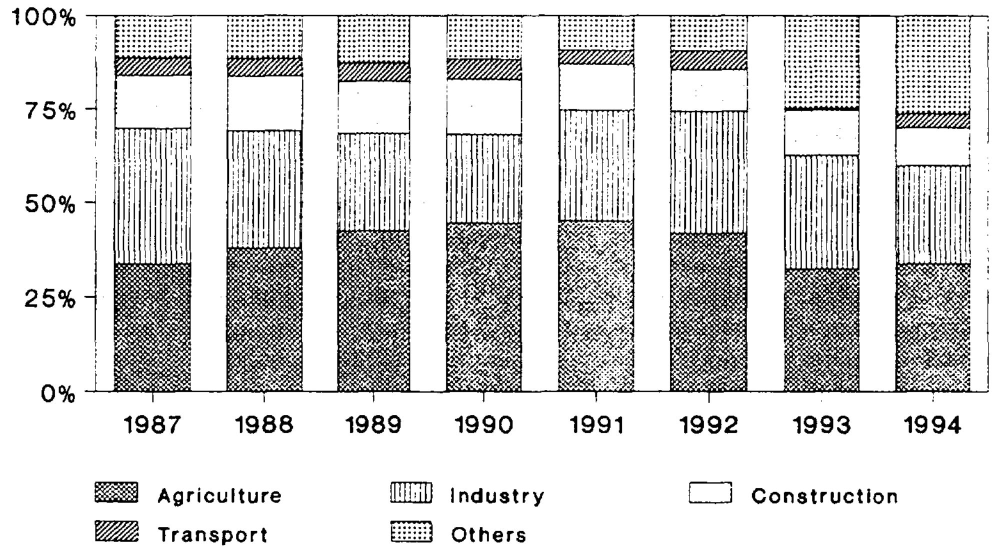
More than 30 new joint-stock commercial banks have been registered since 1990, often with state-owned enterprises and ministries holding a major share. The main objective of these new banks has been to mobilize funds for their owners. This ownership structure has had a considerable effect on their lending terms and activities. During 1991-94 several new joint-venture banks were also formed with foreign equity participation. In these enterprises the equity share of the foreign bank is restricted to 49 per cent and the minimum capital requirement is Rb500 million, compared to Rb50 million for domestically-owned banks.[16/]

Trade, tourism and other services

Trade, tourism and other services did not have a large role in the economy of Uzbekistan before the country attained independence. As the economy becomes more market-oriented, however, the role of trade establishments and business support services in particular will increase dramatically.

Tourism has been targeted for particularly vigorous promotion by the government, which believes that Uzbekistan will prove especially attractive to "cultural" tourists because of its location along the historic Silk Route and the existence of more than 4,000 important historical monuments. The growth of tourism will require the construction of an appropriate infrastructure, however, and in particular the provision of suitable hotel accommodation. Such accommodation will also be required for the increasingly important business tourism, and several business hotels have already been built or are under construction, often with the participation of foreign investors, in Tashkent and the other business centres.

Fig. 24. Uzbekistan: Net material product
(Percentage share)



Sources: State Statistics and Forecasting Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Demand structure of GDP

During 1987-90 aggregate demand grew significantly in Uzbekistan. Both households and government increased their respective shares of GDP in consumption and investment. As a result, the resource balance with the remainder of the former USSR deteriorated. The deficit was financed by substantial union transfers, which amounted to almost 20 per cent of GDP in 1991 according to official budget data.

Household consumption has accounted for the greater part of demand and has been the least volatile as a percentage of GDP. While the share of total consumption fell in 1991 this was due principally to the fall in government consumption, which declined significantly as a percentage of GDP in response to government retrenchment in the face of a threatened loss of transfers following the dissolution of the former USSR.

Table 61. Uzbekistan: Demand structure of GDP, 1987-93
(Percentage)

Expenditure shares	1987	1988	1989	1990	1991	1992	1993
Household consumption	58	58	59	61	56	45	57
Government consumption	21	20	23	26	21	20	25
Investment	29	27	32	32	19	44	15
Resource balance	-8	-6	-13	-19	4 a/	-9	3

Sources: World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993; *Statistical Handbook 1995 – States of the Former USSR,* Washington DC, 1995.

a/ Budget figures report a union transfer of 19.5 per cent of GDP.

External trade and payments

By all relevant criteria, Uzbekistan is a very open economy. According to estimates prepared by the IMF, its total trade (imports plus exports) accounted for 154 per cent of GDP in 1992. Trade with the former USSR alone accounted for 64 per cent of GDP, even though it had declined in 1992 relative to earlier years due to payment and other problems. Official figures for 1994 indicate that total trade was still 100.5 per cent of GDP while trade with republics of the former Soviet Union had fallen to just over 50 per cent of GDP. Within the former USSR, the Russian Federation and the four other central Asian republics accounted for 90 per cent of the country's trade. After the Russian Federation, which accounted for 48 per cent of inter-republic total trade, Tajikistan was the most important trading partner, accounting for 19.0 per cent of Uzbekistan's inter-republic exports and 18.9 per cent of its imports.

The country's main exports are cotton, basic metals, machinery, agricultural and aviation equipment, textiles and fertilizers. Natural gas is also an important export item. Imports have historically been dominated by oil-, coal- and petroleum-related products, as well as foodstuffs, raw materials and consumer goods. Uzbekistan's imports of oil and oil-related products more than offset its exports of gas.

Trade with countries outside the former USSR is focused mainly on the industrialized countries of Europe. In 1993 these countries accounted for 43.7 per cent of the dollar value of Uzbekistan's exports beyond the former USSR, and 47.7 of its imports from these countries. In 1993 Switzerland was the country's most important source of imports outside the former USSR, followed by Germany, Turkey and the Netherlands. The main export markets outside the former USSR were Taiwan Province of China, Nigeria, Indonesia, Slovenia and Belgium. The principal exports to the countries outside the former USSR are raw materials, processed industrial products and cotton fibre, while the most important imports from these countries comprise foodstuffs (especially wheat), machinery and consumer goods.[17/]

Table 62. Uzbekistan: Direction of trade with countries outside the former USSR, 1992-94
(Percentage)

	Exports			Imports		
	1992	1993	1994	1992	1993	1994
Socialist countries[a/]	20.0	12.7	19.9	13.3	8.3	17.1
Asia	5.1	3.8	14.8	7.6	3.7	8.0
Europe	14.9	8.8	5.1	5.7	4.7	9.1
Industrial countries	57.0	54.2	68.8	36.9	54.7	71.0
Asia	0.9	2.8	..	1.2	3.7	..
Europe	51.7	43.7	..	33.5	47.7	..
Western hemisphere	4.4	7.8	..	2.3	3.3	..
Developing countries	22.9	33.1	29.1	9.9	36.9	31.3
Asia	8.7	24.0	13.1	5.8	7.7	19.3
Europe	9.3	7.3	15.2	3.9	28.5	9.2
Middle East	2.1	1.8	0.7	0.2	0.7	2.1
Western hemisphere	2.8	-	-	-	-	4.4
Other[b/]	-	-	-	39.9	-	-

Sources: International Monetary Fund, *Economic Review: Uzbekistan*, Washington DC, March 1994, p. 78; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

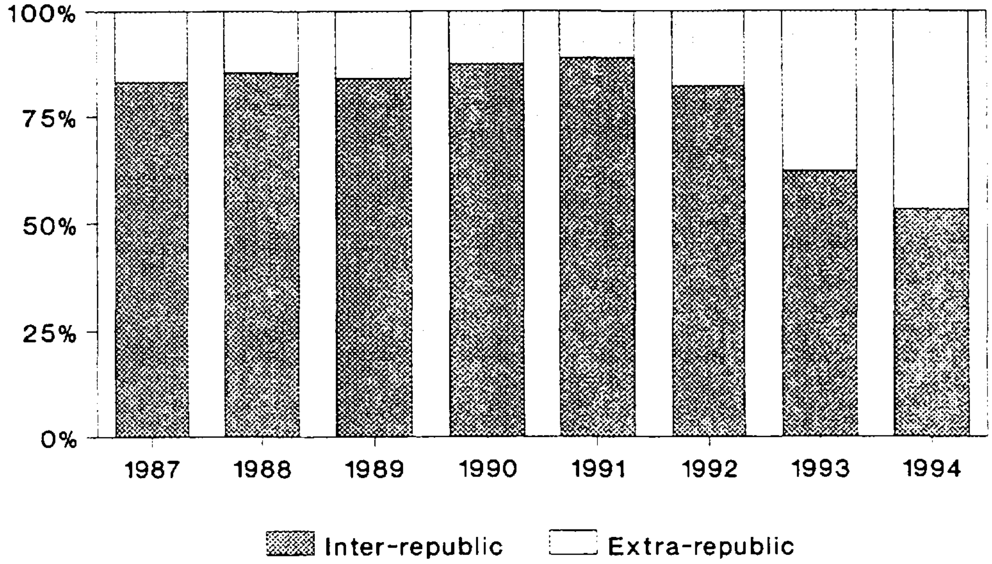
a/ Current and former including: Bulgaria, China, Czechoslovakia, Hungary, People's Democratic Republic of Korea, Mongolia, Poland, Romania, Viet Nam and Yugoslavia.

b/ Not included elsewhere.

Because of the large energy-based component of its international trade, Uzbekistan experienced a sharp deterioration in its terms of trade in 1992. By 1993, however, the increase in the price of the country's cotton exports to the other republics of the former USSR to close to world levels had more than offset the deterioration suffered in 1992.[18/] In line with the pattern prevailing elsewhere in central Asia, moreover, Uzbekistan has in recent years substantially increased the volume of its trade conducted through barter arrangements, especially with China.

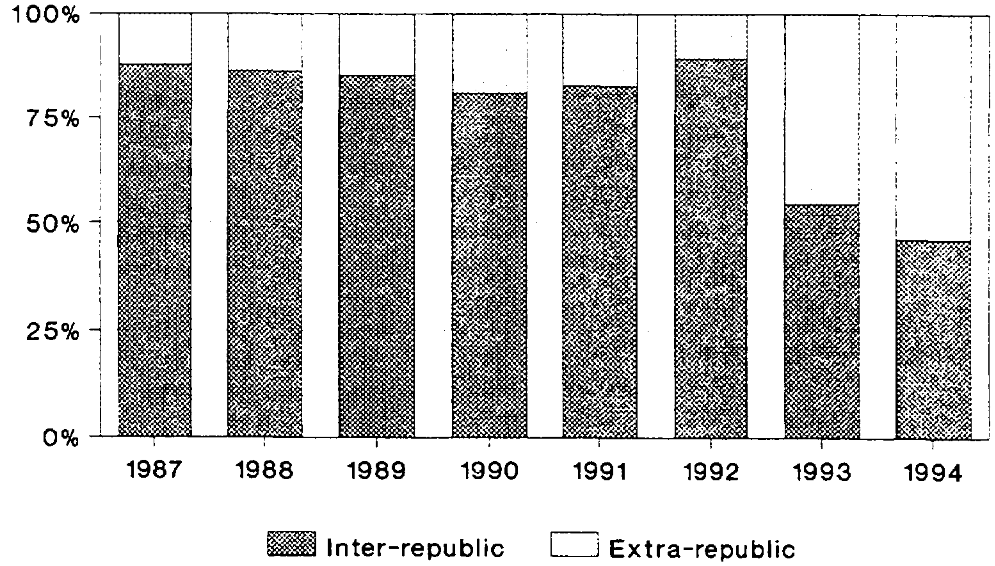
Uzbekistan does not have a significant foreign debt and is unlikely to face any debt-related problems in the foreseeable future. Having signed the "zero option" agreement with the Russian Federation in November 1992, under which Russia assumed the share of the former USSR's obligations allocated to Uzbekistan, the country has not inherited any debt. At the end of 1992 its total foreign debt consequently stood at a mere $123 million, equivalent to 6.1 per cent of GDP, and was believed to have risen to 11.5 per cent of GDP by the end of 1993, with its servicing requirements amounting to 5.5 per cent of exports. With its vast reserves of gold, oil and natural gas, and with substantial foreign investments flowing into the country to develop these resources, Uzbekistan will be well able to maintain an equilibrium in its external balance in the coming years.

Fig. 25. Uzbekistan: Distribution of exports
(Percentage share)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Fig. 26. Uzbekistan: Distribution of imports
(Percentage share)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Table 63. Uzbekistan: Composition of trade with countries outside the former USSR, 1992 and 1993
($ million)

	Exports		Imports	
	1992	1993[a/]	1992	1993[a/]
Total[b/]	**869**	**526**	**929**	**742**
Fuel, mineral raw materials, metals	67	3	-	2
Raw materials and processed industrial products	696	464	50	42
Processed foods	-	1	685	439
Cotton fibres	673	448	-	-
Chemical products, fertilizers, rubber	39	23	3	58
Machinery, equipment and transport goods	-	2	-	51
Industrial consumer goods	-	5	3	26
Other	67	29	189	123

Source: International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994, p. 77.

a/ January to September only.
b/ Does not include the Airbus lease-purchase agreement.

Table 64. Uzbekistan: Balance of trade, 1993 and 1994
($ million)

	1993[a/]	1994[a/]
Exports	292.4	362.4
Imports	434.0	370.8
Balance	**-141.6**	**-8.4**

Source: UNIDO national economist.

a/ January to May only.

C. THE MACROECONOMIC POLICY ENVIRONMENT

Economic reforms

Relatively few economic policies intended to facilitate a shift to a market-oriented economy were introduced in Uzbekistan until the end of 1993. The government's efforts were directed mainly at setting up new institutions to perform the functions which had formerly been directed centrally from Moscow. These institutions were intended to replicate the previous institutional structure with a view to replacing the erstwhile centralized institutions of the former USSR with national institutions to manage and control the economy.

Some reform did nevertheless take place through the enactment of a series of legislative measures designed to provide the basic legal framework for a gradual shift to a market economy. The first of these measures, the Law on Ownership, was enacted on October 31, 1990, and was followed on February 15, 1991 by the enactment of the Law on Business Undertakings, the Law on Enterprises, and laws governing the taxation of individuals and corporations. The next major steps were taken on June 14, 1991, when the Law on Foreign Investments legalizing the establishment of joint ventures with foreign participation in various fields was enacted, and February 10, 1992, when a decree on the creation of a Committee for State Property Management and Privatization was promulgated to set the framework for privatization in various fields.

It was not until January 1994, however, that firm steps were taken to accelerate the shift towards a more market-oriented economy through the issue of a presidential decree "on measures to deepen economic reform, protect private ownership and develop entrepreneurship". This decree was indicative in nature, providing general guidelines for a wide range of economic, financial and legal reforms aimed at accelerating the privatization process and the growth of entrepreneurial activities, but leaving the formulation and implementation of specific legal, policy and institutional arrangements to a newly established inter-agency Council on Economic Reform, Entrepreneurship and Foreign Investment. This council is attached to the Office of the President, and includes representatives of the Ministry of Foreign Economic Relations, the Ministry of Finance and the Ministry of Justice.

As a result of these measures the government has won the increased support of the major multilateral funding institutions and several bilateral donors. In January 1995 the IMF extended a systemic transformation facility (STF) of $74 million, and in March the World Bank announced plans to provide more than $900 million in aid, including $45 million for technical assistance, $300 million for balance-of-payments support and $580 million for investment financing and export credits. In December 1995 the IMF made a further $259 million available. Of this, $185 million is a 15-month stand-by agreement and $74 million is the second tranche of the STF.

Despite the release of this credit, the IMF remains concerned about the country's economic reform policy, especially its failure to make significant headway on privatization. In fact, while targets such as that for the fiscal deficit have been eased (4 per cent of GDP for 1996 versus 3.5 per cent in 1995), the IMF has indicated that it expects further reform in several other areas. As well as the privatization of the medium and large enterprises, these areas include:

- enterprise reform;
- reform of monetary policy;
- a new Central Bank law;
- a new commercial banking law;
- improved bank supervision;
- restructuring of bank loan portfolios;
- reform of the payments system;
- reduction of state orders for cotton and grains and increases in the prices given for those goods;
- reduction of government borrowing from the Central Bank;
- creation of a Treasury;
- abolition of the foreign exchange budget; and

- foreign trade liberalization, including a reduction in the number of goods requiring an export licence and on which export duty is paid, a lowering of the maximum export duty, and simplification of the import duty regime.

Fiscal policy

Uzbekistan operates a federal budgetary system under which the budgets of local authorities are financed by shared taxes and fees as well as by direct transfers from the national budget. The revenue sharing schemes underlying this system are approved annually as part of the budget. In addition to the power to raise taxes and engage in public spending, local authorities also have the right to borrow and issue credit guarantees to enterprises under their jurisdiction.

Since January 1992 Uzbekistan has not received the large budgetary transfers from the former USSR that previously constituted a major source of its financial resources. Accounting for approximately 40 per cent of state revenue (almost 20 per cent of GDP) in 1990 and 1991, this loss has seriously affected the country's fiscal position. The government responded to these changed circumstances with a review of the tax system in early 1992, which involved the replacement of the existing sales tax with a VAT and the introduction of excise taxes. In addition, the government's expenditure was tied to its monthly receipts, with priority given to the payment of wages, subsidies and transfers, and the import of food, medicine and other strategic goods.

In 1992 the state deficit was reported at 10.8 per cent of GDP, but after adjustments to accounting procedures, the IMF estimates that it was closer to 12.1 per cent of GDP.[19/] More than 30 per cent of the revenue collected in that year originated from the new VAT, and a further 22 per cent was gained from taxes on the sale of cotton. During the first three quarters of 1992 the strict spending limits were adhered to, and even though the fiscal stance was relaxed in the last quarter, government expenditure over the year as a whole declined to 43 per cent of GDP, from 53 per cent of GDP in 1991. To achieve this reduction a large proportion of planned investment and maintenance expenditure was cut, delayed or financed with extra-budgetary funds.

In 1993 the government tried to limit the formal budget deficit to 5 per cent of GDP. Changes were made to the tax code in January 1993, but expenditure levels were not cut. The results were very good, with the deficit being held at 3.9 per cent of GDP, but the goal was reached largely by a further shift to extra-budgetary financing. The IMF estimates that without recourse to these funds the budget would have been in deficit by 20 per cent of GDP in 1992 and 34 per cent in 1993. In 1994 the overall deficit was kept at 7 per cent of GDP, and in 1995 it was 4 per cent.

The new measures contained in the tax law of January 1993 include:

- a 30 per cent tax on depreciation allowances and a 6 per cent resource charge on material outlays;

- the elimination of the top rate of 60 per cent on personal income and the raising of the two lowest rates to 14 per cent and 16 per cent;

- an extension of the VAT to wholesale and retail sales, and the lowering of its rate from 30 per cent to 25 per cent; and

- a 35 per cent tax on foreign exchange earnings to replace the 60 per cent surrender requirement that was abolished with the introduction of the som.[20/]

Monetary policy

Uzbekistan remained a member of the rouble zone, and hence subject to the monetary policies pursued by the Central Bank of Russia (CBR), for several years after achieving independence. It was not until July 1993, when the CBR delinked the rouble circulating in the Russian Federation from that circulating in Uzbekistan, that the Central Bank of Uzbekistan began to exercise some degree of monetary control. With the introduction of the transitional som-coupon in November 1993 that separation was made formal and permanent.

Monetary policy in Uzbekistan has not been excessively tight. Until the middle of 1993 credit expansion was rapid and the policy stance was looser than that of the Russian Federation. By 1994, however, a somewhat tighter monetary stance began to be adopted, resulting in the deceleration of inflation to 550 per cent in that year and a continuing slowdown in 1995 to around 115 per cent.

Trade policy

Uzbekistan's foreign trade is highly centralized and planned in accordance with national development priorities. One of the principal aims of the trade policies pursued by the government of Uzbekistan is the expansion of exports through the promotion of increased investment in export oriented industries. In particular, this policy aims to change the country's status from being primarily an exporter of raw and semi-processed goods to becoming an exporter of finished goods, especially in the field of textiles, through an increase in the domestic value-added of its resource-based exports. This policy of increased downstream processing inevitably also implies a reduction in the country's reliance on imported consumer goods in general, and foodstuffs and energy in particular. Steps have already been taken to increase the production and range of locally manufactured consumer goods.

Another important objective of the government, at least in the short term, is the restoration of Uzbekistan's disrupted trade links with the republics of the former USSR, and by the beginning of 1993 the country had signed trade agreements with Belarus, Estonia, Kazakstan, the Kyrgyz Republic, Latvia, the Russian Federation, Tajikistan, Turkmenistan and Ukraine. Most of these agreements involve barter arrangements because of the widespread shortage of foreign exchange, and are cleared on the basis of world market prices prevailing at the time the agreement is entered into. The majority of these inter-republic trade flows are subject to government control and managed by a government agency, Uzcontractorg, which obtains export products from domestic suppliers through the state-order system at fixed prices. The most important commodities traded through these barter arrangements are cotton fibre, which is exported from Uzbekistan, and oil and petroleum products, which are imported mainly from the Russian Federation.[21/] Other important products traded in this manner include food products, chemicals, non-ferrous metals and machinery.

Over the longer term, the government's principal trade policy objective is to reduce Uzbekistan's continued heavy trade dependence on the countries of the former USSR, and the Russian Federation in particular. During the past few years the country has therefore entered into bilateral payments agreements with China, India and Indonesia, and bilateral trade agreements with China, Finland, Hungary, India, Indonesia, the Islamic Republic of Iran, the Republic of Korea, Malaysia, Pakistan, Poland and Turkey.[22/] While the latter agreements provide for settlement in convertible currencies, a large proportion of the individual transactions conducted by Uzbekistan with these countries has also been based on barter.

Trade with countries outside the former USSR is under the control of the Ministry of Foreign Economic Relations, and most of Uzbekistan's major exports, including oil, gas, electric energy, coal, metallic ores, metal products, cotton and a number of food products, are subject to an export licence requirement from the ministry. In addition, the export of many products is subject to duties ranging from 10 per cent to 50 per cent, while the foreign exchange earnings of exporters are subject to a 15 per cent surrender requirement.[23/] Several products, mainly foods, may not be exported at all.

A major constraint on the expansion of Uzbekistan's exports outside the boundaries of the former USSR is the inadequate quality of many locally produced goods. The development of international export markets will therefore require an upgrading of the quality of several products where the country has competitive potential but the present product does not meet international standards. A case in point is the silk industry, where the quality of the cocoons and the dyes used for printing need to be significantly improved if exports are to be increased.

Meanwhile, in an effort to diversify its import sources and facilitate the import of consumer goods, the government announced the suspension of all tariffs on imports from countries outside the former USSR between January 1994 and July 1995. At the same time, the Ministry of Justice, the Ministry of Foreign Economic Relations and certain other interested ministries were required to draw up a list of items whose imports would be prohibited.

Box 3. Uzbekistan: Major trade agreements

* GATT observer status (June 1994).

* EC Trade and Cooperation Agreement (December 1989) with USSR remains in force, but not signed by Uzbekistan.

* Other OECD countries have granted MFN and/or GSP status, some on an exceptional, temporary or *de facto* basis.

* Economic union with the CIS countries signed September 1993. Bilateral barter and inter-governmental agreements in place with CIS countries and some former CMEA partners.

* Single Economic Space with Kazakstan and the Kyrgyz Republic (January 1994).

* Member of the Economic Cooperation Organization (ECO) formed by Turkey, the Islamic Republic of Iran and Pakistan.

Foreign exchange policy

Until the end of 1993 Uzbekistan's foreign exchange policy was determined by the Central Bank of Russia as the country remained in the rouble zone. Frustrated by the inefficiency of the system, Uzbekistan followed the lead of several other republics of the former USSR and left the rouble zone in November 1993. This was accompanied by the introduction of a transitional currency, the som-coupon, which initially circulated alongside the rouble but became the sole legal tender in April 1994, and was itself replaced by Uzbekistan's new currency, the som, in July of that year. The som is subject to a managed float, with its daily value being determined by transactions conducted in a newly opened currency exchange in Tashkent. As indicated by a persistently large spread between the official and black market rates, however, the som is less than fully convertible.

The foreign exchange regulations in force in Uzbekistan still contain several elements of the old system, but are being progressively reformed. A particularly important step in this direction was taken in January 1994, when a presidential decree was issued liberalizing several features of the exchange rate system. Specifically, the decree called for:

- the National Bank for Foreign Economic Activity to create the conditions needed for persons to open foreign currency accounts with interest payments at internationally competitive rates in order to enable an earlier decree issued in 1991 legalizing foreign exchange accounts to become effective;

- the introduction of a centralized service for foreign exchange cash management and the removal of restrictions on the legal import of foreign currency by domestic and foreign citizens; and

- the provision of bank credits in national currency and foreign exchange to importers in order to stimulate private entrepreneurial activity.

A decree issued in June 1995 abolished a previously prevailing $500 per year limit on the amount of foreign exchange that could be bought by residents of Uzbekistan. In order to qualify for this improved access to foreign exchange, however, the firms in question must be joint ventures, exporters, working on government priority projects, and not in arrears to suppliers or banks. At the same time, the new decree requires firms receiving loans in dollars to receive them in som and then convert them into dollars, thereby imposing an unnecessary transaction charge which benefits the government's coffers. Continued shortages of foreign currency have made exchanges difficult, however, and the president personally ordered banks to make over $120 million available for hard-currency purchases in the second half of 1995. There have also been reports that the government intends to introduce convertibility in 1996.

Policies towards human resource development

Although Uzbekistan has a large pool of educated and technically skilled labour, there is a severe shortage of the skills required for the transition to a market economy and the efficient functioning of the economy within a market-oriented system. Major efforts will therefore have to be made in coming years in order to provide manpower support for the reform process. In certain areas such as finance, where the lack of skills is particularly problematic, efforts have already been made to remedy the situation, often with external financial and technical assistance. This is exemplified by the establishment of a regional bank training centre (RBTC) funded by 30 banks from the Kyrgyz Republic, Tajikistan and Uzbekistan as well as international donors, which is to provide practical training in banking to approximately 800 pupils per year.

On a more general level, the government has begun to give greater priority to basic education and training than in the past, and to create a new legal and institutional framework for education. This process began in 1992 with the enactment of a law upholding the right to life-long education and granting workers paid leave for part-time education and training. A further provision of the new law allowing the establishment of private schools and granting the pupils of these schools the right to take public exams was rescinded in 1993, however, when it became clear that many of these private educational institutions were primarily religious in character and often financed from abroad.

Table 65. Uzbekistan: Educational institutions, 1990

	Number of institutions	Students
Secondary schools	8,329	4,649,000
Secondary specialized schools	244	277,300
Higher schools and universities	44	331,600

Source: Europa Publications Ltd, *The Europa World Year Book 1993,* London, 1993.

Environmental policies

The principal environmental issue in Uzbekistan is the shrinkage and increased salinity of the Aral Sea as a result of the nearly total cutoff of inflows from the Amu-Dar'ya and the Syr-Dar'ya rivers for irrigation. Since the mid-1960s the depth of the lake has dropped by 15 metres, its surface area has shrunk from 68,000 to 37,000 square kilometres and its salinity has increased from 10 grammes per litre to 30 grammes per litre. The drying up of the lake has also led to large increases in the salinity of the soil in the Aral basin and decreases in its fertility. Other critical environmental issues include:

- the overuse of pesticides, which polluted much of the ground water and the Aral Sea;
- the disposal of solid and hazardous waste;
- water contamination from municipal and industrial sources;
- industrial pollution in the Fergana Valley; and
- the impact of mining activities (gold, uranium and lead) on air pollution and water quality.

Strict environmental standards were established by the former USSR, but have not been observed. The Ministry of Environment, also known as The State Committee for the Protection of Nature, is responsible for formulating new environmental policies, and has been engaged in preparing standards governing the exploitation of Uzbekistan's natural resources, setting permissible emission levels, and devising measures to ensure an adequate implementation of existing regulations.

D. POLICIES TOWARDS INDUSTRY

Privatization

The process of privatization in Uzbekistan was initiated through the enactment of the Law on Destatization and Privatization of 1991, which was amended in May 1993. The formulation and implementation of the privatization programme has been entrusted to the Committee for State Property Management and Privatization (CSPMP), which was established as a permanent committee through a presidential decree issued in February 1992. The committee, which is directly responsible to the Supreme Soviet and the Cabinet of Ministers, is based in Tashkent and operates through 14 regional branches.

The Law on Privatization gives priority to the privatization of small firms with assets of less than Rb5 million in 1992 engaged in trade, catering, services and local industry, which are to be privatized at a local level. The initial programme does not provide for the privatization of enterprises with important forward linkages, such as mining, metallurgy, pharmaceuticals production and other technology-intensive industries, and transportation. The introduction of these measures led to few concrete results until mid-1995, with government ownership and control continuing in all of the important sectors of the economy. In mid-1995, however, the process of privatization was given a boost by an announcement that the government was considering new methods of converting all remaining state-owned firms into joint-stock enterprises.

The bulk of the privatization projects launched to date have been initiated by worker collectives, although individuals and families have also played a role in the privatization of very small establishments. Worker collectives and employees of enterprises are eligible for a significant discount on the assessed value of their firm, and also have access to bank credits, repayable in equal instalments over three years, for the purchase of shares issued by their companies.

All privatization plans have to be approved by a two-thirds majority of the workers' collective, and subsequently by the privatization committee. Once approval has been granted a joint-stock company is created and the shares of the enterprise to be privatized are transferred to this new entity, the shares of which are owned collectively by the firm's employees and cannot be transferred to outside shareholders. Consequently, privatization through workers' collectives has resulted in collective rather than individual ownership. These newly created firms must be registered with the Ministry of Finance and are expected to retain the "profile" of the former state-owned enterprise, maintaining the existing level of employment and continuing to provide the services or produce the output of the former entity.

The proceeds from the sale of state-owned enterprises are collected by the Uzbekistan State Fund, or Uzgosfund, which has been especially established within the Ministry of Finance for this purpose. The fund is also intended to administer the shares retained by the state in partially privatized enterprises, and to exercise managerial control over them.

Until the end of 1993 the privatization process had been quite narrow in scope and excluded large-scale enterprises and enterprises with important linkages to other sectors. Even the privatization of small enterprises, which had made some considerable progress, had been subject to a number of constraints. First, the case-by-case method and complex bureaucratic procedures adopted by the government slowed down the implementation of the process. Secondly, in the absence of a voucher system of the kind employed in the Russian Federation and several other economies in transition, access to finance constituted a major constraint. Thirdly, the economic conditions for new private enterprises were often not conducive to the privatization of a wider range of enterprises.

In January 1994, the president of Uzbekistan issued a decree "on measures to deepen economic reform, protect private ownership and develop entrepreneurship" which was accompanied by the establishment of a Republican Auction Centre, with the assistance of the United States Agency for International Development, to facilitate an acceleration of the pace of privatization. The centre is directed by the CSPMP and entrusted with the selling of shares to the public through auctions. The sectors identified for privatization by this means include energy, machine building, medical services and tourism.

In order to support the achievement of its aim of speeding up the privatization process, the presidential decree of January 1994 provided for a number of changes to the existing policies towards privatization. The most important of these were the following:[24/]

- Companies with a closed shareholding and limited transferability of shares as a result of privatization through workers' collectives were to be reorganized as open joint-stock companies in order to permit a wider range of investors, including foreigners, to participate in the process of large-scale privatization.

- The privatization process was to be extended to include a selected number of core industries, notably the machine-building and chemical industries, with foreigners being permitted to acquire shares. As an initial step in the privatization of core economic activities, the tobacco industry was offered for privatization and the UK-based firm British American Tobacco (BAT) acquired a 51 per cent share in a venture established through the combination of the assets of the existing tobacco enterprises.

- A national real estate exchange was to be set up for the sale of state property earmarked for privatization.

- A national stock exchange was to be established for the placement of shares of state-owned enterprises designated for privatization. The allocation of these shares was to be undertaken jointly by Uzgosfund, the Ministry of Finance, the Committee for State Property Management and Privatization, and the Central Bank of Uzbekistan.

- The prevailing restrictions requiring land bearing trade and service establishments to be owned by the state were to be lifted, and the sale of such land was to be permitted to private owners and foreigners.

- The state-owned banking system was required to support the privatization process through the provision of credits and financial guarantees.

In a recent declaration the government announced its intention to extend privatization to medium-sized and large enterprises in the more strategic sectors, including 1,300 enterprises in the ferrous, non-ferrous, rare and precious metals subsectors, as well as 412 agricultural concerns.[25/] Plans, or intentions, have also been announced for a mass privatization programme of 300 medium-sized enterprises whereby 30 per cent of the shares would be reserved for investment funds and for the privatization of more than 60 oil and gas extraction and transport enterprises in 1996.

Private-sector development

Despite the various policy measures taken in recent years, the institutional framework for the promotion of private-sector development has remained inadequate. Its establishment has been hampered by a number of constraints, including the unavailability of sufficient credit and finance, the persistence of the state-order system, the lack of local entrepreneurial capabilities, inadequate facilities for the development of small and medium-sized enterprises, and even the lack of office space and the absence of a real estate market.

The banking system, comprising both the established large state-owned banks and the newly created banks owned by state-owned enterprises, does not provide sufficient financing for new private enterprises. To finance newly established private businesses, the fund for the Support of Entrepreneurship was established in 1991 through the Union of Entrepreneurs. The government paid in Rb2 million, but the capitalization of the fund is too small to provide for the short- and long-term capital needs of the new private enterprises.

The development of the private sector is also hampered by a considerable dearth of market information to guide new entrepreneurs in both domestic and foreign markets. Some assistance for private-sector development has been provided by the Uzbekistan Business Union, a non-governmental organization seeking to promote local entrepreneurship. Although this organization receives some financial support from the European Union, the scope of operations is fairly limited, and it has so far focused mainly on the preparation of business feasibility studies in the areas of food processing, agribusiness and tourism.

Institutional framework for industrial development

The institutional structure of Uzbekistan's economy remains highly centralized. In the former USSR, production and the input-output flows of enterprises were centrally organized through Gosplan and Gosnab. Although these institutions no longer exist, the new institutional structure which has emerged following the dissolution of the USSR and the independence of its constituent republics continues to maintain the principal features of the former system. Production and input flows are still, to a large extent, determined centrally, and state-owned enterprises are grouped into large conglomerates, which assume the functions of previous branch ministries to direct the activities of state-owned enterprises. The new institutional mechanisms have not resulted in any significant increase in the decision-making autonomy of state-owned enterprises.

The activities of industrial enterprises in Uzbekistan continue to be governed to a large extent by the state-order system, which involves the compulsory delivery of goods at fixed prices. Under this system, enterprises have to give priority to the fulfilment of the prescribed state-order requirement. This often leaves only a very limited and uncertain surplus for sale to private enterprises. According to one recently compiled set of estimates, only about 10-20 per cent of industrial output was available for delivery outside the state-order system in 1992.[26/]

In addition, private enterprises commonly have to pay higher prices for their purchases than are paid for deliveries within the state-order system. Supply shortages for new private investors also result from the high degree of vertical integration of the traditional state-owned enterprises, the structure of which is designed for the internal utilization of inputs rather than for outside sales. The priority of production for internal enterprise consumption was also restated in the Enterprise Law adopted in 1992, which stipulates that shareholders or participants in a society or partnership "will enjoy a right of priority to obtain products (services) manufactured (rendered) by the society and partnership".[27/]

Although the government had successively reduced the scope of the state-order system in 1992 and 1994, a substantial share of production in most of the important sectors of Uzbekistan's economy is still governed by the system. For most industrial products the share of production volume subject to the state-order system ranges between 20 and 80 per cent. In the case of cotton, for example, it is as high as 80 per cent, while for fruits and vegetables it amounts to 50 per cent.[28/] Production in the state enterprise sector thus continues to be based primarily on a central plan that assigns output quotas to each enterprise. Any surplus production in excess of the quota is allowed to be retained by the enterprise and sold on the open market.

Financial support for industrial development

The financial support structure for industry has also remained largely unchanged. State-owned enterprises continue to receive credits from the state-owned banking sector, and can also continue to finance their purchases through inter-enterprise arrears and to receive direct allocations from the state budget. The lending policies of the banks continue to be governed by non-commercial considerations, with a major share of the credit issued by the state-owned banks being channelled to state-owned enterprises, including those which would not be viable without subsidies, and bearing negative real interest rates.

Promotion of foreign direct investment

Since Uzbekistan's manufacturing sector is highly concentrated into a small number of subsectors dominated by cotton processing, chemicals, metallurgy and engineering, the government has come to regard a greater diversification of the country's industrial base as one of its principal objectives. A particularly high priority is placed in this context on the development of a consumer goods industry, a sector in which the country's import dependency remains very high. Such diversification is to be achieved both by the conversion of selected military-related industrial enterprises to the production of consumer goods, and through the encouragement of new private initiatives, including foreign direct investment.

An important area of concentration for the government is the development of industries related to agricultural processing. Particular emphasis is being placed in this connection on the development of an integrated textile industry based on the processing of the country's principal agricultural crop, cotton. Other industries which are targeted for expansion are the manufacture of consumer goods, light manufactures, construction materials, electronics and automotive equipment. In view of Uzbekistan's substantial production of copper and gold, the government is also seeking to promote the increased local processing of these minerals.

Uzbekistan's foreign investment policy, formulated by the Ministry of Foreign Economic Relations in cooperation with the Ministry of Finance, is based on these major considerations. In general terms, the government aims to promote the inflow of foreign direct investment into the following areas:

- the development of natural resources, mostly in the form of concession agreements and other production-sharing arrangements rather than through equity shareholding;
- the modernization of existing industries;
- the establishment of new industries, with special emphasis on developing an integrated textile industry, electronics production and automobile assembly; and
- infrastructural development, with priority for the telecommunications sector and the development of access routes to foreign ports.

The Law on Foreign Investments, adopted in 1991, established the legal basis for foreign investment and the participation of foreign investors in the privatization programme.[29/] Foreign investors must register with the Ministry of Finance, and wholly foreign-owned companies must register with the Cabinet of Ministers as well. The formation of wholly foreign-owned companies is permitted, except in the natural resources sector where participation by foreigners has to take the form of concession agreements rather than equity shareholding.

The law provides assurances for the protection of investors' rights consistent with international norms, including guarantees against the nationalization and expropriation of foreign assets. In addition, it stipulates that foreign investors will be compensated if their rights are infringed by any agencies of the Republic of Uzbekistan. Furthermore, the 1991 law notes that investors may continue to operate under the regulations prevailing at the time they signed their initial contracts for a period of ten years in the case of subsequent revisions to the law. Finally, foreign investors are guaranteed the right to transfer their profits abroad in foreign currency, although the permissible modalities of the transfer are not prescribed in the law.

A further relaxation of the regulations governing foreign investment was initiated in January 1994 through the presidential decree on measures to deepen economic reform, protect private ownership and develop entrepreneurship, which stipulated, *inter alia*, that:

- the sale of trade and service establishments to foreigners may also include real estate: until the introduction of this regulation foreign investors could only lease, but not own, real estate;
- joint ventures with a foreign equity share of more than 50 per cent specializing in the production of consumer goods would be granted a five-year tax holiday on their foreign exchange earnings; and
- domestic and foreign investments could be insured by the state-owned insurance company, Uzbekinvest, to be established for this purpose under the Ministry of Finance.

The laws and regulations relating to foreign direct investment provide a comparatively liberal framework, even though several issues critical for foreign investors have not been specified or are inadequately covered. These include access to foreign exchange for the repatriation of profits and earnings, the specification of permissible methods for such repatriation, and provisions for arbitration and the settlement of disputes.

The inflow of foreign direct investments began only in 1992, when the US firm Newmont Mining committed itself to invest some $80 million-100 million in 1993-94 to extract gold from existing deposits. The initial $105 million for the project was financed by a consortium of European and US banks led by the EBRD and Bayclays (UK). Production is currently under way, with the first shipment of gold having been made in late 1995. Production in 1996 is expected to be 450,000 ounces and is targeted for 13-17 tonnes in subsequent years.

In December 1993 the UK firm Lonhro signed an agreement with the government of Uzbekistan to operate a large gold mine in the Kyzylkum desert together with two local state-owned mining companies. The joint venture is expected to produce up to 15 tonnes of gold annually. The project is partially financed by a loan from the EBRD.[30/]

The relatively large internal market, the country's political stability and the extensive natural resource base are expected to attract a significant number of foreign investors in the coming years. The inflow of such investments is expected to accelerate once the government decides to open up the mining sector and oil and gas exploration to foreign investors and enacts a more promotional regulatory framework for foreign investments. The first step in this direction was taken in early 1995 when the US firm M.W. Kellogg signed a $200 million agreement to develop the Kokdumalak oilfield by using a gas-injection method to increase output.

Policies towards science and technology

The government is keen to promote the increased application of science and technology in Uzbekistan's manufacturing sector. A special office has been set up under the president of the republic for this purpose, and the government has regularly allocated a substantial share of its budget, equivalent to about 2 per cent of GDP, to promote science and technology.[31/] The new institutions have no experience in managing science and technology policies in a market environment, however, and the linkages between their activities and those of the production enterprises remain tenuous.

Enterprise restructuring

The restructuring of Uzbekistan's large state-owned enterprises constitutes an important element of the country's economic reform process, since the state-owned enterprise sector accounted for 85 per cent of GDP and 80 per cent of employment at the end of 1991.[32/] So far, however, the restructuring of the state-owned enterprise system has taken place mainly through the administrative reorganization of these enterprises, which have been amalgamated into industry-specific associations. These, in turn, have taken over the functions of the now defunct branch ministries which formerly directed the activities of the state-owned enterprises. This process culminated in the presidential decree of January 1994 on measures to deepen economic reform, protect private ownership and develop entrepreneurship, which contained provisions to abolish the existing management system of state enterprises and transfer all decision-making authority to the following associations of producers:

- the association of enterprises of the chemical industry;
- the association of enterprises of the radio-electronics and electrical products industry;
- the association of enterprises of the metallurgical industry;
- the association of machine-building enterprises, including agricultural machinery;
- the association of enterprises of the automobile industry; and
- the association of enterprises for the mining of precious metals.

Initial efforts have also been undertaken to reduce the degree of dependency of Uzbekistan's industrial enterprises on the former USSR, both as a source of their inputs and as a market for their outputs, which is particularly high in the case of the metalworking, engineering, and chemical and petrochemical industries. In order to reduce dependency on the Russian Federation for refined petroleum products, for example, the government has proposed the construction of two major refineries with financial and technical assistance from Japan and France.

A significant need for industrial restructuring also exists in areas where large, specialized production facilities were established to cover the demand of the entire former USSR. A case in point is the Tashselmas agricultural machinery-building factory in Tashkent, which produced the entire output of cotton harvesting machinery for the former USSR, with an annual production of about 8,000 units. The country's current demand amounts to approximately 3,000 units, and there is an urgent need for the development of alternative uses for the plant's existing capacity.

Some steps have also been taken to convert military-related production facilities to the manufacture of consumer goods. The need for this form of industrial restructuring is particularly pronounced in the machine-building sector, where an important share of production was dedicated to military-related production. The declining demand for such military products will necessitate the conversion of many of these plants to the manufacture of consumer goods. An example of this trend is given by the conversion of a former machine tool factory to the production of rubber shoes for civilian use, and its planned diversification into the production of tyres. A second example is the Jizzabh accumulator plant, which previously manufactured batteries for missile launchers and has been converted to produce batteries for commercial application.

II. THE MANUFACTURING SECTOR

A. GROWTH AND STRUCTURAL CHANGE

Growth

With the exception of a modest mining industry, Uzbekistan was primarily an agricultural and pastoral region until the mid-1920s. The industrialization process began under the first two five-year plans in 1928-33 and 1933-38, and the pace of industrialization was boosted further during the Second World War as a result of the relocation of a number of industries to Uzbekistan from the war zone. The industrialization process continued in the early post-war period, but industrial investment started to slacken in the 1970s when the USSR planners began to shift their attention to the development of the western Siberian oil regions. By the second half of the 1980s industrial growth had begun to stagnate due to a lack of imported inputs and decreased demand for its specialized products. Increased energy prices in 1992 and 1993 also led to a decline in industrial output in those years. In recent years, the lack of spare parts and equipment has had a negative effect on the production and processing of oil and oil-related products.

Structural change

Uzbekistan's manufacturing base is extremely narrow, with only a relatively small range of industries having been established in the country during the Soviet era in line with the then prevailing policy of inter-republic specialization. By 1991 the country's manufactured output was mainly limited to a few chemical products, of which the most important was fertilizer, and a modest selection of engineering goods, the most prominent being cotton harvesters, some other agricultural machinery, and textile mill equipment, although the country also had a large aircraft manufacturing enterprise. Other important manufactured products included some processed foods, textiles, shoes and soft roofing materials. A consumer goods industry was largely lacking.

A major objective of the government's economic reform and transformation process is the development of new industries and an expansion of the country's manufacturing capacity. The efforts to achieve these objectives are being focused mainly on industries using domestically available natural resources, such as textiles, building materials, metallurgy (including gold jewellery) and agrochemicals. Other industries targeted for growth by the government include automobiles, spare parts and service equipment, as well as a wide range of consumer goods industries.

Table 66. Uzbekistan: Structure of the manufacturing sector, 1993

	Energy	Processed foods	Light industry	Forestry, pulp and paper	Chemicals	Building materials	Metals	Machine-building
Share of sector (Percentage)								
Output	6.6	18.1	42.8	1.5	4.4	3.3	10.8	10.4
Employment	5.1	10.8	36.7	2.8	4.8	7.6	6.4	22.8
Assets	27.5	6.4	13.3	1.6	14.6	7.8	8.4	16.7
Indices[a/]								
Capital intensity	4.17	0.35	0.31	1.07	3.32	2.36	0.78	1.61
Energy intensity	2.86	0.23	0.25	0.57	6.16	2.24	2.32	0.62
Labour intensity	12.00	9.00	13.00	28.00	16.00	35.00	9.00	33.00
Dependence on former USSR (Percentage)								
Imports	..	35	35	95	70	30	50	80
Exports	..	45	35	5	70	45	70	70
Value-added (Percentage)								
Domestic prices	34	17	17	31	20	27	61	29
World prices	46	-88	-1	7	9	..	39	-3

Source: World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

a/ Capital intensity = percentage of assets in subsector/percentage of output in subsector.
Energy intensity = percentage of energy consumed in subsector/percentage of output in subsector.
Labour intensity = number of employees per Rbl million of output.

B. INDUSTRIAL EMPLOYMENT

Quantitative trends

The industrial labour force in Uzbekistan has not grown as rapidly as its agricultural counterpart. As a result, the percentage share of the total working population employed in industry dropped from 15.3 per cent in 1985 to 14.4 per cent in 1991. The percentage of working ethnic Uzbeks in the industrial labour force is comparatively low at 11.1 per cent, while that of Russian speakers amounts to 32.6 per cent.[33/]

As in the case of many other republics of the former USSR, the increase in the number of registered unemployed has not kept pace with the decline in output, with only 21,800 persons being officially classified as unemployed in December 1994.[34/] On the other hand, the number of persons registered as seeking work stood at about 51,000 by the second quarter of 1994. Since almost 80 per cent of the vacancies announced in Uzbekistan are for skilled workers, because of a drift of skilled workers to the private sector, many openings are left unfilled and many young people with inadequate skills and experience remain unemployed. In response to this situation the government has begun to intensify job creation measures, initiate training and retraining schemes, and expand the network and functions of the country's labour exchanges.

Table 67. Uzbekistan: Industrial employment by subsector, 1991

	Thousands	Percentage
Total	**947**	**100**
Processed foods	99	10
Light industry	335	35
Heavy industry	453	48
Energy	47	5
Forestry, woodworking, pulp and paper	26	3
Chemicals and petrochemicals	44	5
Building materials	69	7
Metallurgy	59	6
Ferrous	9	1
Non-ferrous	50	5
Metal processing and machine-building	208	22
Other	60	6

Source: State Statistics and Forecasting Committee.

The role of women

No reliable up-to-date information on the role of women in the industrial labour force is available at present. Until 1975, however, the rate of participation showed a more or less steady increase to 42 per cent, even though it remained significantly below the average for the USSR as a whole (49 per cent), as well as that of Kazakstan and the Kyrgyz Republic (both 48 per cent). Developments across the rest of the former USSR suggest that women are likely to be bearing the brunt of the decline in industrial production and suffering disproportionately high rates of unemployment.

Table 68. Uzbekistan: Female participation in the non-farm workforce, 1928-75, selected years (Percentage)

	1928	1940	1950	1960	1970	1975
USSR	..	38	46	45	48	49
Uzbekistan	18	31	40	39	41	42

Source: Lewytzkj, Borys, *The Soviet Union: Figures-Facts Data*, K.G. Saur, Munich, 1979.

C. PRODUCTIVITY AND PERFORMANCE

Enterprise profitability

The profitability of enterprises in Uzbekistan is extremely difficult to measure because of inadequate data and widespread economic distortions. These difficulties notwithstanding, it is widely accepted that many of the existing enterprises are loss-making, and that a significant proportion may even be technically bankrupt. In the first quarter of 1994 no less than 534 enterprises reported losses, which compared favourably with corresponding data for 1993.

One of the most serious problems facing most enterprises is the delayed payment or non-payment of bills by their customers, which has resulted in the accumulation of huge inter-enterprise arrears across the entire region of central and eastern Europe and the former USSR. In Uzbekistan delayed payments to suppliers amounted to Som-coupon341 billion on March 1, 1994.[35/]

Labour productivity

Statistics for labour productivity in the republics of the former USSR are not readily available. The measurement of labour productivity is also complicated in Soviet-type enterprises because of the diversity of production and ancillary activities undertaken by them. Consequently, the common measures of productivity do not adequately reflect the productive ability of these enterprises or their workforces, and are not directly comparable to similar measures of productivity for enterprises operating in market economies.

These caveats notwithstanding, it can nevertheless be said that productivity in Uzbekistan is generally low. The republic's net domestic material production per head has always been lower than the average for the former USSR as a whole (which itself was never very high), and has collapsed since the mid-1980s. In 1970 the average for the central Asian region amounted to only 83 per cent of the average for the former USSR. By 1985 the corresponding figure for Uzbekistan had fallen to 71 per cent, and by 1990 it amounted to only 55 per cent.

D. OWNERSHIP AND INVESTMENT PATTERNS

Ownership

Until 1991 all industrial and commercial enterprises in Uzbekistan were owned by the state. The passage of the Law on Privatization in November 1991 marked the beginning of the ongoing process of transferring the ownership of the productive base of the economy from the state to the private sector. In September 1992 the transfer of housing, retail shops, small service firms and light industrial enterprises was begun. By the end of 1993 almost all of the housing stock had been transferred, as well as 40,000 small and medium-sized enterprises in the local industry, trade and services sector, many of which were involved in agro-related activities in particular. By the end of the third quarter of 1995 it was estimated by the EBRD that almost 30 per cent of Uzbekistan's GDP was accounted for by the private sector.[36/]

This privatization process has not always resulted in a full transfer of control to private owners, however. In most cases the divestment of public ownership was achieved through the sale of shares to newly created joint-stock companies owned by workers' collectives, managers and the State Property Fund responsible for overseeing the privatization process. Under the prevailing laws, the government can exercise control with a share ownership of only 25 per cent or 33 per cent.

Investment

The ownership patterns in Uzbekistan have ensured that the government has historically been responsible for the bulk of gross fixed investment in the country. During the 1980s the agricultural sector was the largest recipient of such investment in the material sphere, while investment in the non-material sphere was channelled mainly into the housing stock.

Table 69. Uzbekistan: Gross fixed investment, 1980-90, selected years
(Rb million, constant 1984 prices)

	1980	1985	1986	1987	1988	1989	1990
Total	**6,197**	**6,811**	**6,980**	**7,170**	**7,568**	**7,529**	**8,505**
Material sphere	4,442	4,649	4,645	4,592	4,702	4,573	4,960
Agriculture	2,181	2,090	2,104	2,064	2,094	1,898	2,267
Forestry	1	3	3	2	2	4	4
Industry	1,465	1,579	1,587	1,675	1,741	1,805	1,671
Construction	179	276	252	210	247	246	289
Transport	396	465	464	445	388	382	368
Communication	51	81	81	79	81	84	95
Trade and other material services	155	136	135	115	147	152	249
Storage	14	19	19	2	2	2	17
Non-material sphere	1,755	2,162	2,335	2,578	2,866	2,956	3,545
Housing	956	1,271	1,335	1,488	1,788	1,760	2,080
Other a/	799	891	1,000	1,090	1,078	1,196	1,465

Source: State Statistics and Forecasting Committee.

a/ Includes health, education, science, culture and arts, and community services.

Between 1991 and 1995 more than 1,500 foreign joint ventures and some 80 wholly foreign-owned enterprises were also established in Uzbekistan, involving investors from some 70 countries. Only an estimated 60 per cent of these are functioning, however.[37/] Investment commitments totalled $9 million in 1992 and $18 million in 1993, the years for which data are available.[38/] The bulk of foreign investment, particularly in terms of foreign exchange invested, was initially channelled into energy, mining, and the chemical, machine tools and textiles industries. Telecommunications and other infrastructure projects attracted many valuable commitments in 1995. Siemens (Germany) alone signed over $900 million in joint-venture agreements in this area.

E. INDUSTRIAL LOCATION

The capital, Tashkent, is the most important industrial centre in Uzbekistan. With a population of more than 2 million, it was the fourth largest city in the former USSR. It is the principal centre for the production of agricultural machinery and the location of the country's large aviation factory. Cars are produced primarily in the Fergana Valley. Samarkand is the next most important industrial area, with a population of almost 400,000 and a well-developed infrastructure.

F. ENVIRONMENTAL ISSUES

Uzbekistan faces many severe environmental issues, the most important of which are related to the drying of the Aral Sea and the resulting increase in soil salinity caused by the diversion of water from the Amu-Dar'ya and the Syr-Dar'ya rivers to feed the country's extensive irrigation networks. The industrial sector has also imposed severe environmental strains, causing serious air and water pollution problems, which have been exacerbated by the lack of suitable systems for the handling and disposal of industrial wastes. The need for tighter environmental controls is widely recognized, however, and the government is currently drafting new environmental legislation.

G. TRADE IN MANUFACTURES

Uzbekistan's trade in manufactured goods has historically been limited largely to imports, since the country is primarily an exporter of raw materials and semi-processed goods, especially cotton fibre. Its manufactured exports include some agricultural equipment and other machinery, vegetable oil, tobacco, cotton and silk textiles, and some basic chemicals. Imports, however, include machinery, chemicals, processed foods, and light industrial products including clothing and woollen goods.

Table 70. Uzbekistan: Share of trade in manufactured goods in total trade, 1987-94, selected years
(Percentage)

	Exports					Imports				
	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994
Total	**93.2**	**92.7**	**99.0**	**97.0**	**94.5**	**94.9**	**89.2**	**91.5**	**72.8**	**82.2**
Processed foods	8.8	8.8	3.8	1.9	1.8	15.1	13.5	14.0	6.6	19.1
Light industry	47.7	45.4	48.1	52.7	60.9	20.2	20.2	7.1	5.5	2.9
Sawmill and lumber industries	0.4	..	0.3	..	..	5.7	3.8	4.3	1.6	2.9
Chemicals and petroleum	8.2	9.1	7.6	4.3	2.7	7.6	7.8	11.1	8.1	7.6
Building materials	..	..	0.7	..	0.4	1.8	1.4	1.1	0.8	1.3
Ferrous metallurgy	..	..	1.8	1.3	0.9	5.2	4.5	13.7	8.0	9.0
Non-ferrous metallurgy	..	4.8	10.2	4.7	3.1	3.0	2.8	3.4	1.9	1.0
Machinery and metalworks	12.6	13.2	..	9.3	4.4	25.4	24.7	10.5	11.3	19.6
Other	..	0.8	-	2.6	0.2	1.8	2.8	0.9	0.7	1.3

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

H. INTERNATIONAL COOPERATION FOR INDUSTRIAL DEVELOPMENT

According to data collected by the OECD Register, technical assistance to Uzbekistan has been limited to date, with only 44 projects with a combined value of less than $4 million having been completed by mid-1994.[39/] Of these, only five were specifically for Uzbekistan, while the rest were part of regional programmes. The republic has also received $26 million in humanitarian aid.

The OECD countries, and particularly the members of the European Union, are the largest donors. Other major donors are the United Nations Development Programme (UNDP), Turkey and Germany. Turkish aid has centred on agriculture, telecommunications, banking, and economic cooperation, while aid from the OECD and EU has been earmarked for general economic programmes, trade policy reforms, energy, job creation and the construction of airports. The UNDP has focused on training, support for small and medium-sized enterprises, and the development of technical assistance management capacity. German assistance has been directed primarily into the fields of science and technology, including the environment.

Table 71. Uzbekistan: Technical assistance, 1993 and 1994

	Completed		Under way		On Offer	
	1993	1994	1993	1994	1993	1994
Number of projects	23	43	85	108	23	60
Value ($ million)	0.8	3.0	38.7	36.9	21.7	33.4

Source: *OECD Register.*

UNIDO has undertaken several projects in the republic and stationed a UNIDO country director in Tashkent. The largest of these projects involves supporting the government in the implementation of the privatization scheme at a total outlay of $1 million. A $300,000 project to support small and medium-sized enterprises through the development of three business incubators has also been approved and is to be completed in 1996. Other projects that have recently been initiated include a workshop for government authorities on privatization techniques and the workings of a market economy, a workshop on the use of a computer model for feasibility analysis and reporting, the opening of an investment promotion service office in Tashkent, and projects involving the provision of enterprise restructuring assistance and assistance in expanding the privatization information system.

III. INDUSTRIAL BRANCH PROFILES

A. FOOD PROCESSING AND RELATED AGRO-INDUSTRIES

The resource base

Food processing and agro-based industries have not been major contributors to the economy of Uzbekistan. While the republic does produce and process much of its own meat and is the largest producer of vegetables in the central Asian region, its output of grains and grain-based products has traditionally fallen short of domestic requirements. Three-quarters of the republic's grain needs are consequently imported, and foodstuffs account for the bulk of the country's imports from outside the former USSR and for a large proportion of its imports from within it.

Past trends

In 1991 the agro-industrial sector consisted of 405 enterprises employing 99,000 people, or 11 per cent of the industrial labour force, and producing an output of Rb11 billion, or 18 per cent of industrial production for the year. Since that time the government of Uzbekistan has given increased priority to the promotion of domestic food production, and especially the production of grains. The land allocated to grain production was increased to 1.5 million hectares in 1995, with much of it becoming available through a reduction in the area under cotton cultivation, and grain production increased from 2.3 million tonnes in 1994 to 2.7 million tonnes in 1995. At the same time new processing facilities are being built and existing facilities are being upgraded; a number of pasta-making facilities in particular have been built in the past three years. These efforts appear to have met with some success in that agro-processing is one of the few industries to have recorded an increase in production relative to 1990.

Table 72. Uzbekistan: Output of the food processing industry, 1985-93, selected years
(Rb million)

	1985	1988	1989	1990	1991	1992	1993
Processed foods	2,666	850	2,870	3,156	5,621	44,080	429,195
Meat and dairy	578	662	693	675	3,493	16,722	206,446
Fish	52	60	64	69	150	1,010	11,961

Source: State Statistics and Forecasting Committee.

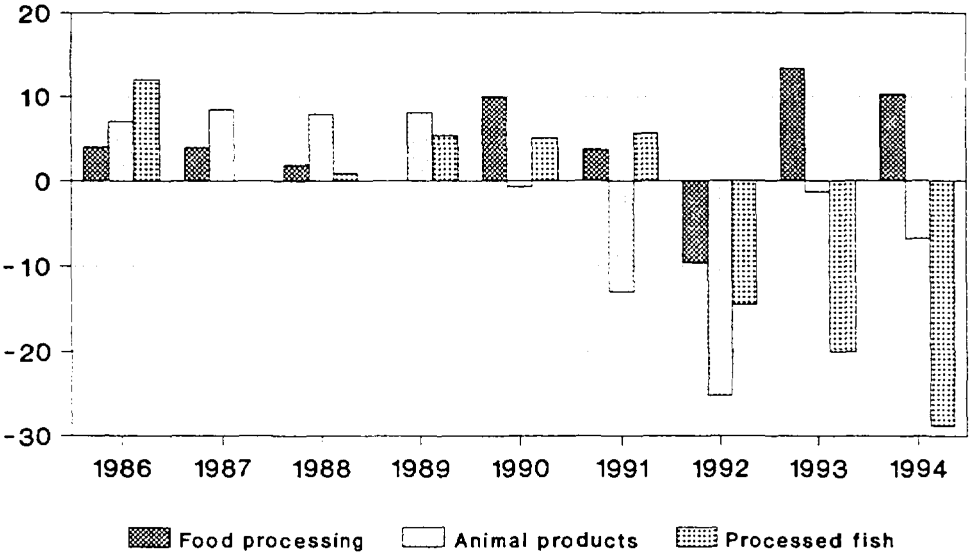
Table 73. Uzbekistan: Output of the food processing industry, selected products, 1991-93
(Index: 1990 = 100)

	1991	1992	1993 January-September a/
Dairy products	95.1	66.0	58.8
Cooking fat	91.9	108.9	120.5
Vegetable oil	89.7	73.5	65.8
Margarine	101.8	96.9	128.4
Macaroni	108.6	115.7	115.4

Source: International Monetary Fund, *Economic Review: Uzbekistan*, Washington DC, May 1992.

a/ Based on an index of production relative to the first nine months of 1992.

Fig. 27. Uzbekistan: Gross output of the food industry
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Constraints and prospects

Perhaps the most serious constraint on the growth of Uzbekistan's food processing industry is the lack of water resources for expansion of the irrigation network. Any increase in the production of existing or new crops must be accomplished either through the increase in productivity of existing lands or through a shift in the crops produced, which has caused the government to promote the planting of food crops on land currently planted to cotton. Other constraints include inefficient farming techniques and poor post-harvest handling and storage facilities, which result in a high degree of lost output.

The increase in the production of a number of food items recorded since 1990 is encouraging, however. With the government remaining committed to the continued promotion of the sector's development, and financing likely to be provided by such international institutions as the EBRD, Uzbekistan's agro-processing industry is likely to experience significant growth in the coming years. In order to compete against imports from outside the former USSR and to break into export markets, however, the industry will have to overcome several further constraints, one of the most important of which is a shortage of packing materials. Efforts are already being made to increase the production of glass jars and bottles, and to develop new canning facilities.

The tobacco processing industry appears to have a particularly favourable outlook, and has attracted considerable foreign investment interest in recent years. The UK-based British American Tobacco Company (BAT) has taken a 51 per cent holding in UZ Tobacco, a newly formed joint venture with a consortium of domestic tobacco interests. This firm plans to invest in two new tobacco processing plants in Samarkand and Urgut, a new cigarette manufacturing facility in Samarkand and the modernization of the existing Tashkent plant. As a result of these investments the company's total output is projected to rise from the current level of 7 billion cigarettes to 25 billion cigarettes per year. As output increases, the stake of the UK firm is to rise to 90 per cent.

B. TEXTILES AND CLOTHING

The resource base

Uzbekistan is extremely well-endowed with a raw material base for the development of a textile industry. The country is one of the world's leading producers of cotton, with output having exceeded 4 million tonnes per year by a substantial margin for much of the 1980s. In addition, Uzbekistan is a significant producer of wool and silk, since the rearing of sheep and the breeding of silk worms are important agricultural activities.

Past trends

The abundant availability of cotton in Uzbekistan has ensured that the country's light industry is dominated by the manufacture of textiles and clothing. At the same time, however, Uzbekistan's domestic processing capacity falls well short of its production levels, as a result of which it has had to export some 80 per cent of its output in a raw or semi-processed state. Similarly, the country's processing capacity for wool and silk is also limited, requiring it to export some 40 per cent of its silk cocoons for further processing.

Since independence the government has sought to promote the development of a modern textile industry based on the country's abundance of raw materials, with active encouragement being given to both domestic and foreign investors to increase both the quantity and quality of domestically produced textiles. These efforts have attracted a favourable response, and a considerable amount of foreign investment has already taken place, often in export-oriented production facilities. Austrian companies have invested in the production of bedlinen, Canadian and French firms in the manufacture of knitwear and sweaters, Italian firms in the production of denim and jeans, German firms in the manufacture of cotton terry cloth, and firms from the Republic of Korea in the production of cotton yarn. In addition, the art of carpet weaving is being revived.

Table 74. Uzbekistan: Output of textiles and clothing, 1985-93, selected years
(Rb millions)

	1985	1988	1989	1990	1991	1992	1993
Textiles	6,741	7,029	7,333	7,439	20,487	104,696	987,058
Clothing	1,170	1,315	1,441	1,558	2,956	75,329	140,877

Sources: State Statistics and Forecasting Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Constraints and prospects

The biggest constraint on the future development of a modern textile industry is not the inability to increase raw material production but a general lack of financing and the need to expand domestic processing capacity. It has not been uncommon for existing clothing production facilities to be operating well below capacity due to an inability to obtain cloth. To help overcome this problem the EBRD has extended a credit facility for the distribution of small loans for the development of small and medium-sized enterprises involved in the primary processing of cotton and other textile raw materials. This programme also includes an effort to find foreign partners with technology and funding for local entrepreneurs.[40/]

With such financing from international donor organizations and continued high levels of interest by private foreign investors, the outlook appears favourable for the development of a competitive textile industry. It is also an area that is likely to witness a significant degree of domestic investment and the growth of small enterprises.

C. LEATHER AND FOOTWEAR

The resource base

With the rearing of livestock accounting for a substantial proportion of agricultural activity in Uzbekistan, the country has a good local resource base for the development of a leather-goods industry. The production of sheepskins is particularly important, since sheep herding is a traditional activity in the country.

Past trends

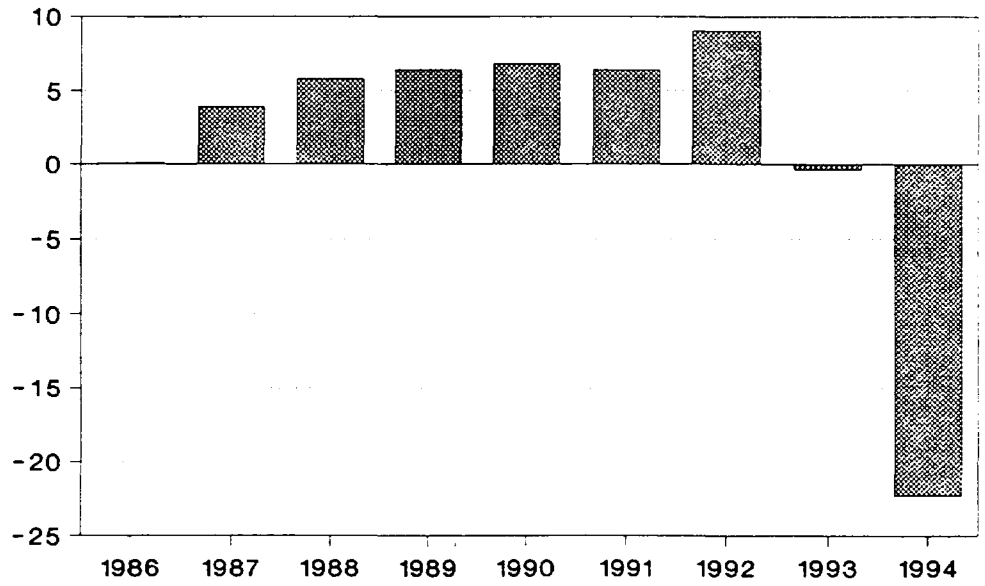
The production of leather goods and shoes has held up comparatively well since 1990 despite the contraction suffered by many other sectors of the economy, and several of the 27 enterprises involved in the manufacture of leather and footwear have upgraded their facilities in recent years.[41/] A number of sheep breeders have also begun to process hides for export in response to low prices in the domestic market.

Table 75. Uzbekistan: Output of the leather and footwear industries, 1985-93, selected years (Rb million)

1985	1988	1989	1990	1991	1992	1993
495	536	573	604	1,385	9,286	82,907

Source: State Statistics and Forecasting Committee.

Fig. 28. Uzbekistan: Gross output of the leather and footwear industries
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Constraints and prospects

Although the contribution of the leather-based industries to the national economy will remain limited, they are nevertheless expected to continue to grow in the coming years in response to increasing demand and the availability of sufficient raw materials. The production of sheepskins is expected to expand particularly rapidly in view of the limited amount of capital investment required to enter the industry and the continuing high level of international demand.

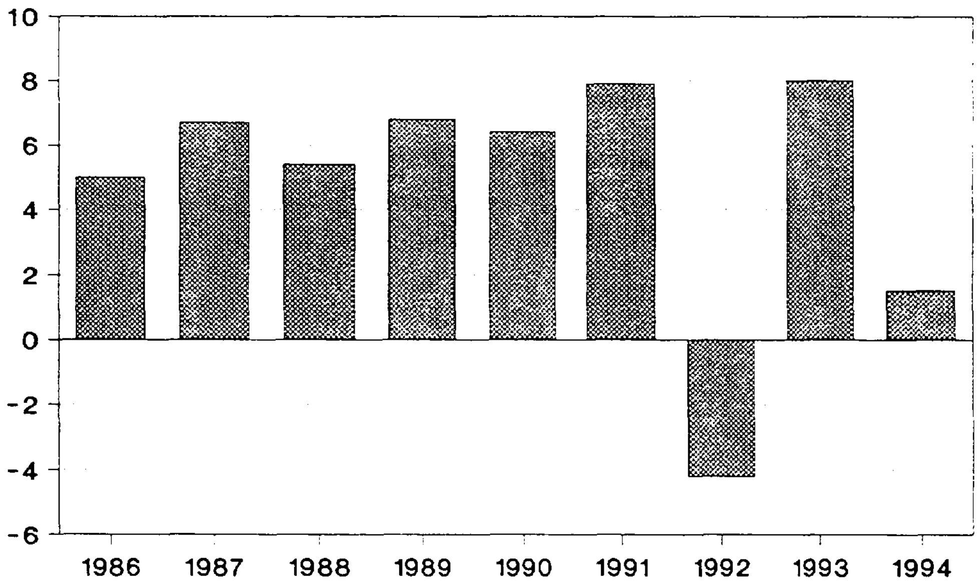
D. WOOD AND WOOD PROCESSING, PULP AND PAPER

The resource base

Only 5.1 per cent of the land in Uzbekistan is forested. This is not nearly enough to allow the development of a local timber industry able to satisfy the country's demand for 10 million cubic metres of construction timber per year, let alone to provide the base for an active pulp and paper industry. The government has begun a programme of reforestation, however, which began with 5 million plantings per year in 1992 and is eventually expected to expand to 15 million plantings per year.

Past trends

Fig. 29. Uzbekistan: Gross output of the wood processing and related industries
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Table 76. Uzbekistan: Output of wood processing and related industries, 1985-91
(Rb million)

	1985	1986	1987	1988	1989	1990	1991
Forestry and wood products	291	306	337	376	405	418	764
Pulp and paper	24	25	24	23	30	40	136

Source: State Statistics and Forecasting Committee.

In 1991 the timber-based industries, comprising forestry, woodworking, pulp and paper, consisted of 96 enterprises employing 26,000 people. The combined value of their output amounted to Rb1 billion, representing only 2 per cent of industrial production. Production has contracted sharply since 1990 due to raw material shortages, and in some cases has been stopped altogether.

Constraints and prospects

Despite the current planting, Uzbekistan will not be able to produce enough local timber to support the expansion of its woodworking and paper industries. Imports will therefore have to continue to provide the bulk of the country's raw material needs, but its ability to import is likely to remain constrained for the foreseeable future by shortages of hard currency and difficulties in the payments system between Uzbekistan and the other republics of the former USSR.

E. PETROLEUM AND GAS PRODUCTION AND REFINING

The resource base

Natural gas is the principal energy resource in Uzbekistan. As of 1993 the country's proven reserves amounted to 1,883 billion cubic metres, sufficient to last 44 years at current production levels. Oil has also been produced in the Fergana Valley since the 1880s, but production remains limited at less than 4 million tonnes per year. The size of Uzbekistan's known reserves of oil has increased substantially since the mid-1980s, however, as a result of large investments in exploration. It is now believed that the country possesses more than 244 million tonnes and could become self-sufficient in oil.

Past trends

Uzbekistan's fuel and power industry comprised 53 enterprises (including some based on coal and hydro-power) in 1991, and employed 47,000 people, equivalent to 5 per cent of the industrial labour force. The industry's output was valued at Rb4 billion, or 7 per cent of total industrial production.

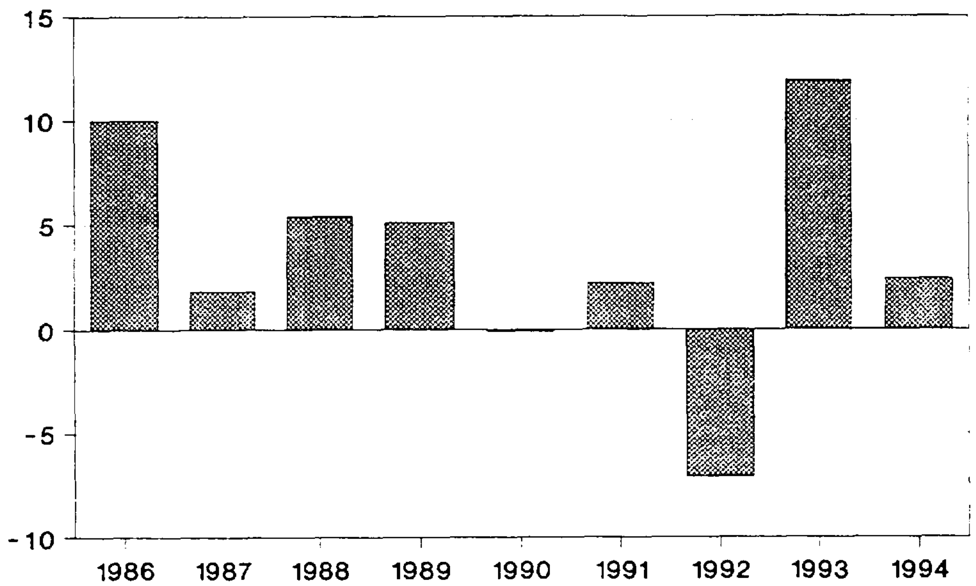
Production of natural gas expanded by almost 20 per cent during the 1970s and 1980s, but domestic consumption rose even faster, resulting in a drop in exports. Much of the new production has a high sulphur content, however, and some 90 per cent of it needs to be refined. The refining industry is currently operating at full capacity.

Table 77. Uzbekistan: Fuel production, 1985-93, selected years (Rb million)

1985	1988	1989	1990	1991	1992	1993
879	1,028	1,080	1,079	2,342	60,740	841,877

Source: State Statistics and Forecasting Committee.

Fig. 30. Uzbekistan: Gross output of the fuel industries
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Oil production doubled during the 1980s but continues to account for only a small proportion of Uzbekistan's total energy production. More than 50 per cent of the country's current production consists of natural gas condensates. Uzbekistan's oil refining capacity exceeds its production of crude oil, however, and the country has traditionally imported crude from the Kyrgyz Republic and Tajikistan while supplying them with refined products. Other refined products have been imported from Russia and Kazakstan.

Table 77. Uzbekistan: Output of selected oil and gas products, 1990-95

	Units	1990	1991	1992	1993	1994	1995a/
Natural gas	Billion cubic metres	40.7	41.9	42.8	45.0	47.2	50.0
Oil and gas condensate	Million tonnes	2.8	2.8	3.3	3.9	5.5	7.5

Sources: International Monetary Fund, *Economic Review: Uzbekistan*, Washington DC, March 1994; The Economist Intelligence Unit, *Uzbekistan: Country Profile 1995-96*, London, 1996.

a/ Estimates.

Constraints and prospects

The oil and natural gas industries face a number of constraints. The most serious problem is a shortage of equipment and spare parts, which has restrained production in recent years, particularly in the older fields. The most binding constraint affecting the natural gas industry, meanwhile, is a lack of sufficient refining capacity.

The government is committed to the rapid development of the hydrocarbons industry, and is actively seeking to attract foreign technical know-how and funds into this sector. Several Western oil companies, including the French firm Elf Aquitaine and the US firm Chevron, have already entered into exploration and production agreements with the government and are expected to commence operations in the near future. Any shortfall in foreign investment is to be funded from local sources, and the government has already begun to upgrade several facilities through funds obtained from exports of oil, gas and cotton.

With this strong government commitment to ensure the availability of the necessary funds and foreign technology, the outlook for the oil and natural gas industries appears extremely favourable. Two new oil/condensate fields are currently being brought on stream at Kokdumalak near the border with Turkmenistan and at Minbulak in the Fergana Valley, which are expected to produce 4.3 million tonnes per year and 1.5 million tonnes per year respectively by the late 1990s. Efforts are also being made to attract foreign investment for a large natural gas processing plant currently under construction at the Shutan gasfield.

F. CHEMICALS AND PETROCHEMICALS

The resource base

Uzbekistan's substantial hydrocarbon reserves provide it with a strong resource base for the development of a petrochemical industry. The existence of organic minerals also gives the country a base for the development of a mineral fertilizer industry.

Past trends

Uzbekistan had 49 chemical and petrochemical enterprises in 1991. They employed a total of 44,000 people, representing 5 per cent of the industrial labour force, and produced an output valued at Rb3 billion, equivalent to 4 per cent of the country's total industrial production. The two most important products of the sector were mineral fertilizers and pesticides.

Table 79. Uzbekistan: Production of petrochemicals, 1985-91
(Rb million)

1985	1986	1987	1988	1989	1990	1991
63	66	69	71	75	70	133

Source: State Statistics and Forecasting Committee.

While the output of agro-related chemicals has not dropped as sharply, production of other chemicals has collapsed since 1990. The production of petrochemicals in particular has plummeted as a result of the disruption of crude oil imports from, and the loss of markets in, the former USSR. In an effort to survive the change in demand they are facing, several chemical enterprises in Uzbekistan have tried to switch to the production of consumer chemicals such as wallpaper adhesives, cosmetic creams and shampoos.

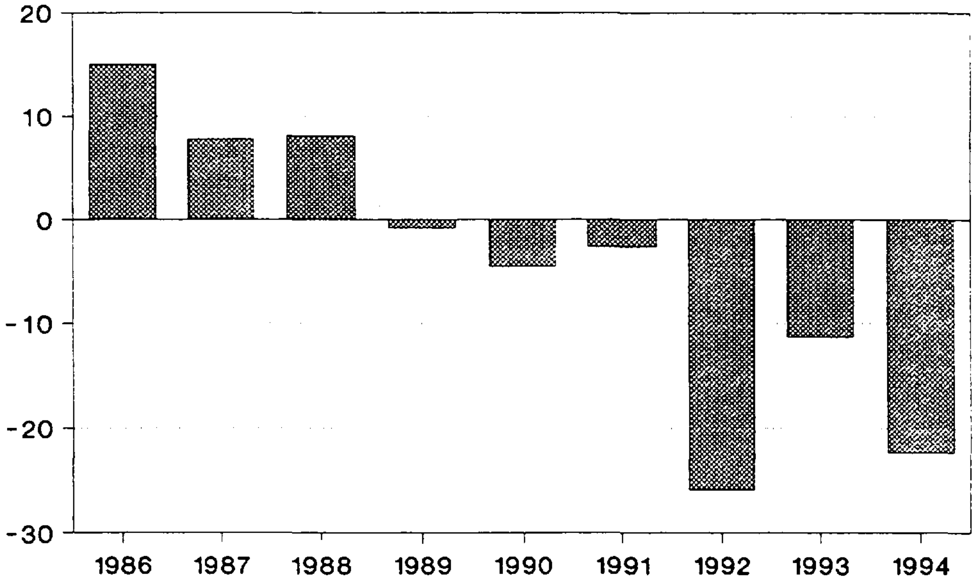
Table 80. Uzbekistan: Output of the chemical industry, 1991-93
(Index: 1990 = 100)

	1991	1992	1993 January-September a/
Mineral fertilizers	94.2	77.2	72.4
Sulphuric acid	83.7	51.6	46.8
Plastics and synthetic resins	91.7	60.7	35.4
Fibres and chemical threads	93.7	62.0	43.9
Insecticides	85.1	69.6	79.6

Source: International Monetary Fund, *Economic Review: Uzbekistan*, Washington DC, March 1994.

a/ Based on an index of production relative to the first nine months of 1992.

Fig. 31. Uzbekistan: Gross output of the chemical and petrochemical industries
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Constraints and prospects

One of the main constraints facing Uzbekistan's chemical and petrochemical industries is their heavy dependence on the former USSR for 70 per cent of both their imports and their exports. Securing new sources for inputs and markets for outputs will not be easy. In recognition of this problem, the government has established a chemicals exchange in the hope that it will facilitate the procurement of raw materials and help enterprises to sell their output.

The industry's output is heavily oriented towards basic chemicals and bulk chemicals, such as acids and fertilizers. This should facilitate the search for new markets, but also makes the industry vulnerable to the highly volatile international prices for such goods.

A further problem facing the sector is environmental. The existing chemical plants are highly pollutive, resulting in extensive damage to the ground water near several facilities and high levels of atmospheric pollution. Although efforts to reduce emissions and improve the handling and disposal of waste products have become a government priority, the lack of financial resources will inevitably restrain progress.

With most existing plants operating well below capacity, there is scope for a considerable expansion of output if the marketing problems for raw materials and finished products can be resolved. The industry will also receive a major boost from the completion of the natural gas processing plant at the Shutan field, which will have an annual production capacity of 300,000 tonnes of polyethylene and 50,000 tonnes of polypropylene.

G. CONSTRUCTION MATERIALS

The resource base

The mineral resource base of Uzbekistan includes several non-metallic minerals that can be employed for the production of building materials, including clays and limestones.

Past trends

Uzbekistan's building materials industry in 1991 consisted of 231 enterprises with 69,000 employees, representing 8 per cent of the industrial labour force. The value of its output amounted to Rb2 billion, or 3 per cent of the total value of industrial output for that year.

Table 81. Uzbekistan: Output of the building materials industry, 1985-93, selected years (Rb million)

1985	1988	1989	1990	1991	1992	1993
1,052	1,031	1,007	1,012	2,010	26,294	294,429

Sources: State Statistics and Forecasting Committee; World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Despite the economic dislocations of the past few years, the building materials industry has continued to perform relatively well. The output of certain products, such as roofing sheets and ceramic tiles, has increased since 1991 on the strength of strong domestic demand as well as increased exports to markets outside the former USSR. Although output has fallen in most other cases, the decline has been maintained at tolerable levels.

Table 82. Uzbekistan: Output of selected building materials, 1991-93
(Index: 1990 = 100)

	1991	1992	1993 January-September[a/]
Cement	96.9	92.9	88.2
Roofing sheets	96.0	86.8	106.8
Soft roofing material	80.3	52.8	70.2
Ceramic tiles	98.0	110.1	152.7
Linoleum	94.6	90.4	58.8

Source: International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

a/ Based on an index of production relative to the first nine months of 1992

The construction materials industry has also attracted some foreign interest. Several countries have begun to consider the possibility of importing cement from Uzbekistan, while Indian business interests have expressed an interest in forming joint ventures for cement production. A German joint-venture has been established to produce chipboard from cotton stalks.

Constraints and prospects

In view of the strong resource base, the medium-term outlook for the construction materials industry appears favourable. As the economy begins to recover and foreign investment flows increase, demand for office space, hotels and housing will rise, as will the upgrading and construction of industrial plants and infrastructural facilities.

H. FERROUS AND NON-FERROUS METALLURGY

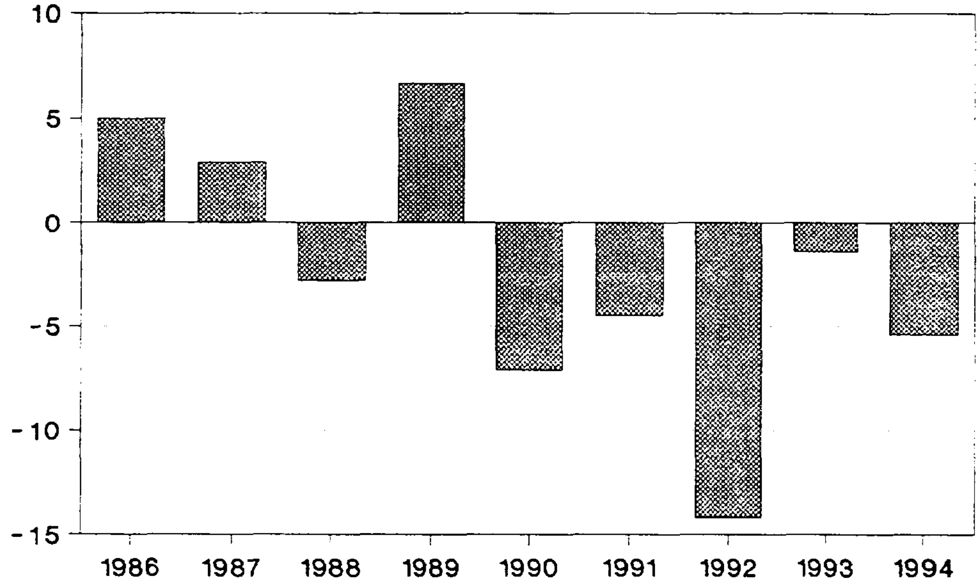
The resource base

Uzbekistan has vast metallurgical resources ranging from gold and uranium to silver, copper, zinc, lead, tungsten and several other rare metals. The country is currently the world's eighth largest producer of gold, and operates the world's largest producing gold mine at Murantau, which accounts for 70 per cent of its total gold output.

Past trends

The exploration and exploitation of Uzbekistan's mineral resources is controlled by the state. Approximately 90 per cent of exploration is undertaken by the State Committee for Geology, which upon completion of the exploration project transfers the operating rights to state-owned mining enterprises. The government also holds full ownership in the new mining projects currently under evaluation, such as the Kyzylkum Rare Metals and Gold Enterprise, which also includes a gold-uranium project.

Fig. 32. Uzbekistan: Gross output of the metallurgical industry
(Percentage change, constant prices)



Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

In 1991 the metallurgical industry consisted of six ferrous metallurgical enterprises and 16 non-ferrous metallurgical enterprises. The former had a workforce of about 9,000 employees and an output of Rb1 billion, equivalent to approximately 1.7 per cent of the country's total industrial production. The non-ferrous metallurgical enterprises had some 50,000 employees, representing 5 per cent of the industrial workforce, and an output of Rb6 billion.

Despite its less intensive dependence on the markets of the former USSR than several other industries in Uzbekistan, the metallurgical industry has suffered a significant drop in output in recent years. This has been due mainly to shortages of equipment and spare parts. The processing of uranium in particular has declined, but this has been due mainly to a fall in demand in the former USSR.

A major exception is the gold industry, however, which has been promoted directly by the government both in order to enable it to increase its own financial reserves and in order to boost exports. The mining and processing of gold was also one of the first industries to attract foreign investment interest. The US firm Newmont Mining and the UK firm Lonhro have both made substantial investments in the development of Uzbekistan's gold resources. Once production increases, the government hopes to encourage the development of a gold jewellery industry.

Table 83. Uzbekistan: Production of metallurgical goods, 1985-93, selected years (Rb million)

1985	1988	1989	1990	1991	1992	1993
1,012	1,077	1,149	1,166	2,686	59,604	484,223

Source: State Statistics and Forecasting Committee.

Constraints and prospects

The large economies of scale inherent in the metallurgical industry may serve to make it one of the most competitive manufacturing sectors in Uzbekistan. A study conducted by the World Bank on the value-added of several industrial sectors indicates that the metallurgical industry has a high value-added at world prices and is thus likely to survive the transition to a market economy.[42/] Because of its ability to reach new markets immediately, moreover, this sector will be more readily able to expand its exports than most others, which will be very beneficial to the economy during the transition period.

I. MACHINERY AND TRANSPORT EQUIPMENT

The resource base

Uzbekistan's metallurgical industry provides a modest resource base for the manufacturing of machinery and transport equipment. In general terms, however, the development of the engineering industry in Uzbekistan was related to the requirements of the military industrial complex of the former USSR. Consequently, it was highly dependent on the other republics of the former USSR for both inputs and outputs, with some 70-80 per cent of its inputs being imported from these republics and 60-90 per cent of its outputs being exported to them.

Past trends

The engineering and metal processing industry consisted of 289 enterprises in 1991. It had 208,000 employees, representing 23 per cent of the industrial labour force, and the value of its output amounted to Rb6 billion, or 10 per cent of Uzbekistan's total industrial production.

Because of its extremely high level of dependence on the former USSR, the engineering industry contracted sharply in the early 1990s following the disintegration of the union. On the other hand, the industry has also attracted a good deal of foreign interest and investment, particularly in automotive assembly and production, because of the comparatively high quality of the existing plant and equipment as well as the size of the potential market. Thus, the Czech firm Avia Automotive and the Russian firm KamAZ have signed joint-venture agreements to assemble trucks in Uzbekistan, while the German firm Daimler Benz and Daewoo of the Republic of Korea have agreed to establish local assembly plants for automobiles.

Table 84. Uzbekistan: Output of the machinery industry, 1985-93, selected years
(Rb million)

1985	1988	1989	1990	1991	1992	1993
2,450	3,010	2,986	2,923	5,518	64,615	519,090

Source: State Statistics and Forecasting Committee.

Table 85. Uzbekistan: Production of machinery and transport equipment, 1991-93
(Index: 1990 = 100)

	1991	1992	1993 January-September a/
Electric cranes	52.4	35.8	29.0
Power transformers	78.7	53.7	28.3
Compressors	99.7	72.9	36.4
Excavators	107.1	85.9	50.1
Elevators	97.0	62.6	32.0
Tractor trailers	93.8	64.1	72.5
Tractors	90.0	72.8	50.0
Cotton-picking machines	109.7	44.4	43.6
Tractor-cultivators	85.9	68.3	47.8
Tractor-harvesters	86.8	53.3	60.1

Source: International Monetary Fund, *Economic Review: Uzbekistan*, Washington DC, March 1994.

a/ Based on an index of production relative to the first nine months of 1992.

Constraints and prospects

The high level of dependence on the former USSR for inputs and on demand from the military for its outputs will restrain the growth of many parts of the engineering industry in the short to medium term. The transition to the production of civilian goods will not be easy for many enterprises. The industry has one of the highest labour intensities in the country, and will require major restructuring in order to survive the transition to a market economy.

On the other hand, however, the engineering industry enjoyed one of the highest rates of new investment during the 1980s and has some of the most modern equipment in Uzbekistan. Manufacturers of some products, such as cotton-picking machines, also have dominant positions in world markets, and therefore face a more favourable outlook than many other engineering firms. Some enterprises have been able to ensure their short-term survival by embarking on the process of transforming production to civilian uses, particularly consumer goods, and have attracted foreign investors. The level of foreign interest and investment in the production of automobile parts and in car and truck assembly also augurs well for the sector, as does the shift of the Tashkent Aircraft Factory to the manufacture of commercial aeroplanes for the carriage of both passenger and freight.

J. CONSUMER GOODS

The resource base

The production of consumer goods has been extremely limited in Uzbekistan in the past, and the country has virtually no existing facilities for the sole purpose of consumer goods production. Much of the production that is being undertaken is the result of the conversion of enterprises previously producing military equipment. Since most of the military suppliers located in Uzbekistan were involved in the production of electronic and radio equipment, personal computers, radar and acoustic installations, printed circuits and electrical systems, the easiest conversion for many of these enterprises was to begin the production of electrical and electronic equipment such as electrical household appliances.

Past trends

Over the past few years, several defence-based enterprises have been converted to civilian use. The largest of these are:

- Algorhythm Electronics enterprise in Tashkent through a joint venture with Daewoo (Republic of Korea);
- Semurg Electronic Equipment enterprise in Tashkent, which now produces radios and television sets for the local market;
- Zenith Electronics enterprise in Tashkent through a joint venture with Daewoo (Republic of Korea) producing household appliances;
- Kinap enterprise in Samarkand, which now produces household appliances;
- Mikond enterprise in Tashkent, which formerly manufactured printed and micro-circuits and now produces glass and crystal ware; and
- Foton enterprise in Tashkent, which also manufactured printed and micro-circuits and is now producing glass and crystal ware.

Table 86. Uzbekistan: Production of consumer goods, 1991-93
(Index: 1990 = 100)

	1991	1992	1993 January-September a/
Refrigerators and freezers	105.4	41.9	42.6
Household soap	78.9	73.9	62.4
Toilet soap	91.4	42.5	45.5
Detergents	96.9	51.9	41.5

Source: International Monetary Fund, *Economic Review: Uzbekistan*, Washington DC, March 1994.

a/ Based on an index of production relative to the first nine months of 1992.

Constraints and prospects

The long-term outlook for the consumer goods industry is quite bright. The demand for such goods is high, and several enterprises have already made the transition to their production. In addition, the industry can also draw on a relatively skilled labour force, and has been attracting a significant degree of foreign investment interest, which will facilitate the transfer of both technology and the urgently needed business and customer service skills. The shortage of these skills represents the most serious constraint on the development of the consumer goods industry at present, and its ability to compete against imports and to break into export markets in the future will depend crucially on improvements in quality control, marketing and customer service.

NOTES TO CHAPTER THREE

1/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, May 1992.

2/ The Economist Intelligence Unit, *Business Briefing, London,* 10 April 1995.

3/ UNIDO national consultant.

4/ The Economist Intelligence Unit, *Country Profile 1995-96: Uzbekistan,* London, 1996.

5/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

6/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

7/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

8/ Narzikulov, R., Speech to the conference on "Economic Consequences of Soviet Disintegration", Vienna, April 1992.

9/ Narzikulov, R., Speech to the conference on "Economic Consequences of Soviet Disintegration", Vienna, April 1992.

10/ ESCAP, Report of a Mission to the Central Asian Republics, Bangkok, May 1993.

11/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

12/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

13/ World Bank, *Uzbekistan: An Agenda for Reform,* Washington DC, September 1993.

14/ The Economist Intelligence Unit, *East European Industrial Monitoring Service,* London, 1989-94, March 1991 and August 1992 issues.

15/ Charter of the Central Bank of the Republic of Uzbekistan, 1992.

16/ Business Information Service for the Newly Independent States, *Commercial overview of Uzbekistan,* United States Department of Commerce, Washington DC, 1993.

17/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

18/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

19/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

20/ On 1 January 1994, however, a surrender requirement of 15 per cent was re-introduced while the tax was lowered to 15 per cent.

21/ National Trade Data Bank, *Commercial overview of Uzbekistan,* United States Department of Commerce, Washington DC, March 1994.

22/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

23/ For details see, National Trade Data Bank, "Translation of the Text of the Presidential Decree issued on 21 January 1994", *Market Reports Uzbekistan,* United States Department of Commerce, Washington DC, 17 March 1994, Appendix 3 and 4.

24/ For the text of the decree see National Trade Data Bank, *Market Reports,* United States Department of Commerce, Washington DC, 17 March 1994.

25/ The Economist Intelligence Unit, *EIU Business Report: Uzbekistan, 1st Quarter 1996,* London, 1996.

26/ Estimates are by World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

27/ *Enterprise Law of December, 1992,* Part l, Chapter 2, paragraph 2.

28/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

29/ Law on Foreign Investments of 14 June 1991.

30/ European Information Service, "Lonhro to operate gold mine in Uzbekistan", *International Business News,* No. 1908, 8 December 1993.

31/ United Nations Economic and Social Commission for Asia and the Pacific, *Report of ESCAP mission to Azerbaijan, Kyrgyzstan, Turkmenistan and Uzbekistan in May 1993,* Bangkok, 20 May 1993, p. 63.

32/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

33/ Narzikulov, R., Speech to the conference on "Economic Consequences of Soviet Disintegration", Vienna, April 1992.

34/ World Bank, *Statistical Handbook 1995 - States of the Former USSR,* Washington DC, 1995.

35/ UNIDO national consultant.

36/ European Bank for Reconstruction and Development, *Transition Report 1995,* London, October 1995.

37/ The Economist Intelligence Unit, *Uzbekistan: Business Report, 1st Quarter 1996,* London, 1996.

38/ International Monetary Fund, *Economic Review: Uzbekistan,* Washington DC, March 1994.

39/ The OECD Register is a primary source of information with respect to technical assistance to the countries of central and eastern Europe and the former USSR. Reporting to the register is on a voluntary basis, as a result of which the information contained in the register is incomplete. In particular, it does not cover assistance provided by a number of multilateral donor agencies.

40/ European Bank for Reconstruction and Development, *The EBRD in Uzbekistan,* communications document, London, 1994.

41/ UNIDO national consultant, unpublished data.

42/ World Bank, *Uzbekistan: An Agenda for Economic Reform,* Washington DC, September 1993.

ANNEX A

STATISTICAL TABLES

Annex Table A-1. Azerbaijan: National accounts, 1985-94, selected years (Rb million)

	1985	1989	1990	1991	1992	1993	1994
Current prices							
Gross social product	24,141	24,290	23,535	44,642	398,806	254,499	2,507,049
Material inputs	13,617	13,371	12,822	24,273	221,884	136,135	1,254,183
Net material product	10,524	10,919	10,712	20,370	176,922	118,364	1,253,757
By industrial origin:							
Agriculture	3,441	3,350	4,014	8,372	60,151	42,289	506,310
Industry	4,503	4,722	3,727	7,567	77,536	41,134	380,367
Construction	1,280	1,277	1,255	1,705	16,449	14,949	70,507
Transport and communications	355	331	555	663	8,325	10,438	195,167
Others	945	1,240	1,162	2,063	14,461	9,561	101,406
By expenditure:							
Consumption	6,184	7,283	8,027	14,915	162,795	107,860	922,745
Investment (accumulation)	2,826	1,107	2,268	2,278	15,988	23,605	91,260
Losses	213	200	319	74	..	..	..
Net exports	1,300	2,329	98	3,102	1,861	13,101	293,752
Constant prices b/							
Gross social product	24,404	23,339	21,752	22,563	30,104	..	..
Material inputs	13,915	13,210	12,091	12,053	16,082	..	..
Net material product	10,489	10,129	9,661	10,510	14,021	..	..
By industrial origin:							
Agriculture	3,119	3,003	3,423	3,899	6,446	..	..
Industry	4,773	4,445	3,913	3,436	5,233	..	..
Construction	1,306	1,213	643	1,289	1,398	..	..
Transport and communications	355	312	537	776	316	..	..
Others	937	1,156	1,146	1,111	629	..	..
By expenditure:							
Consumption	6,020	7,210	7,270	7,550	7,100	..	..
Investment (accumulation)	2,760	1,090	1,910	320	1,472	..	..
Losses and discrepancy b/	1,709	1,829	481	2,640	5,449	..	..
Net exports	..	..	..	..	..	..	..
Net material product	..	..	..	..	..	..	..
Total national income a/	..	11,310	11,298	12,064	14,441	..	..
Depreciation c/	..	2,381	2,374	2,531	2,857	..	..
Gross national product	..	13,691	13,672	14,595	17,298	..	..

Source: State Statistics Committee.

a/ According to the UN System of National Accounts.
b/ In 1983 prices for 1985-88; in previous, years prices for 1989-92.
c/ For 1989-92, depreciation in current prices was used.

Annex Table A-2. Azerbaijan: General government budget, 1987-92
(Rb million)

	1987	1988	1989	1990	1991	1992
Revenue						
Total revenue	2,897	3,250	3,459	3,877	6,803	58,588
Tax revenue	2,397	2,734	2,875	3,102	5,623	52,072
Indirect taxes	1,056	1,505	1,654	1,835	3,456	37,327
Turnover, sales, excise	1,056	1,505	1,641	1,827	3,407	18,019
Value-added	..	..	..	..	..	19,158
Export-import tax, duties	..	..	13	8	49	150
Direct taxes	1,341	1,228	1,221	1,267	2,167	14,745
Profit tax	1,100	975	940	952	1,530	11,547
Income tax	232	244	273	308	599	3,004
Property tax	8	9	8	8	38	194
Non-tax revenue	501	516	584	775	1,180	6,156
Royalties	..	..	..	..	..	1,389
Re-evaluation of inventories	..	..	..	..	109	2,268
Other non-tax revenue	501	516	584	775	1,071	2,859
Expenditure						
Total expenditure	3,210	3,379	3,771	4,686	8,127	68,851
National economy	1,380	1,388	1,637	2,225	2,635	4,346
Science	..	..	56	55	55	838
Social and cultural	1,663	1,798	1,928	2,150	4,641	32,804
Education	939	1,005	1,039	1,132	1,855	18,941
Health	309	342	384	427	775	7,304
Culture and sports	13	8	10	9	257	1,808
Social security[a/]	402	442	494	582	1,753	4,751
Internal security and administration[b/]	38	39	43	73	355	13,896
Consumer subsidies[c/]	..	..	..	..	..	6,711
Other expenditure	129	155	108	184	442	10,256
Balance before union transfers	-313	-129	-313	-809	-1,324	-10,263
Financing	313	129	313	809	1,324	10,263
Net transfers from union	284	117	448	637	2,125	..
Transfers from union	411	329	538	775	3,640	..
Transfers to union	127	212	90	138	1,515	..
Sales of bonds	145	137	133	172	..	..
Other	-116	-125	-269	-	-801	10,263
Memorandum items:						
GNP (current prices)	14,656	14,604	15,484	14,697	26,676	183,186

Source: Ministry of Finance.

a/ For 1991 and 1992, includes Social Protection Fund.
b/ For 1992, includes defence.
c/ Bread, petroleum products and fodder.

Annex Table A-3. Azerbaijan: Summary of external trade, 1977-94, selected years
(Rb million)

	1977	1982	1987	1988	1989	1990	1991	1992	1993	1994
Total trade										
Exports	4,557	6,633	6,763	6,782	7,123	6,430	12,199	207,756	66,307	774,592
Imports	4,353	5,472	5,554	5,672	5,190	5,752	11,010	131,580	50,312	946,048
Balance	204	1,161	1,209	1,110	1,933	678	1,189	76,176	15,995	-171,456
Of which:										
Inter-republic trade										
Exports	4,285	6,340	6,291	6,357	6,675	6,105	11,455	102,175	34,197	333,184
Imports	3,678	4,446	4,251	4,258	3,794	4,247	8,836	85,026	28,264	590,976
Balance	607	1,894	2.040	2,099	2,881	1,858	2,619	17,149	5,933	-257,792
Extra-republic trade										
Exports	272	293	471	424	448	325	744	105,581	32,110	441,408
Imports	675	1,026	1,302	1,414	1,396	1,505	2,173	46,554	22,048	355,072
Balance	-403	733	831	-990	-948	-1,180	-1,429	59,027	10,062	86,336

Source: State Statistics Committee.

Annex Table A-4. Azerbaijan: Exports by commodity groups, 1987-94, selected years
(Rb million)

	Inter-republic					Extra-republic					Total exports				
	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994
Agriculture	311	134	769	..	..	1	3	56	..	..	311	137	825	..	..
Industry	5,971	5,846	101,406	33,985	333,184	466	319	105,525	32,110	441,408	6,437	6,165	206,931	66,095	774,592
Power	34	46	2,957	810	7,296	-	-	-	..	..	34	46	2,957	810	7,296
Energy	999	747	28	5,618	74,176	43	102	15,044	12,731	181,184	1,042	849	15,072	18,349	255,360
Processed foods	1,476	1,749	30,598	8,858	75,392	57	30	1,123	512	3,648	1,533	1,779	31,721	9,370	79,040
Light industry	1,512	1,366	2,986	2,545	36,480	298	61	8,943	3,950	114,304	1,810	1,427	11,929	6,495	150,784
Sawmill and lumber industry	24	15	42	12	1,216	-	-	1.141	776	4,864	24	15	1,183	788	6,080
Chemicals and petroleum	619	518	29,900	3,837	27,968	9	6	63,947	884	6,080	628	524	93,847	4,721	34,048
Building materials	49	63	325	140	2,432	-	-	256	101	-	49	63	581	241	2,432
Ferrous metallurgy	97	71	3,917	337	..	1	7	2,432	9,204	107,008	98	78	6,349	9,541	107,008
Non-ferrous metallurgy	122	80	5,772	3,449	1,216	12	1	2,276	1,902	10,944	133	81	8,048	5,351	12,160
Machinery and metalworks	934	936	24,858	10,590	107,008	46	112	10,351	1,530	13,376	980	1,049	35,209	12,120	120,384
Other industries	107	254	23	885	-	-	-	12	520	-	107	254	35	1,405	-
Other material production	9	125	-	212	..	5	3	-	..	..	14	128	-	212	..
Total	**6,291**	**6,105**	**102,175**	**37,197**	**333,184**	**472**	**325**	**105,581**	**32,110**	**441,408**	**6,763**	**6,430**	**207,765**	**69,307**	**774,592**
Memo item: Share to total trade	93.0	94.9	49.2	53.7	43.0	8.0	5.1	50.8	46.3	57.0	100.0	100.0	100.0	100.0	100.0

Sources: State Statistics Committee, World Bank, *Statistical Handbook 1995 - States of the Former USSR*, Washington DC, 1995.

Annex Table A-5. Azerbaijan: Imports by commodity groups, 1987-94, selected years
(Rb million)

	Inter-republic					Extra-republic					Total imports				
	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994
Agriculture	91	146	1,070	697	19,456	156	131	6,309	1,515	14,592	247	277	7,379	2,212	34,048
Industry	4,156	3,984	83,956	27,562	571,520	1,147	1,373	40,245	20,533	340,480	5,303	5,358	124,201	48,095	912,000
Power	29	16	-	..	..	-	-	-	..	..	29	16	-	..	..
Energy	445	428	6,702	7,395	279,680	1	2	-	154	1,216	446	430	6,702	7,549	280,896
Processed foods	625	501	8,647	5,306	89,984	359	431	22,258	7,222	126,464	984	932	30,905	12,528	216,448
Light industry	688	708	4,529	187	4,864	443	403	2,932	894	9,728	1,130	1,111	7,461	1,081	14,592
Sawmill and lumber industry	153	117	3,442	544	17,024	40	26	214	516	9,728	193	144	3,656	1,060	26,752
Chemicals and petroleum	434	488	13,247	2,518	32,832	91	88	2,717	3,762	29,184	525	576	15,964	6,280	62,016
Building materials	121	94	1,137	308	8,512	14	14	532	65	3,648	135	108	1,669	373	12,160
Ferrous metallurgy	314	219	23,960	3,284	80,256	67	49	206	220	8,512	318	268	4,166	3,504	88,768
Non-ferrous metallurgy	109	101	2,295	1,543	2,432	-	-	39	459	7,296	109	101	2,334	2,002	9,728
Machinery and metalworks	1,113	1,119	19,464	5,320	46,208	126	349	10,420	5,328	100,928	1,239	1,468	29,884	10,648	147,136
Other industries	120	189	527	1,145	19,456	7	11	927	1,894	23,104	127	200	1,454	3,039	42,560
Other material production	4	117	-	5	..	-	-	-	..	..	4	118	-	5	..
Total	**4,251**	**4,247**	**85,026**	**28,264**	**590,976**	**1,302**	**1,505**	**46,554**	**22,048**	**355,072**	**5,554**	**5,725**	**131,580**	**50,312**	**946,048**
Memo item: Share to total trade	76.5	73.8	64.6	56.2	62.5	23.5	26.2	35.4	43.8	37.5	100.0	100.0	100.0	100.0	100.0

Sources: State Statistics Committee, World Bank, *Statistical Handbook 1995 - States of the Former USSR*, Washington DC, 1995.

Annex Table A-6. Azerbaijan: Industrial production by subsector, 1985-94, selected years (Rb million, constant prices)

	1985	1990	1991	1992	1993	1994
Processed foods	3,175	3,287	3,312	2,164	1,823	1,371
Food processing	2,764	2,898	3,011	1,975	1,675	1,283
Meat and dairy products	359	345	259	161	134	77
Fish	52	44	42	28	14	11
Light industry	2,654	2,402	2,452	2,139	2,204	1,777
Textiles	1,971	1,698	1,720	1,462	1,529	1,164
Clothing	436	466	508	487	479	418
Leather	247	238	224	190	196	195
Heavy industry	5,942	5,822	6,131	4,532	4,218	3,066
Energy	1,917	1,740	1,702	1,415	1,343	1,221
Electricity	454	507	510	508	496	448
Fuels	1,463	1,233	1,192	907	847	773
Wood products	220	230	296	271	246	83
Chemicals	913	780	810	371	324	215
Building materials	424	379	421	371	374	242
Metallurgy	542	460	450	316	220	68
Machine-building	1,926	2,233	2,452	1,788	1,711	1,237
Other	535	689	891	908	816	790
Total	**12,306**	**12,200**	**12,786**	**9,743**	**9,061**	**7,004**

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Annex Table A-7. Azerbaijan: Production of main industrial products, 1980-92

	Units	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Agro-industries														
Mineral fertilizers	Thousand tonnes	220	237	222	227	273	306	304	313	320	275	212	188	81
Cotton fibre	Thousand tonnes	248	272	299	258	230	251	243	240	219	207	167	171	148
Meat	Thousand tonnes	59	61	61	64	70	77	86	87	87	82	61	48	28
Sausage products	Thousand tonnes	25	27	24	29	29	29	28	28	28	28	17	14	8
Butter	Tonnes	4,733	4,527	4,373	4,793	4,740	4,808	4,860	5,197	5,666	4,689	3,829	3,069	2,858
Cheese	Thousand tonnes	17	18	19	20	20	21	21	21	20	18	17	16	9
Milk products	Thousand tonnes	188	195	201	198	209	220	232	236	239	224	203	175	81
Canned food	Million pieces	470	479	527	530	569	620	642	790	845	728	653	628	508
Margarine	Thousand tonnes	16	16	18	19	18	20	20	23	22	21	19	18	10
Tea	Thousand tonnes	11	12	16	15	17	19	20	21	22	24	17	15	9
Vodka and vodka products	Thousand bottles	1,821	1,881	1,901	1,896	1,995	1,692	1,388	1,050	1,770	1,686	1,770	2,407	1,812
Cognac	Thousand bottles	1,388	1,486	1,599	1,752	1,524	861	761	1,295	1,635	1,791	1,771	1,954	891
Grape wine	Thousand bottles	10,346	10,822	11,823	11,625	12,072	8,248	5,817	6,474	8,180	11,369	9,362	8,553	5,416
Champagne	Thousand bottles	5,780	12,029	12,539	13,294	17,393	18,734	10,273	14,695	20,858	20,194	18,168	16,071	17,141
Confectionary	Thousand tonnes	80	82	86	87	91	95	97	103	106	111	106	88	38
Flour	Tonnes	678	678	703	726	772	799	820	843	892	825	796	804	698
Fodder	Thousand tonnes	623	695	732	784	851	898	915	915	924	988	835	689	365
Bread and rolls	Thousand tonnes	565	599	633	620	604	598	614	591	546	543	586	699	872
Fermented tobacco	Thousand tonnes	50	48	42	51	54	53	51	55	56	51	49	47	47
Cigarettes	Million pieces	7,673	8,803	9,165	9,800	9,626	9,791	9,626	8,618	7,327	7,089	6,520	7,311	4,886
Light industry														
Cotton fabric	Million square metres	114	119	125	129	133	135	115	131	127	121	102	95	77
Wool fabric	Million square metres	19	19	19	16	16	15	15	16	16	14	11	9	7
Silk	Million square metres	36	35	37	40	40	36	34	38	37	30	33	30	21
Stockings and socks	Million pairs	38	30	37	39	42	42	44	44	44	43	38	35	32
Knitted wear	Million pieces	30	30	31	36	37	41	42	43	43	42	37	31	14
Shoes	Million pairs	18	20	19	20	21	23	23	23	20	17	15	10	5
Chemicals														
Sulphureous acid	Thousand tonnes	652	740	683	713	798	782	839	872	846	768	603	552	269
Synthetic rubber	Tonnes	127	132	137	140	143	146	129	130	121	107	85	78	28
Synthetic resin and plastics	Thousand tonnes	55	58	56	57	58	59	62	63	76	105	68	85	14
Polyethylene	Thousand tonnes	37	37	36	37	38	37	37	37	51	82	49	66	6
Caustic soda	Thousand tonnes	167	149	172	194	212	227	235	245	236	219	160	171	92
Tyres	Thousand	1,681	1,658	1,700	1,679	1,665	1,666	1,587	1,592	1,483	1,327	1,123	870	479
Sulphanol	Thousand tonnes	117	131	132	134	134	131	142	141	141	136	130	118	62
Synthetic detergents	Thousand tonnes	61	54	64	57	60	71	73	79	84	85	82	76	52

(continued)

Annex Table A-7. Azerbaijan: Production of main industrial products, 1980-92 (continued)

	Units	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Chemicals (continued)														
Diesel fuel	Thousand tonnes	3,581	3,534	3,797	3,903	4,011	4,500	5,005	5,159	5,145	4,236	3,899	3,635	3,211
Gasoline	Thousand tonnes	2,204	1.992	2,019	2,079	1,909	1,989	2,150	2,121	1,743	1,523	1,472	1,174	1,035
Lubricants	Thousand tonnes	1,138	1,120	1,065	1,186	1,193	1,118	1,132	1,104	1,061	934	818	763	391
Energy														
Electro-energy	Billion kWh	15	15	17	19	20	21	22	23	24	23	23	23	20
Oil including condensed gas	Million tonnes	15	14	13	13	13	13	13	14	14	13	13	12	11
Natural gas	Billion cubic metres	14	15	15	15	15	14	14	13	12	11	10	9	8
Building materials														
Slate	Million pieces	101	99	90	100	102	112	100	116	92	85	66	78	70
Brick	Million pieces	90	102	102	109	106	117	119	126	136	141	132	129	81
Construction glass	Thousand square metres	7,192	5,494	4,281	6,106	6,430	5,448	6,375	6,838	5,683	5,413	5,320	5,895	4,708
Cement	Thousand tonnes	1,196	1,190	1,186	1,191	1,192	1,253	1,279	1,290	1,220	1,058	990	923	827
Metallurgy														
Steel tubes	Thousand tonnes	575	575	542	578	556	582	541	566	604	584	493	411	260
Primary aluminium	Thousand tonnes	58	56	55	57	55	56	57	55	55	36	27	26	20
Alumina	Thousand tonnes	239	275	321	339	366	385	395	415	400	380	239	276	240
Machine-building														
AC electric engines	Thousand pieces	314	321	319	337	387	390	404	406	407	372	266	208	95
Power transformers	Thousand kWh	1,991	2,059	2,197	2,462	2,365	2,411	2,587	2,502	2,082	2,410	1,996	1,616	657
Vehicles	Pieces	450	608	1,000	1,505	1,912	2,125	2,500	2,827	3,051	3,028	3,104	3,246	1,146
Oil drilling and geological research equipment a/	Million roubles	255	281	298	336	357	388	399	414	428	602	583	8,486	6,900
Instruments and related equipment a/	Million roubles	36	37	42	47	51	54	61	74	74	91	81	985	729
Consumer durables														
Refrigerators	Thousand pieces	267	273	286	252	272	302	314	332	357	354	330	313	223
Furniture a/	Million roubles	59	65	65	72	75	82	87	93	95	127	134	818	626
Home air-conditioners	Thousand pieces	401	427	430	428	430	429	430	429	421	400	309	295	268

Source: State Statistics Committee.

a/ Until 1990, in the wholesale prices of enterprises as of 1 January 1982; for 1991 and 1992, in current prices.

Annex Table A-8. Turkmenistan: National accounts, 1985-93, selected years (Rb million)

	1985	1988	1989	1990	1991	1992	1993
Current prices							
Gross social product	8,891	10,307	10,534	11,381	29,739	461,714	16,561
Material inputs	4,896	5,590	5,706	6,059	17,440	180,183	6,612
Net material product	3,995	4,718	4,828	5,321	12,299	281,531	9,949
By industrial origin:							
Agriculture	1,641	1,841	2,094	2,548	5,680	45,838	1,121[a/]
Industry	1,128	1,233	1,099	833	2,514	183,395	6,898
Construction	673	968	875	950	2,225	25,305	1,098
Transport and communications	189	296	309	451	815	10,865	299
Others	364	380	451	539	1,065	16,069	534
By expenditure:							
Consumption	3,131	3,599	3,914	4,317	7,154	45,536	1,161
Investment (accumulation)	1,471	1,210	1,360	1,188	6,694	119,589	1,344
Losses[b/]	127	158	198	788	..	4,517	77
Net exports	-734	-250	-644	-972	..	111,888	7,367
Constant prices[c/]							
Gross social product	9,013	10,492	9,989	10,869	11,992	..	..
Material inputs	4,897	5,545	5.601	5,956	6,921	..	..
Net material product	4,116	4,947	4,389	4,913	5,071	..	..
By industrial origin:							
Agriculture	1,687	1,885	1,846	2,244	2,109	..	..
Industry	1,205	1,396	1,013	848	853	..	..
Construction	687	943	824	890	1,005	..	..
Transport and communications	189	296	302	441	601	..	..
Others	348	428	403	490	504	..	..
By expenditure:							
Consumption	3,149	3,553	3,825	3,856	4,455	..	..
Investment (accumulation)	1,489	1,003	1,232	878	1,237	..	..
Difference (produced-consumed)	-522	-391	-669	-179	-620	..	..

Source: State Statistics Committee.

a/ Includes forestry.
b/ For 1990 includes balancing item.
c/ 1985-88 are in 1983 prices; 1989-92 are in the prices of the previous year.

Annex Table A-9. Turkmenistan: General government budget, 1985-93
(Rb million)

	1985	1990	1991	1992	1993
Revenue					
Total revenue	1,630	3,236	6,563	64,009	1,426
Of which:					
Grants	197	728	1,409	..	..
Current revenue					
Tax revenue	930	1,225	1,975	34,447	1,077
Taxes on income and profit					
Personal	199	166	349	2,985	88
Corporate	44	92	643	12,875	485
Social security contributions	104	187	..	..	..
Taxes on payroll or workforce	..	..	..	..	..
Taxes on property	..	..	..	..	..
Taxes on goods an services	..	..	..	..	..
General sales, turnover or value added taxes	583	780	983	17,400	496
Excises	..	..	..	1,151	8
Others	..	..	..	..	..
Taxes on international trade					
Import duties	..	..	..	..	..
Export duties	..	..	..	..	..
Other taxes	..	..	..	36	..
Non-tax revenue	503	1,283	3,179	29,562	349
Expenditure					
Total expenditure	1,542	3,114	6,048	92,665	1,809
Surplus/deficit	88	122	591	-28,656	-383

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

Annex Table A-10. Turkmenistan: Summary of external trade, 1987-93
(Rb million)

	1987	1988	1989	1990	1991	1992	1993
Total trade							
Export	2,448	2,634	2,659	2,641	7,905	256,991	..
Import	2,925	2,918	3,333	3,608	5,497	91,323	..
Balance	-477	-284	-674	-967	2,408	165,668	..
Of which:							
Inter-republic trade							
Export	2,327	2,389	2,418	2,469	6,785	120,644	2,458
Import	2,597	2,486	2,744	2,923	4,608	80,409	..
Balance	-270	-97	-326	-454	2,177	40,235	..
Extra-republic trade							
Export	120	245	241	172	1,121	136,347	..
Import	328	432	590	685	889	10,915	..
Balance	-208	-187	-349	-513	232	125,432	..

Source: State Statistics Committee.

Annex Table A-11. Turkmenistan: Exports by commodity groups, 1987-93, selected years
(Rb million)

	Inter-republic					Extra-republic					Total exports				
	1987	1990	1991	1992	1993	1987	1990	1991	1992	1993	1987	1990	1991	1992	1993
Agriculture	133	124	370	..	-	2	4	42	..	..	135	127	412	-	..
Industry	2,188	2,272	6,335	96,290	2,293	118	164	1,079	115,836	..	2,307	2,435	7,413	212,126	..
Power	65	67	152	6,780	126	-	-	-	-	..	65	67	152	6,780	..
Energy	743	696	2,563	77,549	1,987	-	9	445	115,805	1,084	743	705	3,008	193,354	3,071
Processed foods	90	206	300	6,211	..	4	7	17	39	..	93	213	317	6,250	..
Light industry	1,074	1,083	2,767	1,685	..	113	139	576	14	9	1,187	1,221	3,343	1,699	..
Sawmill and lumber industry	-	-	1	12	-	-	-	-	-	..	-	-	1	12	..
Chemicals and petroleum	140	147	400	2,751	42	2	7	35	5	10	141	153	435	2,756	52
Building materials	23	28	50	653	10	-	-	1	12	..	24	28	51	665	..
Ferrous metallurgy	3	3	7	78	-	-	-	-	-	..	3	3	7	78	..
Non-ferrous metallurgy	6	6	4	25	-	-	-	-	-	..	6	6	4	25	..
Machinery and metalworks	44	35	90	545	2	1	2	5	-	..	44	37	95	545	..
Other industries	1	1	1	1	-	-	-	-	-	..	1	1	1	1	..
Other material production	6	73	80	24,354	166	-	5	-	20,418	..	6	78	80	44,772	..
Total	**2,327**	**2,469**	**6,785**	**120,644**	**2,458**	**120**	**172**	**1,121**	**136,347**	..	**2,448**	**2,641**	**7,905**	**256,991**	..

Source: State Statistics Committee.

Annex Table A-12. Turkmenistan: Imports by commodity groups, 1987-92
(Rb million)

	Inter-republic						Extra-republic						Total imports					
	1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992	1987	1988	1989	1990	1991	1992
Agriculture	67	28	34	132	208	14,038	4	42	51	60	78	2,660	70	71	84	192	286	16,698
Industry	2,529	2,457	2,612	2,693	4,264	65,455	325	390	539	625	810	7,207	2,854	2,847	3,150	3,318	5,057	72,662
Power	9	9	10	10	16	140	-	-	-	-	-	..	9	9	10	10	16	140
Energy	100	100	100	79	125	14,036	-	-	-	-	-	2	100	100	100	79	125	14,038
Coal	7	7	7	5	15	220	-	-	-	-	-	..	7	7	7	5	15	220
Processed foods	437	434	478	445	700	15,892	124	123	144	185	240	2,127	561	557	622	630	940	18,019
Light industry	467	395	453	551	867	6,413	136	196	243	255	330	840	603	591	697	805	1,197	7,253
Sawmill and lumber industry	120	103	125	97	152	998	29	26	12	9	12	..	149	129	137	106	164	998
Chemicals and petroleum	182	200	209	203	320	2,509	8	9	21	27	35	1,770	190	209	230	229	354	4,286
Building materials	54	54	54	50	79	916	3	4	5	6	8	..	57	58	59	56	87	916
Ferrous metallurgy	106	107	85	106	167	2,869	10	8	19	7	9	23	116	115	102	113	176	2,892
Non-ferrous metallurgy	5	9	10	9	14	3,560	-	-	-	-	-	..	5	9	10	9	14	3,560
Machinery and metalworks	935	926	949	959	1,509	17,904	11	21	93	120	155	2,438	946	947	1,042	1,078	1,664	20,342
Other industries	108	114	133	180	283	..	3	3	3	17	22	..	111	117	135	197	305	-
Other material production	1	1	99	98	154	916	-	-	-	-	-	..	1	1	99	98	154	916
Total	**2,597**	**2,486**	**2,744**	**2,929**	**4,608**	**80,409**	**328**	**432**	**590**	**685**	**889**	**10,915**	**2,925**	**2,918**	**3,333**	**3,608**	**5,497**	**91,323**

Source: State Statistics Committee.

Annex Table A-13. Turkmenistan: Industrial production by subsector, 1985-94, selected years
(Rb million, constant prices)[a/]

	1985	1990	1991	1992	1993	1994
Processed foods	420	533	1,623	16,346	445	..
Food processing	225	303	690	8,612	223	..
Meat and dairy products	159	196	876	7,397	210	..
Fish	36	34	57	337	12	..
Light industry	1,560	2,028	6,072	36,519	638	..
Textiles	1,323	1,745	5,488	33,623	576	..
Clothing	171	235	462	2,221	52	..
Leather	66	48	122	675	10	..
Heavy industry	1,652	1,847	6,144	122,863	4,243	..
Energy	1,139	1,239	4,931	107,932	3,924	..
Electricity	170	250	565	8,736	341	..
Fuels	969	989	4,366	99,196	3,583	..
Wood products	56	64	95	531	13	..
Chemicals	145	192	404	5,721	99	..
Building materials	259	285	583	7,130	183	..
Metallurgy	6	9	16	184	2	..
Machine-building	47	58	115	1,365	22	..
Other	351	391	864	11,070	278	..
Total	**3,983**	**4,799**	**14,703**	**186,798**	**5,604**	**27,300**

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

a/ 1985-1992 in roubles, 1993 and 1994 in manats.

Annex Table A-14. Uzbekistan: National accounts, 1985-94, selected years
(Rb million)

	1985	1989	1990	1991	1992	1993	1994
Current prices							
Gross social product	45,124	49,747	53,487	114,977	885,200	9,036,876	..
Total material input	25,249	28,189	30,085	65,341	524,834	..	..
Net material product	19,875	21,558	23,402	49,636	386,071	4,162,595	44,563,260
By industrial origin:							
Industry[a/]	6,981	5,610	5,565	14,738	126,169	1,693,372	16,227,850
Construction	2,588	3,062	3,477	6,093	43,610	1,205,213	11,643,450
Agriculture	7,143	9,128	10,370	22,356	160,598	1,281,330	14,885,370
Transport and communications	1,074	1,101	1,340	1,950	21,182	..	..
Others	2,089	2,657	2,650	4,500	34,511	..	..
By expenditure:							
Consumption	17,026	19,596	23,973	36,442	217,421	..	..
Investment (accumulation)	5,812	5,094	7,071	15,012	172,693	..	..
Losses	..	..	529	136	4,230	..	..
Net exports	-2,963	-3,132	-8,171	-1,953	-8,274	..	..
Constant prices[b/]							
Net material product	19,780	21,395	24,001	22,543	43,253	372,433	3,853,422
By industrial origin:							
Industry	7,150	7,330	7,330	5,811	12,925	117,799	1,123,803
Construction	2,557	2,917	3,159	2,931	3,518	41,025	406,881
Agriculture	7,109	7,589	9,771	10,330	20,729	161,299	1,239,253
Transport and communications	1,073	1,057	1,163	1,337	1,807	..	..
Others	1,891	2,502	2,578	2,125	4,273	..	..
By expenditure:							
Consumption	17,118	19,322	19,687	19,618	29,843	..	..
Investment (accumulation)	5,936	4,540	6,208	7,126	14,045	..	..
Losses and discrepancy[b/]	245	311	528	136	560	..	..
Net exports	-3,519	-2,778	-2,422	-4,346	-1,196	..	..

Source: State Statistics and Forecasting Committee.

a/ Data for industry prior to 1992 include taxes.
b/ In prices of the previous year.

Annex Table A-15. Uzbekistan: General government budget, 1987-94, selected years (Rb million)

	1987	1990	1991	1992	1993	1994[a/]
Revenue						
Total revenue	9,100	14,600	28,000	142,700	1,814,500	19,000
Current revenue	7,200	8,300	16,000	142,700	1,814,500	19,000
Grants	1,900	6,300	12,000	..	..	..
Tax revenue	6,800	7,900	10,900	117,100	1,214,900	15,426
Taxes on income and profits	2,900	2,800	5,100	34,500	528,200	5,638
Individual	1,000	900	1,600	10,800	145,300	1,666
Corporate	1,900	1,900	3,500	24,600	382,900	3,972
Social security contributions	800	1,100	..	..	73,100	530
Other taxes						
Domestic taxes on goods and services	3,100	4,000	5,800	81,700	713,600	7,959
Non-tax revenues[b/]	400	400	5,100	25,600	599,600	3,574
Expenditure						
Total expenditure	8,900	14,900	30,800	188,400	1,923,400	21,680
National economy	4,300	8,100	16,400	76,700	653,500	..
Social and cultural expenditure	4,300	6,200	10,900	69,500	760,900	..
State administration	..	..	300	2,800	46,000	..
Defence, public order and safety	..	..	200	11,700	163,000	..
Compensation to mining enterprises	..	..	1,600	20,300	219,000	..
Other	300	600	1,600	7,400	81,000	..
Surplus/deficit	200	-300	-2,800	-45,700	-108,900	-2,680

Sources: Ministry of Finance, World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

a/ Until 1993 this financing item included proceeds from state bonds sale.
b/ Million som-coupons.

Annex Table A-16. Uzbekistan: Summary of external trade, 1987-94, selected years (Rb million)

	1987	1989	1990	1991	1992	1993[a]	1994[a]
Total trade							
Export	8,973	10,169	9,352	19,535	150,036	2,277	30,311
Import	12,987	14,157	14,662	21,475	181,885	2,052	26,807
Balance	-4,014	-3,988	-5,310	-1,940	-31,849	-175	3,504
Of which:							
Inter-republic trade							
Export	7,457	8,542	8,169	17,339	123,136	1,409	16,057
Import	11,374	12,045	11,864	17,766	162,246	1,118	12,385
Balance	-3,917	-3,503	-3,695	-427	-39,110	291	3,672
Extra-republic trade							
Export	1,516	1,628	1,182	2,196	26,900	868	14,254
Import	1,613	2,112	2,798	3,709	29,639	934	14,422
Balance	-97	-484	-1,616	-1,513	-2,739	-66	-168

Sources: State Statistics and Forecasting Committee, World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

a/ Million som-coupons.

Annex Table A-17. Uzbekistan: Exports by commodity groups, 1987-94, selected years[a/]
(Rb million)

	Inter-republic					Extra-republic					Total exports				
	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994
Agriculture	567	405	1,510	23	365	23	43	14	1	3	589	447	1,524	24	368
Industry	6,866	7,532	121,624	1,386	15,108	1,492	1,139	26,843	823	13,544	8,358	8,671	148,467	2,209	28,652
Power	202	207	140	46	2,533	-	..	178	-	-	202	207	318	46	2,533
Energy	581	593	16,209	383	2,864	21	6	747	6	22	602	598	16,956	389	2,886
Coal	14	8	127	2	19	..	..	14	-	-	14	8	141	2	19
Processed foods	782	810	5,640	43	515	8	14	22	1	38	789	824	5,662	44	553
Light industry	2,932	3,384	49,070	640	6,167	1,347	858	23,073	560	12,306	4,280	4,242	72,143	1,200	18,473
Sawmill and lumber industry	31	15	417	2	7	2	-	76	..	..	33	15	493	2	7
Chemicals and petroleum	696	793	10,462	61	431	39	60	913	37	390	735	853	11,375	98	821
Building materials	82	71	1,106	7	178	-	-	5	..	15	82	72	1,112	7	193
Ferrous metallurgy	111	99	2,003	14	80	-	-	619	16	206	111	99	2,622	30	286
Non-ferrous metallurgy	347	429	14,253	76	513	-	18	1,102	32	421	347	447	15,355	108	934
Machinery and metalworks	1,054	1,051	22,131	111	1,225	73	180	..	100	114	1,128	1,231	22,131	211	1,339
Other industries	35	73	66	1	46	-	2	95	57	26	35	75	161	58	72
Other material production	24	232	2	-	584	2	1	43	44	707	26	233	45	44	1,291
Total	**7,457**	**8,169**	**123,136**	**1,409**	**16,057**	**1,516**	**1,182**	**26,900**	**868**	**14,254**	**8,973**	**9,352**	**150,036**	**2,277**	**30,311**

Source: State Statistics and Forecasting Committee, World Bank, *Statistical Handbook 1995 - States of the Former USSR*, Washington, DC, 1995.

a/ Data for 1993 and 1994 are in million som-coupons.

Annex Table A-18. Uzbekistan: Imports by commodity groups, 1987-94, selected years[a/]
(Rb million)

	Inter-republic					Extra-republic					Total imports				
	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994	1987	1990	1992	1993	1994
Agriculture	517	932	4,642	51	1,844	94	377	10,816	502	2,819	611	1,309	15,458	553	4,663
Industry	10,801	10,652	156,667	1,067	10,525	1,520	2,420	18,823	426	11,510	12,320	13,071	175,489	1,493	22,035
Power	151	172	12,894	8	2,099	..	..	..	..	..	152	172	12,894	8	2,099
Energy	950	886	34,747	545	2,403	41	2	-	..	..	990	888	34,747	545	2,403
Coal	48	48	1,342	26	5	13	-	..	..	..	61	48	1,342	26	5
Processed foods	1,555	1,247	14,199	69	634	406	735	12,563	66	4,485	1,961	1,983	26,762	135	5,119
Light industry	1,877	1,938	10,514	48	249	740	1,025	3,176	65	536	2,617	2,963	13,690	113	785
Sawmill and lumber industry	656	513	8,162	32	692	85	47	13	-	75	742	560	8,174	32	767
Chemicals and petroleum	939	973	20,231	83	1,244	41	174	964	83	779	980	1,147	21,195	166	2,023
Building materials	213	192	2,176	16	295	23	14	8	-	57	236	205	2,184	16	352
Ferrous metallurgy	644	647	25,922	140	1,528	28	14	333	25	872	672	661	26,255	165	2,400
Non-ferrous metallurgy	374	409	6,442	34	265	13	-	-	5	7	387	409	6,442	39	272
Machinery and metalworks	3,168	3,292	18,585	63	868	124	333	1,579	168	4,373	3,292	3,625	20,164	231	5,241
Other industries	226	334	1,453	3	24	6	75	187	12	321	231	409	1,640	15	345
Other material production	56	280	937	-	16	-	1	1	6	93	56	281	938	6	109
Total	**11,374**	**11,864**	**162,246**	**1,118**	**12,385**	**1,613**	**2,798**	**29,639**	**934**	**14,442**	**12,987**	**14,662**	**191,885**	**2,052**	**26,827**

Source: State Statistics and Forecasting Committee, World Bank, *Statistical Handbook 1995 - States of the Former USSR*, Washington DC, 1995.

a/ Data for 1993 and 1994 are in million som-coupons.

Annex Table A-19. Uzbekistan: Industrial production by subsector, 1985-94, selected years (Rb million, constant prices)

	1985	1990	1991	1992	1993	1994
Processed foods	2,943	3,680	3,608	3,087	3,358	3,545
Food processing	1,946	2,351	2,438	2,204	2,499	2,756
Meat and dairy products	940	1,257	1,094	818	807	752
Fish	57	72	76	65	52	37
Light industry	8,477	9,726	10,040	10,740	11,323	12,531
Textiles	6,770	7,528	7,475	7,938	8,089	8,874
Clothing	1,230	1,604	1,933	2,113	2,548	3,124
Leather	477	594	632	689	686	533
Heavy industry	8,222	9,751	9,819	8,887	8,925	8,854
Energy	1,879	2,273	2,264	2,112	2,227	2,222
Electricity	933	1,102	1,067	1,000	983	948
Fuels	946	1,171	1,197	1,112	1,244	1,274
Wood products	399	533	575	551	595	604
Chemicals	1,140	1,444	1,406	1,042	924	718
Building materials	1,242	1,350	1,403	1,200	995	892
Metallurgy	1,113	1,164	1,112	954	941	890
Machine-building	2,449	2,987	3,059	3,028	3,243	3,528
Other	2,230	2,733	2,811	1,803	1,794	724
Total	**21,872**	**25,890**	**26,278**	**24,517**	**25,400**	**25,654**

Source: World Bank, *Statistical Handbook 1995 – States of the Former USSR*, Washington DC, 1995.

ANNEX B

CONTACT POINTS FOR INVESTORS

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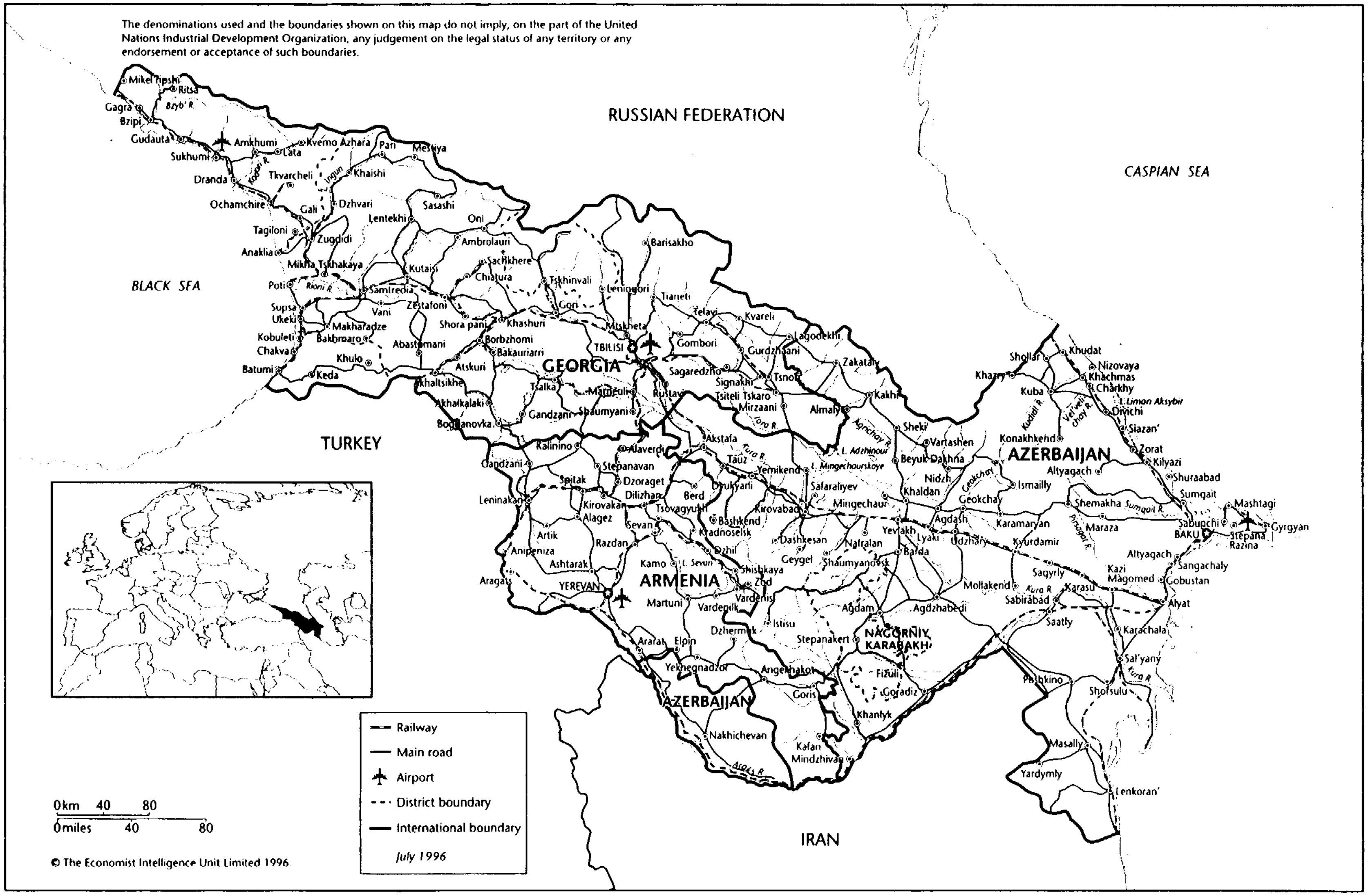
Chamber of Commerce and Industry 16A Timura pr. Tashkent 700017	Tel: (3712) 33 62 82

MAP 1



The denominations used and the boundaries shown on this map do not imply, on the part of the United Nations Industrial Development Organization, any judgement on the legal status of any territory or any endorsement or acceptance of such boundaries.
RUSSIAN FEDERATION
CASPIAN SEA
BLACK SEA
TURKEY
IRAN
GEORGIA
ARMENIA
AZERBAIJAN
AZERBAIJAN
NAGORNIY KARABAKH
TBILISI
YEREVAN
BAKU
Mikel'tipshi
Ritsa
Gagra
Bzipi
Gudauta
Sukhumi
Amkhumi
Kvemo Azhara
Lata
Pari
Mestiya
Tkvarcheli
Khaishi
Dranda
Ochamchire
Gali
Dzhvari
Sasashi
Lentekhi
Oni
Tagiloni
Zugdidi
Anaklia
Ambrolauri
Mikha Tskhakaya
Sachkhere
Kutaisi
Chiatura
Tskhinvali
Barisakho
Poti
Samtredia
Zestafoni
Vani
Leningori
Tianeti
Supsa
Ukeki
Kobuleti
Chakva
Batumi
Makharadze
Bakhmaro
Abastumani
Shora pani
Khashuri
Borzhomi
Bakauriani
Khulo
Keda
Atskuri
Akhaltsikhe
Akhalkalaki
Bogdanovka
Tsalka
Gandzani
Marneuli
Shaumyani
Gori
Mtskheta
Telavi
Kvareli
Gombori
Lagodekhi
Gurdzhaani
Sagaredzho
Signakhi
Tsnori
Tsiteli Tskaro
Mirzaani
Zakataly
Kakhi
Almaly
Rustavi
Kalinino
Alaverdi
Stepanavan
Akstafa
Tauz
Yemikend
Sheki
Vartashen
Beyuk Dakhna
Nidzh
Khaldan
Ismailly
Leninakan
Spitak
Dzoraget
Dilizhan
Kirovakan
Alagez
Berd
Krukyarli
Safaraliyev
Mingechaur
Kirovabad
Bashkend
Kradnoselsk
Sevan
Tsovagyukh
Artik
Razdan
Dashkesan
Naftalan
Yevlakh
Lyaki
Udzhary
Agdash
Geokchay
Anipemza
Ashtarak
Aragats
Kamo
Shishkaya
Zod
Vardenis
Geygel
Shaumyanovsk
Barda
Martuni
Vardenik
Istisu
Agdam
Agdzhabedi
Dzhermuk
Stepanakert
Ararat
Elpin
Yekhegnadzor
Angekhakot
Goris
Fizuli
Goradiz
Khanlyk
Nakhichevan
Kafan
Mindzhivan
Sholiar
Khudat
Nizovaya
Khachmas
Charkhy
Khazry
Kuba
Divichi
Siazan'
Konakhkehd
Zorat
Kilyazi
Altyagach
Shuraabad
Sumgait
Mashtagi
Shemakha
Karamaryan
Maraza
Kyurdamir
Sabunchi
Gyrgyan
Stepana
Razina
Altyagach
Sangachaly
Kazi Magomed
Gobustan
Saqyrly
Mollakend
Karasu
Sabirabad
Alyat
Saatly
Karachala
Sal'yany
Pushkino
Shorsulu
Masally
Yardymly
Lenkoran'
Rioni R.
Kura R.
Araks R.
Bzyb' R.
Kodori R.
Ingur R.
Iora R.
L. Sevan
L. Mingechaurskoye
L. Adzhinour
Agrichay R.
Kudial R.
Velvel chay R.
Geokchay R.
Sumgait R.
Pirsagat R.
L. Limon Aksybir
Railway
Main road
Airport
District boundary
International boundary
July 1996
0km 40 80
0miles 40 80
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MAP 2

The denominations used and the boundaries shown on this map do not imply, on the part of the United Nations Industrial Development Organization, any judgement on the legal status of any territory or any endorsement or acceptance of such boundaries.
RUSSIAN FEDERATION
KAZAKSTAN
UZBEKISTAN
TURKMENISTAN
KYRGYZ REPUBLIC
TAJIKISTAN
AFGHANISTAN
IRAN
CHINA
MONGOLIA
TURKEY
GEORGIA
ARMENIA
AZERBAIJAN
BLACK SEA
CASPIAN SEA
Aral Sea
Balkhash L.
Tengiz L.
Zayson L.
Issyk Kul R.
Ishim R.
Irtysh R.
Syr Darya R.
Amu Darya R.
Emba
Uralsk
Chapayevo
Aksay
Kalmykovo
Aktyubinsk
Alga
Orsk
Guryev
Makat
Kulsary
Emba
Fort Shevchenko
Shevchenko
Beyneu
Chelkar
Aralsk
Novokazalinsk
Troitsk
Rudnyy
Zverinogolovskoye
Dzhetygara
Kustanay
Zhailma
Petropavlovsk
Karabutak
Kokchetav
Stepnyak
Makinsk
Kachiry
Amangeldy
Tselinograd
Kurgaldzhino
Pavlodar
Ekibastuz
Yermak
Baikohur
Karsakpay
Dzhezkazgan
Karaganda
Temirtau
Atasu
Abay
Karkaralinsk
Semiyarka
Rubtsovsk
Semipalatinsk
Uspensky
Karazhal
Ust-Kamenogorsk
Leninogorsk
Zyryanovsk
Mointy
Gulshad
Balkhash
Saryshagan
Ayaguz
Karakas
Kurchum
Akogay
Urdzhar
Zaysan
Rybachye
Krasnovodsk
Cheleken
Chimbay
Tashauz
Kzyl Orda
Chiili
Kizyl-Arvat
Darvaza
Khiva
Gasan Kuli
Yerbent
Kentau
Turkestan
Dargan Ata
Fiyuza
ASHGABAT
Zhanatas
Espe
Akkol
Ush-Tobe
Taldy Kurgan
Chimkent
Dzhambul
Dushak
Bukhara
Navoi
Chardzhou
Kagan
TASHKENT
Chirchik
BISHKEK
Tokmak
Kapchagay
Panfilov
ALMATY
Mary
Dzhizak
Samarkand
Namangan
Khodzhent
Kokand
Andizhan
Karakol
Kerki
Kitab
Fergana
Osh
Naryn
Kushka
DUSHANBE
Termez
Kulyab
Khorog
Railway
Main road
Airport
International boundary
June, 1996
0 km 200 400 600 800
0 miles 200 400 600
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INDEX

acids . . . 161
aeroplanes, aircraft . . . xxxviii, xlvi, 78, 123, 144, 166
Afghanistan . . . 9, 73, 120
agricultural equipment/machinery . . . xxxviii, xliii, 12, 64, 123-124, 143, 144, 149
agricultural mechanization . . . xxxiv, 95
agricultural output/production . . . xxvi, xxx, 18, 75-77, 93, 100, 121, 122
agriculture, farming . . . xxi, xxv-xxvii, xxix-xxxix, xlii-xliv, 12, 13, 16-20, 25, 28, 32, 33, 40, 41, 46-50, 52, 55, 64, 69, 70, 74-77, 79, 81, 83, 84, 86, 90-96, 100, 102, 109, 118, 120-123, 128, 139, 141, 143-145, 148-150, 152-154
agricultural processing, agro-industries . . . xxi, xliii, 19, 21, 39, 47, 48, 94, 95, 100, 123, 126, 140, 141, 147, 151, 153, 160
Agro-Industrial Bank . . . 21, 126
agrochemicals . . . xlii, 144
Agroprombank . . . 20, 21, 34, 79
aid . . . 132, 150
air/atmospheric pollution . . . xxxiv, xlv, 97, 137, 161
air transport/aviation . . . xxx, 78, 125
air-conditioning . . . xxviii, 43, 65
Airbus . . . 131
aircraft, aeroplanes . . . xxxviii, xlvi, 78, 123, 144, 166
airports . . . 20, 70, 78, 81, 96, 125, 150
alcohol . . . xxi, xxii, xxiv, xxvi, xxxv, 12, 17, 19, 39, 47, 49, 50, 59, 101
Ali-Bayramli . . . 56
All Union Law on State Banking . . . 126
alumina, aluminium . . . xxviii, 30, 42, 59, 62-64
aluminium chloride . . . 59
alumite . . . 62
American Petroleum Institute (API) . . . xxviii, 65
ammonia . . . 97, 107, 109
Amoco . . . xxvii, 55
Amu-Dar'ya . . . xxx, 69, 73, 78, 105, 117, 120, 122, 137, 149
animal husbandry, livestock farming . . . xxi, xxx, xxxi, xxxv, xxxviii, xliv, 17, 18, 47, 75, 76, 84, 102, 121, 122, 154
anti-alcohol campaign . . . xxi, xxii, xxiv, xxvi, xxxv, 12, 17, 19, 39, 47, 49, 50, 101
apparel, clothing, garments . . . xxvii, xliii, xliv, 51, 53-55, 102-105, 149, 153, 154
Apsheron Peninsula . . . xxv, 16, 17, 32, 42, 56
arable farming . . . xxx, 75
Araks . . . 16, 42
Aral Sea . . . xxxvii, xli, 32, 69, 73, 89, 117, 120, 122, 137, 149
Argentina, Argentine . . . 91, 107
Armenia, Armenian . . . xx, xxi, xxiii, xxiv, xxvi, 1, 12, 14-17, 20, 28, 36, 50, 51, 53, 57, 70, 71, 74, 83
Arzneftyag . . . 57
Ashgabat . . . xxx-xxxii, xxxiv, 70, 74, 78, 80, 81, 86-88, 96, 97, 107, 112

assembly . . . xxviii, xlvi, 36, 65, 141, 164, 165
astrakhan wool . . . xxxviii, 122
Austria, Austrian . . . 153
automobiles, automotive industry . . . xlii, xliii, xlvi, 112, 141, 143, 144, 149, 164, 165
Autonomous Soviet Socialist Republic (ASSR) . . . xxxvi, xxxvii, 117
Avia Automotive . . . 164
aviation, air transport . . . xxx, 78, 125
aviation equipment . . . xxxix, xliii, 128, 149
Azakbank . . . 21
Azerbaijan, Azerbaijani, Azeri . . . xvii, xx-xxxviii, 1, 3, 11-36, 38-43, 46-66, 70, 71, 74, 83, 111, 143
Azerbaijan International Operating Company (AIOC) . . . xx, 13
Azerbaijan Tube-Rolling Mill . . . 62
Azerichimia . . . 58, 59
Azerineft SA . . . 56
Azerittifak . . . 55
Azerneftmash . . . 64, 65
Aznefte . . . 14, 56
Azneftegeofizika . . . 56
Azneftyag . . . 57
baby carriages . . . xxviii, 65
Baku . . . xxi, xxv, 11, 12, 17, 20-22, 32, 42, 50, 57, 64
Baku Administrative Bank . . . 21
balance of payments . . . 15, 24, 131, 132
Baluchis . . . 74
Bank of Economic Development . . . 35
banking and banks . . . xxii, xxiii, xxvi, xxviii, xxxi-xxxiv, xxxix-xli, xliii, 5, 12-15, 17, 18, 20-22, 24-30, 32-35, 38, 39, 41, 42, 46-48, 52-54, 57, 58, 60, 62, 65, 66, 70-72, 74, 76-81, 83-85, 87-92, 95-97, 101, 104, 106, 108, 110, 111, 119, 121-130, 132, 134-136, 138-143, 145, 147, 149, 150, 152, 154-156, 158, 160, 161, 163, 164
Banking Law . . . xxxix, 126, 132
bankruptcy . . . xvii, xxv, xlii, 1, 15, 41, 147
barter . . . xxxvii, 1, 27, 30-32, 84, 86, 87, 91, 102, 105, 118, 129, 134, 135
basic chemicals . . . xliii, 149, 161
basic metals . . . xxxix, 128
batteries . . . 143
beet sugar . . . xxxii, 86
Belarus . . . 27, 29, 112, 134
Belgium . . . 128
Bina airport . . . 20
birth rates . . . 74, 120
bismuth . . . 62
black market . . . xl, 88, 136
Black Sea Cooperation Accord . . . 12
Boeing . . . 78, 125

Bolshevik . . . 11, 117
bottles and bottling . . . xxxv, 48-50, 101, 153
brandy . . . 48, 50
bread . . . 14, 28, 48, 85
bricks . . . 60
Bridas . . . 91, 107
bridge cranes . . . 123
British American Tobacco (BAT) . . . xliv, 139, 153
British Petroleum (BP) . . . xxi, xxvii, 16, 42, 55, 57, 64
bromine . . . xxxvi, 59, 107, 109
budget, fiscal policy . . . xviii, xx, xxi, xxiii, xxv, xxix, xxxi, xxxii, xl, 2-4, 14-16, 21, 27-29, 34, 41, 73, 79, 81, 84, 85, 127, 128, 132, 133, 141, 143
building/construction materials . . . xxvii, xxviii, xxxvi, xxxvii, xlii, xlv, 13, 25, 38, 60-62, 83, 93, 94, 97, 98, 108-110, 118, 123, 124, 141, 144, 146, 149, 161, 162
Bukhara . . . xxxvi, 69, 117, 120
Bulgaria . . . 129
Burley . . . 51
businessmen, entrepreneurs . . . xviii, xxii, xxxix, xli, xlii, 3-6, 22, 34, 132, 136, 138, 140, 142, 143, 154
butane . . . 86, 105
butter . . . 48
Byuzmeyin . . . xxxiv, 97
cadmium . . . 62
Canada, Canadian . . . 90, 153
canning . . . 153
capital . . . xvii, xix, xxi, xxiv, xxv, xxvii, xxviii, xxx, xxxiv-xxxvi, xli, xliii, xliv, 1, 2, 4, 5, 7, 8, 12, 17, 29, 32, 34, 35, 41, 54, 66, 74, 81, 105, 117, 120, 126, 140, 145, 148, 155
carbon monoxide . . . 97
carpets and carpet weaving . . . xxiii, 31, 52, 92, 95, 103, 154
Caspian Sea . . . xxv, 9, 16, 20, 22, 32, 42, 55, 57, 69, 73, 78, 92, 105
Caspian Shipping Company . . . 20
catering . . . 138
Caucasus, Caucasian . . . xxxiv, 95
caustic soda . . . 58
caviar . . . 30
cement . . . xxxvi, 60, 61, 109, 162
Central Bank of Russia (CBR) . . . xxiii, xxxvii, xl, 28-30, 85, 119, 134, 135
Central Bank of Uzbekistan (CBU) . . . xl, 126, 134, 139
Centre for Economic Policy and International Cooperation . . . 36
ceramics . . . xxviii, 61, 65, 162
cereals . . . xxi, xxvi, 16, 17, 47
Chardzhou . . . xxxiv, 70, 78, 97, 106, 107
Chechnya . . . 15, 25
cheese . . . 48
chemicals . . . xxi, xxvii, xxx, xxxvi, xliii, xlv, 13, 19, 25, 32, 33, 38, 42, 43, 58-60, 78, 83, 87, 88, 92-94, 97, 98, 107-110, 123, 124, 131, 134, 139, 141, 143-146, 148, 149, 159-161

Chevron ..... xlv, 159
China, Chinese 9, 77, 117, 128, 129, 134
chipboard ..... xxxvi, 109, 162
Chirag ..... xxvii, 55, 64
cigarettes 48, 50, 51, 153
circuits ..... xlvi, 79, 166
civil war 1, 71
clays ..... xlv, 62, 161
clothing, apparel, garnments ..... xxvii, xliii, xliv, 51, 53-55, 102-105, 149, 153, 154
coal ..... xxxix, 128, 135, 157
cobalt 62
collectives, collectivization ..... xxiv, xxix, 17, 35, 37, 40, 52, 69, 81, 89, 90, 138, 139, 147
Committee for Ecology 33
Committee for State Property Management and Privatization (CSPMP) 132, 138, 139
Committee on Science and Technology 35
commodities ..... xx, xxxii, xxxviii, 15, 30, 43, 72, 83, 86, 87, 120, 134
Commonwealth of Independent States (CIS) ..... xx, xxvi, 12, 31, 46, 87, 118, 135
communications ..... xxxix, 13, 19, 74, 78, 92, 124, 125, 154
components ..... xxxix, 43, 94, 112, 129
compressors 165
computers 150
condensates 158
confectionery 48, 100
Conference on Security and Cooperation in Europe (CSCE) 12
conglomerates ..... xxxiii, 92, 140
conserves 124
construction ..... xxiv, xxvii-xxix, xxxi, xxxiii, xxxvi, xxxvii, xliv, xlv, 13, 20-23, 39, 41, 56, 57, 60-62, 64, 69, 70, 74, 77-81, 86, 92, 93, 96, 100, 103, 109, 110, 118, 123, 125-127, 141, 143, 148, 150, 156, 159, 161, 162
construction/building materials ..... xxvii, xxviii, xxxvi, xxxvii, xlii, xlv, 13, 25, 38, 60-62, 83, 93, 94, 97, 98, 108-110, 118, 123, 124, 141, 144, 146, 149, 161, 162
consumer cooperatives 90
consumer goods ..... xxii, xxiv, xxv, xxviii, xxxiv, xxxix, xl, xlii, xlvi, 2, 27, 34, 39, 43, 65, 66, 97, 103, 128, 129, 131, 134, 135, 141-144, 165-167
consumer prices ..... xxxvii, 14, 72, 119
consumption ..... xxx, xxxviii, 15, 22, 23, 42, 72, 77, 80, 81, 86, 122, 127, 128, 140, 157
convertibility ..... xxxi, xxxii, xl-xlii, xlvi, 8, 29, 32, 85, 88-90, 134, 136, 141, 143, 166
cooking fat 152
cooling units 41
cooperatives 17, 21, 47, 79, 89, 90, 126
copper ..... xxxviii, xlv, 16, 19, 62, 120, 122, 123, 141, 162

cosmetic creams . . . 160
costs . . . xxii, xxv, xvii, xxviii, xxxiv, xxxv, 1, 22, 40, 63, 69, 77, 86, 96, 98, 105, 125
cotton . . . xxi, xxvi, xxix-xxxiii, xxxv-xxxix, xliii-xlvi, 13, 16, 17, 30, 32, 35, 47, 48, 51, 53, 54, 69-71, 75, 77, 78, 81, 83-86, 92-94, 97, 102, 103, 109, 117, 118, 120, 122-124, 128, 129, 131-135, 140, 141, 143, 144, 149, 151, 153, 154, 159, 162, 165
Council for Mutual Economic Assistance (CMEA) . . . 33, 42, 71, 135
Council on Economic Reform,
Entrepreneurship and Foreign Investment . . . xxxix, 132
credit . . . xviii, xxii, xxviii, xxxi, xxxiii, xxxv, xli, xliv, 3-6, 15, 21, 29, 31, 33-35, 57, 62, 79, 85, 91, 103, 126, 132-134, 136, 138, 139, 141, 142, 154
crude oil production and processing . . . xx-xxii, xxiv, xxv, xxvii, xxx, 11, 13, 14, 19, 24, 25, 38, 43, 57, 58, 77, 105, 106, 158, 160
crystal . . . 166
currency . . . xxi, xxiii, xxvii, xxix, xxxi, xxxii, xxxvii, xl, xli, xliv, 1, 8, 12, 15, 16, 21, 27-32, 55, 57, 60, 65, 66, 70, 71, 73, 81, 85-88, 91, 119, 136, 142, 157
current-account balance . . . 15, 24
cutlery . . . xxviii, 65
Czech Republic, Czech . . . xxiii, 33, 164
Czechoslovakia . . . 129
Daewoo . . . 164, 166
Daghestan . . . 20
Daimler Benz . . . 164
dairy industry . . . xxvi, 47, 101, 151, 152
Dashkasan Group . . . 62
Dashkhovuz . . . xxxiv, 97
debt . . . 8, 15, 129
decree . . . xxxiii, xxxix, xli, xlii, 30, 72, 74, 84, 85, 90, 132, 135, 136, 138, 139, 142, 143
deficits . . . xx, xxi, xxiii, xxxii, xl, 15, 23, 24, 28, 71, 73, 81, 85, 118, 127, 132, 133
deforestation . . . xxvii, 33, 55
demand . . . xxv, xxvii-xxix, xxxv, xxxvi, xxxviii, xxxix, xlii, xliv-xlvi, 12, 15, 20, 22, 23, 43, 51, 54, 55, 60-62, 66, 71, 80, 81, 92, 102, 105, 110-112, 117, 123, 125, 127, 128, 143, 144, 155, 156, 160, 162, 163, 165, 167
demographic structure . . . 17, 74, 120
denim . . . 153
desalinization . . . 92
deserts . . . xxxviii, 73, 80, 120, 123, 142
desiccation . . . 69, 89
detergents . . . 58, 107, 109, 166
devaluations . . . 73, 88
divestment . . . 147
dollars . . . xxxii, 42, 43, 88, 125, 128, 136
donor organizations . . . xliv, 154

donors . . . xxvi, xxxix, xliii, 46, 98, 132, 136, 150
dresses . . . 54
drying . . . xxxvii, xli, 73, 117, 120, 137, 149
dyes . . . xl, 135
Dzhalilabad . . . 49, 50
EC Trade and Cooperation Agreement . . . 31, 87, 135
Economic and Social Commission for
Asia and the Pacific (ESCAP) . . . xxvi, 46, 75, 77, 124, 143
Economic Committee of the Presidential Council . . . xxxi, 84
Economic Cooperation Organization (ECO) . . . 31, 80, 87, 135
economic policy . . . xxxi, xxxix, 36, 84, 91, 131
economic reform . . . xxxi, xxxix, xl, xlii, 27, 33, 84, 122-125, 128, 131, 132, 138, 140, 142-145, 164
economic structure . . . xviii, xxi, xxx, xxxiii, xxxvii, 16, 73, 89, 120
economic trends . . . xx, xxviii, xxxvi, 11, 69, 117
Economic Union . . . 12, 31, 87, 135
education . . . xxiv, xxxii, xxxiv, 17, 39, 79, 88, 89, 95, 120, 136, 137, 148
electrical and electronic equipment . . . xlvi, 20, 25, 42, 64, 65, 92, 124, 135, 141, 143, 165, 166
electricity and power . . . xxxiv, xxxvi, 11, 13, 25, 38, 69, 90, 92, 93, 97, 105, 117, 122, 133, 135, 157, 165
elevators . . . 165
Elf Aquitaine . . . xlv, 107, 159
emigration . . . xxx, xxxiv, 74, 95
emission . . . xli, 33, 61, 137
emissions . . . xxxvi, xlv, 61, 109, 161
employee . . . xxxiv, 96
employees, employment . . . xviii, xxi, xxiv, xxx, xxxii, xxxiii, xxxviii, 4, 7, 8, 14, 17, 33, 38-40, 64, 65, 74, 75, 89, 91, 94-96, 105, 119, 138, 143, 145, 146, 161, 163, 164
energy . . . xxv, xxvi, xxviii, xxxiii, xxxiv, xxxvi-xlv, 1, 13, 14, 19, 32, 40, 42, 46, 63, 70, 77, 83, 86, 91, 94, 96, 107, 118, 122, 129, 134, 135, 139, 144-146, 148, 150, 157, 158
engineering . . . xxvii, xxviii, xlv, xlvi, 60, 63-65, 94, 112, 141, 143, 144, 164, 165
enterprise . . . xvii-xix, xxi, xxiii-xxviii, xxxi-xxxv, xxxviii, xxxix, xli-xlvi, 1-9, 14, 15, 19, 22, 29-31, 33-37, 40-43, 46, 50-52, 54-60, 62-66, 79-81, 84, 85, 89-96, 102, 103, 105, 107, 108, 110, 123, 124, 126, 132, 133, 138-141, 143, 144, 147, 148, 150, 151, 154, 157, 159-161, 163-167
Enterprise Law . . . xxxiii, 90, 140
entrepreneurs, businessmen . . . xviii, xxii, xviii, xxxix, xli, xlii, 3-6, 22, 34, 132, 136, 138, 140, 142, 143, 154
environment . . . xvii-xix, xxii, xxv, xxvi, xxviii, xxxi, xxxiv, xxxvi, xxxvii, xxxix, xli, xlv, 1-3, 7-9, 11, 16, 27, 32, 33, 40, 42, 43, 46, 59, 62, 69, 73, 75, 84, 89, 90, 96, 97, 109, 117, 118, 120, 123, 131, 137, 143, 149, 150, 161

equipment . . . . xx, xxii, xxiv, xxviii, xxxvi, xxxviii, xxxix, xlii, xliii, xlv, xlvi, 11, 12, 19, 20, 35, 36, 38, 41-43, 46, 48, 50-52, 57, 64, 65, 81, 89, 94, 105, 110-112, 122, 123, 125, 128, 131, 141, 144, 149, 159, 163-166
equity 21, 97, 126, 141, 142
erosion . . . . xxi, xxvii, 19, 32, 48, 55
Estonia 27, 134
Estpac International 91
ethyl alcohol 59
ethylene 59
Europe . . . . xx, xxiv, xxxviii, 7, 11, 12, 19, 20, 25, 36, 42, 57, 86, 106, 122, 125, 128, 129, 147, 150
European Bank for Reconstruction and Development (EBRD) . . . . xliii, xliv, 12, 13, 24, 41, 42, 70, 72, 73, 88, 91, 96, 97, 103, 119, 142, 147, 153, 154
European Union (EU) . . . . xxvi, xxxv, xliii, 33, 46, 98, 140, 150
excavators 165
excise duties . . . . xxxii, 28, 85, 133
expenditure . . . . xx, xxix, xxxi, xl, 15, 22, 28, 34, 73, 85, 128, 133
exploration . . . . xxiv, xxxiii, xlv, 36, 41, 42, 56, 90, 91, 122, 123, 142, 157, 159, 162, 163
export credits 132
export earnings, revenues . . . . xxix, xxxii, xxxviii, 59, 70, 71, 75, 77, 86, 87, 122
export markets . . . . xx, xxiii, xxv, xxix, xxxi, xxxii, xxxv, xl, xlvi, 15, 30, 31, 81, 86, 102, 128, 135, 153, 167
export-oriented production . . . . xl, 134
export tariffs 87
exporters . . . . xxiii, xxv, xxxvii, xxxviii, xl, xliii, 15, 30, 38, 43, 87, 88, 100, 119, 122, 124, 134-136, 149
exports . . . . xxii, xxiii, xxv, xxvi, xxix, xxxi, xxxii, xxxviii-xl, xliii, xlv, 9, 23-27, 30-32, 35, 43, 46, 60, 71-73, 75, 77, 81-86, 97, 98, 103, 105, 118, 122, 128-131, 134, 135, 145, 149, 157, 159, 161-164
expropriation . . . . xlii, 141
external payments and debt . . . . xxiii, xxvii, xxix, xxxii, xxxvii, xli, 1, 4-6, 9, 23, 29, 54, 55, 58, 71, 81, 83, 84, 86, 91, 118, 125, 128, 129, 136
extractive industries . . . . xxii, xxxiii, xlii, 19, 38, 43, 93, 139
fabrics . . . . xxvi, 51, 53, 54, 92, 94, 102, 124
factories . . . . xliii, xlvi, 51, 52, 55, 90, 100, 103, 105, 143, 149, 166
farming, agriculture . . . . xxi, xxv-xxvii, xxix-xxxix, xlii-xliv, 12, 13, 16-20, 25, 28, 32, 33, 40, 41, 46-50, 52, 55, 64, 69, 70, 74-77, 79, 81, 83, 84, 86, 90-96, 100, 102, 109, 118, 120-123, 128, 139, 141, 143-145, 148-150, 152-154
Fergana Valley . . . . xliii, 137, 149, 157, 159
ferrous metals and matallurgy . . . . xxviii, 13, 25, 62, 63, 83, 98, 124, 134, 139, 146, 149, 162, 163
fertilizers . . . . xxxiv, xxxvi, xxxix, xlv, 13, 32, 33, 58, 92, 97, 107, 109, 123, 128, 131, 144, 159-161
fibres 131, 160

Filizchay 62
finance . . . . . xxxiii, xxxv, xxxvi, xl, xli, xliv, 15, 20, 31, 42, 58, 70, 79, 91, 97, 106, 107, 110, 124, 126, 132, 133, 136, 138-142, 153, 154
financial assistance and support . . . . . xxvi, xli, 34, 46, 91, 140, 141
financial resources . . . . . xxxv, xl, xlv, 70, 91, 107, 133, 161
financial services 34, 35
finished goods . . . . . xl, 134, 161
Finland 134
fiscal and budget policy . . . . . xviii, xx, xxi, xxiii, xxv, xxxi, xxxii, xxix, xl, 2-4, 14-16, 21, 27-29, 34, 41, 73, 79, 81, 84, 85, 127, 128, 132, 133, 141, 143
fish . . . . . xxiii, 31, 101, 151
Five-Year Plans 117, 144
fixed assets 23
flour 27, 48, 85, 100, 101
fodder 48, 101
food . . . . . xxii, xxiv-xxvi, xxx-xxxii, xxxv, xxxvii-xxxix, xliii, xliv, 13, 14, 19, 27, 30, 39, 43, 46-48, 51, 52, 64, 75, 84, 86, 94, 97, 98, 100-102, 118, 122, 128, 129, 133-135, 140, 151-153
footwear . . . . . xxvii, 42, 53, 54, 103-105, 124, 143, 144, 154, 155
foreign equity 97, 126, 142
foreign exchange, hard currency . . . . . xxvii-xxix, xxxi, xxxii, xxxvii, xl, xli, xliv, 15, 16, 21, 29-32, 55, 57, 60, 63, 65, 66, 70, 71, 73, 77, 79, 81, 85-88, 91, 119, 126, 132-136, 142, 148, 157
foreign investment . . . . . xix, xxii, xxiv, xxvi-xxviii, xxxi, xxxiii-xxxvi, xxxviii, xxxix, xlii, xliv-xlvi, 1, 2, 4, 7-9, 22, 35, 36, 41, 46, 48, 51, 54, 66, 80, 85, 90-92, 97, 103, 107, 109, 110, 112, 123, 127, 129, 132, 141, 142, 148, 153, 154, 159, 162-165, 167
Foreign Investment Central Board . . . . . xxiv, 35
Foreign Investment Department 36
Foreign Language Pedagogical Institute 39
foreign reserves 15, 21, 29, 30, 79, 126
foreign technology . . . . . xviii, xxiv, xlv, 6, 35, 159
foreign trade . . . . . xix, xxiii, xxx, xxxii, xxxix, xl, 9, 16, 20, 29-31, 78, 79, 86, 87, 126, 129, 133, 134
foreign trade bank 20, 79, 126
forestry, logging 13, 55, 124, 145, 146, 148, 156, 157
Foton 166
France, French . . . . . xlv, 17, 103, 107, 125, 143, 153, 159
free economic zones . . . . . xxxiii, 92
freezers 166
freight . . . . . xxii, xlvi, 19, 20, 125, 166
fruit . . . . . xxi, xxxv, 16, 17, 47, 50, 75, 77, 97, 100, 122, 140
fuel . . . . . xxx, 13, 36, 38, 56, 57, 78, 83, 93, 94, 106, 112, 123, 131, 157, 158
Fund for the Support of Entrepreneurship . . . . . xli, 140
furniture . . . . . xxvii, 55, 66

garments, apparel, clothing . . . xxvii, xliii, xliv, 51, 53-55, 102-105, 149, 153, 154
gasoline . . . 57, 106
General Agreement on Tariffs and Trade (GATT) . . . 31, 87, 135
Generalized System of Preferences (GSP) . . . 31, 87, 135
Georgia, Georgian . . . 16, 20, 27, 57, 58, 70, 71, 81, 83
Germany, German . . . xxvi, xxxv, xliii, 20, 46, 83, 98, 110, 128, 148, 150, 154, 162, 164,
glass . . . xxviii, 60, 61, 65, 93, 94, 153, 166
gold . . . xxviii, xxxviii, xlii, xlv, 16, 19, 62, 120, 122, 123, 129, 137, 141, 142, 144, 162, 163
Gosbank . . . xxxi, xxxiii, 20, 34, 71, 79, 91, 126
Gosnab . . . 140
Gosplan . . . 140
grain . . . xxxi, xxxv, xxxviii, xliii, 17, 27, 30, 47, 77, 75, 84, 100, 122, 132, 151
grants . . . 85
grapes . . . xxi, xxvi, xxxv, 12, 16, 17, 32, 47, 49, 50, 75, 100
Greater Caucasus mountains . . . 16
gross domestic product (GDP) . . . xx, xxii, xxiii, xxv, xxix-xxxi, xxxiii, xxxix, xl, xliii, 12, 13, 15, 22, 23, 28, 29, 41, 70, 71, 73-75, 80, 85, 90, 91, 93, 96, 118, 125, 127-129, 132, 133, 143, 147
gross fixed investment . . . xliii, 148
gross national product (GNP) . . . 19, 28
gross output . . . 101, 104, 108, 111, 118, 152, 155, 156, 158, 160, 163
ground water . . . xxv, xli, xlv, 42, 137, 161
Guneshli . . . xxvii, 36, 55
Gyanja . . . xxv, 17, 42, 63
gypsum . . . xxxvi, 61, 108, 109
hairdressing . . . 92
health and healthcare . . . xxiv, xxv, 39, 41, 42, 79, 90, 95, 139, 148
heavy industry . . . xxii, 19, 38, 94, 123, 146
herbicides . . . 59
hides . . . 52, 105, 155
horticulture . . . xxx, 75
hotels . . . xxvii, xxxi, xlv, 22, 62, 80, 127, 162
household goods and appliances . . . xxviii, xlvi, 65, 166
housing . . . xxiv, xxvii, xxxvi, xxxvii, xliii, xlv, 39, 62, 81, 96, 110, 118, 126, 147, 148, 162
human resources and human resource development . . . xxvi, 6, 46, 88, 95, 136
Hungary . . . 129, 134
hydroelectric power . . . 157
hydrocarbons . . . xxv, xxvii, xxix, xxx, xxxv, xxxvi, xxxviii, xlv, 43, 71, 77, 78, 86, 97, 106, 107, 120, 159
imports . . . xxi, xxii, xxv, xxviii-xxxii, xxxvii-xl, xliii-xlvi, 13, 19, 20, 23-27, 30, 32, 43, 55, 57, 60, 61, 65, 70-72, 75, 81-84, 86, 87, 92, 94, 97, 98, 102, 105-107, 110, 111, 118, 122, 128-131, 133, 135, 136, 141, 145, 149, 151, 153, 157, 160, 161, 167
income . . . xx, xxix, 4, 8, 11, 15, 23, 28, 70, 71, 85, 133
India, Indian . . . xxvi, 46, 134, 162
indium . . . 62

Indonesia . . . 128, 134
industrial credit . . . 79
industrial development . . . xvii, xix, xxvi, xxix, xxxiv, 1, 3, 34, 46, 69, 84, 91, 95, 98, 140, 141, 150
industrial employment . . . xxiv, xxxiii, 39, 64, 94, 95, 145, 146
industrial enterprises . . . xxi, xxiv, xxv, xxxiii, xlii, 3, 5, 6, 19, 22, 36, 37, 40, 43, 93, 94, 140, 141, 143, 147
industrial location . . . xxxiv, xliii, 19, 42, 90, 97, 148, 149
industrial output . . . xvii, xxi, xxii, xxx, xxxvii, 1, 13, 19, 38, 39, 48, 55, 58, 64, 70, 78, 94, 118, 123, 124, 140, 144, 146, 151, 157, 159, 161, 163, 164
industrial pollution . . . xxv, xxxiv, 32, 42, 97, 137
Industrial-Building Bank . . . 126
industry and industrialization . . . xix, xx-xxx, xxxii-xxxviii, xl-xlvi, 1, 4, 6, 11, 13, 16, 19-22, 25, 32-36, 38-42, 46-52, 54-66, 69, 70, 74, 78, 79, 81, 83, 89-98, 100-105, 107-112, 117, 122-124, 134, 135, 137-139, 141, 143-149, 151-165, 167
Industry and Construction Bank . . . 79, 21
inflation . . . xx, xxi, xxix, xxxii, xxxvii, xl, 14, 15, 28, 29, 35, 79, 85, 86, 119, 134
information . . . xix, xxix, 5, 6, 8, 29, 31, 34, 70, 77, 80, 88, 95, 98, 126, 140, 142, 146, 150
infrastructure . . . xvii, xviii, xx, xxii, xxx, xxxi, xxxiv, xxxviii, xliii, xlv, 1, 3, 13, 19, 20, 43, 46, 78, 80, 81, 85, 92, 96, 110, 124, 125, 127, 141, 148, 149, 162
Inmarsat satellite system . . . 79
inputs . . . xix, xx, xxv, xxxiv, xxxvii, xlii, xlv, xlvi, 2, 8, 9, 13, 15, 29, 34, 40, 51, 70, 96, 111, 118, 124, 140, 143, 144, 161, 164, 165
insecticides . . . 160
insurance . . . 90, 142
Intelsat . . . 79
inter-enterprise arrears . . . 15, 141, 147
inter-governmental agreements . . . 31, 87, 135
inter-republic trade and payments . . . xxiii, xxix, 1, 15, 29, 30, 70, 71, 92, 94, 118, 134
interest . . . xix, xxii, xxiv-xxviii, xxxi, xxxiii-xxxv, xxxviii, xliv, xlvi, 2, 15, 21, 22, 34-36, 42, 46, 51, 54, 55, 62, 64, 79, 80, 88, 91, 97, 103, 105, 107, 117, 123, 136, 141, 153, 154, 162-165, 167
intermediate goods . . . 70, 124
International Bank . . . 21
International Monetary Fund (IMF) . . . xxiii, xxvi, xxxix, 12, 15, 16, 23, 24, 28, 33, 34, 46, 47, 72, 75, 79, 80, 94, 109, 118, 124, 128, 129, 131-134, 148, 152, 158, 160, 162, 165, 166
inventories . . . 49, 81
Investbank . . . 79
investment, accumulation . . . xix, xxi-xxviii, xxxi, xxxiii-xxxvi, xxxix, xl, xlii-xlvi, 1, 2-4, 7-9, 16, 19, 22, 33-36, 38, 41-43, 46, 48, 52, 54, 57, 59, 63, 64, 66, 78, 80, 81, 85, 86, 90-92, 96, 97, 103, 107, 109, 110, 112, 123, 125-129, 132-134, 139-142, 144, 147, 148, 150, 153-155, 157, 159, 162-165, 167

iodine . . . . . xxxvi, 59, 107, 109
Iraq, Iraqi 25
iron . . . . . xxviii, 16, 19, 33, 62
irrigation . . . . . xxi, xxvi, xxix, xxxiv, xxxv, xxxvii, xxxviii, xliv, 17, 19, 32, 33, 47, 48, 69, 70, 75, 97, 100, 117, 120, 122, 137, 149, 152
Islamic Republic of Iran, Iranian . . . . . xxi, xxvi, 9, 12, 15, 16, 20, 25, 31, 34, 42, 46, 57, 73, 77-79, 81, 83, 87, 92, 134, 135
Italy, Italian 86, 112, 153
jackets 54
Japan, Japanese . . . . . xxvi, 46, 77, 143
jars 153
jeans 153
jewellery . . . . . xlii, 144, 163
Jizzabh accumulator plant 143
John Brown 64
joint-stock companies and banks . . . . . xxiii, xli, 33, 79, 89, 90, 126, 138, 139, 147
joint-ventures . . . . . xviii, xliv, 1, 21, 29, 41, 42, 49, 51, 55, 80, 91, 92, 97, 103, 110, 112, 125, 132, 136, 142, 148, 153, 162, 166
Kaiser Engineering . . . . . xxviii, 63
Kalmakir 123
KamAZ 164
Kara-Kalpak . . . . . xxxvii, 117, 120
Kara-Kalpak Autonomous Republic 120
Kara-Kum . . . . . xxix, xxx, xxxiii, 69, 73, 80, 93
Karakul 92
Kaspmorneftegaz 56
Kaspmorneftegazgeofizrazvedka 56
Kaspneftegeofizika 56
Kazakstan, Kazak . . . . . xvii, xxi, xxii, xxviii, 1-4, 19, 24, 27, 29, 73, 74, 78, 83, 120, 122, 134, 135, 146, 158
Khazardenizneftgaz 14
Khiva . . . . . xxxvi, 69, 117
Kinap 166
Kirovabad 17
knitwear 52, 53, 103, 153
Kokdumalak 123, 142, 159
Korea 129, 134, 154, 164, 166
Koturdepe 91
Krasnovodsk 78, 105, 106
Kura 16, 32
Kyrgyz Republic . . . . . xvii, 1, 27, 70, 118, 120, 134-136, 146, 158
Kyzylkum 123, 142, 163
Kyzylkum Rare Metals and Gold Enterprise 163
labour . . . . . xxiv, xxv, xxx, xxxiii, xxxiv, xli-xliii, xlvi, 14, 37, 40, 74, 89, 90, 94-96, 136, 145-147, 151, 157, 159, 161, 164, 165, 167
land 75
languages . . . . . xxiv, 17, 39, 88, 117
large enterprises 138
Larmak Energy 91
Latvia 27, 29, 70, 134

Law on Business Undertakings 132
Law on Destatization and Privatization . . . . xxxii, xli, 89, 137
Law on Enterprises 132
Law on Foreign Investment . . . . xxiv, xlii, 35, 41, 132, 141
Law on Ownership 132
Law on Privatization . . . . xliii, 138, 147
lead . . . . xxxviii, xlv, 16, 19, 57, 62, 120, 122, 123, 135, 137, 162
leases, leasing 21, 90, 131
leather . . . . xxvi, xxvii, xxxv, xliv, 42, 51, 54, 55, 90, 92, 103-105, 154, 155
leather goods . . . . xxvii, xliv, 154, 155
legislation, laws . . . . xvii-xix, xxi-xxv, xxxi-xxxiii, xxxvi, xxxix, xl-xliii, 1, 4, 5, 7-9, 12, 15, 20, 21, 28, 29, 33-36, 41, 43, 79, 84, 89-91, 107, 119, 124, 126, 132, 133, 136-138, 140-142, 147, 149
lending 21, 34, 35, 84, 126, 141
Lenkoran 16, 48
letters of credit (L/C) 31
liberalization 30, 31, 72, 84, 92, 118, 133
licencing . . . . xviii, 6, 30, 34, 79, 87, 135
light industries . . . . xvii, xxi-xxiv, xxvi, xxxi, xxxii, xliii, 1, 13, 25, 19, 31, 38, 39, 42, 51, 64, 83, 84, 86, 93, 94, 97, 98, 123, 124, 141, 146, 147, 149, 153
lighting . . . . xxviii, 65
limestone . . . . xxxvi, xlv, 16, 19, 109, 161
lindane 59
linoleum 61, 162
literacy 17, 39
Lithuania 27, 29
livestock farming, animal husbandry . . . . xxxi, xxxviii, xliv, 47, 84, 122, 154
locomotives 20, 125
logging, forestry 13, 55, 124, 145, 146, 148, 156, 157
lubricants 57
Lukoil . . . . xx, 13, 36
lumber, timber . . . . xliv, 32, 55, 94, 149, 156, 157
M.W. Kellogg 142
macaroni 152
machinery and machine-building industries . . . . . xxviii, xxxi, xxxvi, xxxviii, xxxix, xliii, xlv, xlvi, 13, 25, 27, 36, 38, 42, 43, 63-65, 83, 84, 92-94, 97, 110, 111, 123, 124, 128, 129, 131, 134, 139, 143, 144, 146, 149, 164, 165
Makhachkala 20
Malaysia, Malaysian 134
management . . . . xviii, xix, xxiv, xxvi, xxx, xxxiv, 4-8, 21, 32, 37, 39, 42, 46, 55, 59, 74, 97, 132, 136, 138, 139, 143, 147, 150
manat . . . . xxi, xxiii, xxix, xxxi, xxxii, 12, 15, 28-30, 32, 73, 79, 85, 86, 88
manufactured goods, manufacturing . . . . xvii, xix, xxiii-xxvi, xxviii, xxx, xxxiii, xxxvi, xxxviii, xlii, xliii, xlv, xlvi, 1, 2, 7, 12, 19, 34, 35, 38, 39, 42, 43, 46, 51, 64, 78, 91, 93-98, 110, 123, 124, 141-145, 149, 153, 154, 164, 166

margarine . . . 48, 152
market . . . xvii-xx, xxii-xxv, xxvii-xxxv, xxxvii-xli, xlv, xlvi, 1-4, 6, 7, 9, 15, 16, 19, 20, 22, 25, 27, 29, 30-32, 34, 35, 39, 40, 42, 43, 46, 49, 50, 52, 54, 57, 60, 64, 65, 70, 72, 78-81, 84-92, 96, 102, 106, 107, 111, 118, 122-124, 127, 128, 131, 132, 134-136, 139, 140, 142, 143, 147, 150, 153, 155, 160-167
marketing . . . xvii-xix, xxiv, xxvii, xlvi, 3-5, 34, 37, 60, 161, 167
Marlboro . . . 50
Mary . . . xxxiv, 90, 92, 97, 105, 107
Max Cross . . . 48
meat . . . xxvi, xliii, 47, 48, 100, 101, 151
medicine . . . 14, 88, 133
Mediterranean . . . 25, 57, 77
medium-sized enterprises . . . xxiii, xxvi, xxvii, xli, xliv, 5, 6, 13, 19, 25, 33, 35, 51, 55, 61-63, 139, 147, 150, 154
metal processing and metallurgical industries . . . xxi, xxviii, xxxi, xxxix, xlii, xlv, 19, 32, 38, 42, 62, 63, 65, 83, 84, 93, 94, 98, 122-124, 128, 131, 134, 135, 138, 139, 141, 143-146, 149, 161-164
micro-circuits . . . 166
Middle East . . . 112, 129
Mikond . . . 166
military facilities and production . . . xlii, xlv, xlvi, 15, 30, 65, 124, 141, 143, 164-166
milk . . . 48, 100
Minbulak . . . 123, 159
mining and mineral processing . . . xxvii, xxviii, xxx, xxxiv, xxxvi, xxxviii, xlii, xlv, 1, 8, 19, 58, 60-63, 77, 78, 90, 97, 107, 110, 120, 122, 123, 131, 137, 138, 141-144, 148, 159-163
Ministry of Agriculture . . . 52, 91
Ministry of Agriculture and Food . . . 52
Ministry of Economics and Finance . . . 79, 91
Ministry of Economy . . . 36, 61, 64
Ministry of Environment . . . xli, 137
Ministry of Finance . . . 42, 91, 97, 124, 132, 138, 139, 141, 142
Ministry of Foreign Economic Relations . . . xxiii, xl, 29, 42, 132, 135, 141
Ministry of Justice . . . xl, 132, 135
Ministry of Local Industry . . . 65
Ministry of Oil and Gas . . . 64
Ministry of State Assets . . . 91
missile launchers . . . 143
Mitsubishi Group . . . 77
modernization . . . xxii, xxiv, 20, 35, 61, 79, 95, 141, 153
Moldova . . . 27, 29
monetary policy . . . xxi, xxiii, xxvi, xxix, xxxi, xxxvii, xl, 12, 16, 15, 21, 23, 24, 28, 29, 34, 42, 46, 71-73, 75, 79, 84, 85, 94, 109, 118, 119, 124, 126, 129, 131-134, 148, 152, 158, 160, 162, 165, 166
Mongolia, Mongol . . . 117, 129
monopolies . . . 21, 34, 124
Moscow . . . xx, xxii, xxxix, 12, 20, 58, 79, 125, 131
Most-Favoured Nation (MFN) status . . . 31, 87, 135
Mostbank . . . 21

motor vehicles . . . xxxvi, 28, 112
mountains . . . 73
mulberry trees . . . 52
Murantau . . . 120, 123, 162
Murghab . . . xxx, 73
music . . . 88
Nagorno-Karabakh . . . xx, xxi, 1, 12, 14, 16, 17, 19, 48
Nakhichevan . . . 16, 20, 21
Nakhichevan Bank . . . 21
National Bank for Economic Activity . . . 126
National Bank for Foreign Economic Activity (BFEA) . . . 126, 136
National Bank of Azerbaijan (NBA) . . . xxii, xxiii, 20, 21, 28, 29, 30, 34
National Savings Bank . . . 79
nationalization . . . xlii, 141
natural gas . . . xix-xxii, xxv, xxix-xxxv, xxxviii-xlv, 1, 9, 14-16, 24, 25, 30, 32, 38, 43, 55, 64, 70, 71, 73, 75, 77, 78, 81, 83, 85-88, 90, 91, 93, 94, 97, 105-107, 109-112, 120, 122, 123, 128, 129, 135, 139, 142, 157-159, 161,
natural resources . . . xvii, xix, xxxviii, xli, xlii, 1, 7, 8, 12, 55, 137, 141, 142, 144
Neftechala . . . 56, 59
net material product (NMP) . . . xx, xxi, xxx, xxxviii, 11-13, 16, 17, 22, 74, 78, 80, 81, 120, 123, 127
Netherlands, Dutch . . . 107, 128, 33, 91
New Baku Oil Refinery . . . 57
Newmont Mining . . . 142, 163
Nigeria . . . 128
Noble Drilling Corporation . . . 91
non-ferrous metals and metallurgy . . . xxviii, 13, 25, 62, 63, 83, 98, 124, 134, 139, 146, 149, 162, 163
non-metallic minerals . . . xlv, 161
Norway, Norwegian . . . xxi, 16, 57
Novobakinsky . . . 57
Nukus . . . 120
Oghuz . . . 69
oil production and processing . . . xx-xxii, xxiv, xxv, xxvii, xxviii, xxx, xxxiv, xxxix, 1, 13, 14, 16, 19, 23, 25, 28, 35, 36, 38-40, 42, 43, 46, 55-57, 59, 62, 64, 65, 70, 78, 92, 97, 98, 105, 107, 122, 128, 134, 142-144, 149, 157, 158
oil production equipment . . . xx, xxii, xxviii, 11, 19, 38, 41-43, 64, 94, 111
oil exports . . . 46, 77
Oil University . . . xxiv, 39
Oman . . . 57
ore . . . xxviii, 16, 19, 62, 123
Organization for Economic Cooperation and Development (OECD) . . . xxvi, xliii, 15, 31, 46, 87, 98, 99, 135, 150
ownership . . . xviii, xix, xxiv, xxv, xxxii-xxxiv, xxxix, xli-xliii, 2, 4, 7, 36, 41, 79, 89-92, 96, 126, 132, 138, 139, 142, 143, 147, 148, 163
packing materials . . . 153

Pakistan . . . xxvi, 9, 31, 46, 87, 134, 135
paper . . . xliv, 13, 25, 38, 50, 93, 124, 145, 146, 156, 157
pasta . . . 100, 151
pectin . . . 100
Pennzoil . . . xxvii, 55
People's Democratic Republic of Korea . . . 129
People's Soviet Republics . . . xxxvi, 117
Persia . . . 69
Persian Gulf . . . 77
personal computers . . . xlvi, 166
pesticides . . . xxxiv, xli, 32, 33, 58, 59, 97, 137, 159
Pet Holding . . . 55
petrochemical industry . . . xxiii, xxvii, xxxvi, xlv, 13, 25, 30, 31, 38, 46, 58-60, 64, 93, 94, 98, 106-109, 124, 143, 146, 159-161
petroleum production and refining . . . xx-xxii, xxiv, xxv, xxvii, xxviii, xxx, xxxiv, xxxix, 1, 11, 13, 14, 16, 19, 23-25, 28, 35, 36, 38-40, 42, 43, 46, 55-57, 59, 62, 64, 65, 70, 78, 87, 92, 97, 98, 105-107, 122, 128, 134, 142-144, 149, 157, 158
petroleum products . . . xx, 13, 25, 43, 134, 143
Philip Morris . . . xxvi, 50
pipelines . . . 9, 57, 58, 77, 106
plantations . . . 49, 120
plastics . . . xxviii, 65, 58, 160
Poland . . . 102, 129, 134
pollution . . . xxi, xxv, xxvi, xxxiv, xli, xlv, 19, 22, 32, 42, 48, 61, 97, 137, 149, 161
polyethylene . . . 58, 59, 161
polypropylene . . . 161
Popular Front of Azerbaijan (PFA) . . . 11
ports . . . xxv, xxxiv, 42, 81, 92, 97, 141
potatoes . . . 75, 84
power and electricity . . . xxxiv, xxxvi, 11, 13, 25, 38, 69, 90, 92, 93, 97, 105, 117, 122, 133, 135, 157, 165
precious metals . . . 139, 143
precision instruments . . . 64
prices . . . xx, xxii, xxv, xxix-xxxii, xxxvii, xxxix, xl, 14, 15, 23, 27, 29, 30, 32, 34, 39, 42, 43, 51, 57, 65, 66, 70-75, 78, 81, 83, 84, 86, 87, 90, 93, 101, 102, 104, 105, 108, 110, 111, 118, 119, 125, 129, 132, 134, 140, 144, 145, 148, 152, 155, 156, 158, 160, 161, 163, 164
primary processing . . . xliv, 154
printed circuits . . . xlvi, 166
printing . . . xl, 93, 135
Private Enterprise Support Fund . . . 34
private-sector . . . xviii, xxi-xxiii, xxv, xxvi, xxviii, xxxi, xxxiii, xxxv, xxxix, xli-xliii, 2-4, 16, 22, 30, 33, 34, 41, 47, 51, 52, 56, 80, 84, 90, 91, 96, 105, 132, 138, 139, 140, 142, 143, 145, 147

privatization . . . . xvii, xviii, xxiii, xxiv, xxxi-xxxiv, xxxvii, xxxix-xliii, 1-4, 16, 33, 36, 41, 46, 84, 89-92, 96, 118, 132, 137-139, 141, 147, 150
processed food . . . . xxiii, xxxi, xxxii, xxxv, xliii, 13, 25, 31, 38, 83, 84, 86, 93, 94, 97, 98, 101, 102, 124, 131, 144, 146, 149, 151
productivity . . . . xix, xxv, xxxiv, xliii, xliv, 2, 7, 12, 17, 19, 40, 48, 95, 96, 147, 152
profitability . . . . xix, xxv, xxviii, xxxi, xxxiv, xlii, 4, 7, 8, 28, 34, 40, 52, 57, 65, 79, 85, 91, 96, 123, 142, 147
Promstroibank 20, 21, 34
propane 86, 105
propylene 59
PTT 92
pulp . . . . xliv, 13, 25, 38, 124, 145, 146, 156, 157
pumps . . . . xxxvi, 92, 110, 111
quality . . . . xvii, xix, xxxv, xl, xlvi, 5, 7, 32, 34, 48, 49, 51, 102, 123, 135, 137, 153, 164, 167
quotas 84, 140
radar . . . . xlvi, 166
radios . . . . xlvi, 124, 143, 166
rail transport . . . . xxii, xxx, 12, 19, 20, 25, 78, 81, 92, 96, 125
rainfall . . . . xxx, 12, 16, 47, 73
rare metals . . . . xlv, 33, 122, 162, 163
raw materials . . . . xxv, xxvii, xxxii, xxxviii, xxxix, xliii-xlv, 34, 43, 52, 58-60, 86, 123, 124, 128, 131, 149, 153-155, 161
real estate . . . . xli, 34, 139, 142
Red Army 11, 69
refineries and refining . . . . xx, xxii, 11, 13, 19, 24, 42, 56, 57, 64, 70, 87, 92, 97, 98, 105-107, 143, 158
reforms . . . . xxi, xxiv, xxix, xxxi, xxxiii, xxxix-xlii, 15, 16, 33, 36, 79, 84, 90, 122-126, 128, 132, 136, 138, 140, 142-145, 164
refrigerators 41, 66, 166
refugees . . . . xxi, 12, 14, 17
Regional Bank Training Centre (RBTC) 136
Republican Auction Centre 138
Republican Currency Fund 31
restructuring . . . . xvii-xix, xxiv, xxvii, xxxii, xxxiii, xxxix, xlvi, 2, 3, 6, 15, 33, 36, 46, 59, 85, 89, 92, 126, 132, 143, 150, 165
retailing 15, 29, 71, 72, 96, 133, 147
retraining . . . . xviii, 146
rice 75, 100
road transport . . . . xxii, xxx, 19, 20, 52, 64, 78, 96, 125
Romania 129
roofing 162, 124, 144, 162
rouble . . . . xxi, xxix, xxxii, xxxvii, xl, 12, 15, 24, 28, 29, 73, 85, 87, 88, 91, 109, 118, 119, 134-136
rubber 58, 131, 143

Russia, Russian . . . . . xix-xxiii, xxviii-xxx, xxxiv, xxxvii-xl, xlii, 1, 9, 11, 13, 16, 17, 19, 21, 24, 25, 27-31, 33, 34, 36, 39, 49, 50, 57, 58, 69, 74, 77, 83, 85, 88, 95, 106, 111, 112, 117-120, 128, 129, 134, 135, 138, 143, 145, 158, 164
saffron 19
salinity and salinization . . . . . xxxvii, xli, 32, 75, 117, 137, 149
salt 92
Samarkand . . . . . xliii, 120, 149, 153, 166
Samsun 51
sanitary ware 61
Sari Checku 123
satellite 20, 79, 92, 125
sausages 48
savings 20, 21, 23, 79, 126
Savings Bank 20, 21, 79, 126
Savings Bank of Uzbekistan (SBU) 126
Sberbank 20, 21
Sea of Japan 77
selenium 62
self-sufficiency . . . . . xxxii, xxxviii, xlv, 75, 86, 94, 100, 122, 123, 157
semi-processed goods . . . . . xl, xliii, 134, 149, 153
service equipment . . . . . xlii, 144
services . . . . . xxiv, xxx, xxxi, xxxiv, xxxix, 3, 5, 8, 20, 22, 34-36, 39, 64, 78, 80, 81, 86, 87, 90, 97, 125, 127, 138-140, 147, 148
shampoos 160
shares and shareholding . . . . . xxii, xxiii, xxv, xxxix, xlii, 2, 4, 8, 15, 17, 20, 22, 23, 25, 26, 29, 30, 39, 40, 43, 55, 64, 71, 72, 74, 75, 80-83, 93, 96, 103, 122-124, 126-130, 138-143, 145, 147-149
sheep . . . . . xxxv, xliv, 102, 103, 153-155
sheepskins . . . . . xxxv, xxxviii, xliv, 103, 123, 154, 155
Shelfproyektstroy 56
shipbuilding 42
shipping . . . . . xxii, 19, 20, 78
shoes and footwear industry . . . . . xxvii, 42, 53, 54, 103-105, 124, 143, 144, 154, 155
Shutan field 161
silk . . . . . xx, xxvi, xxxviii, xl, xliii, xliv, 11, 19, 35, 48, 51-54, 102, 117, 122-124, 127, 135, 149, 153
silver . . . . . xxxviii, xlv, 120, 122, 162
Single Economic Space 135
Siyar 56
skills . . . . . xvii, xviii, xxiv, xxx, xxxiv, xxxvii, xli, xlvi, 1, 8, 34, 38, 39, 64, 74, 95, 117, 136, 145, 146, 167
skirts 54
slate . . . . . xxxvi, 60, 61, 109
Slovenia 128
small enterprises . . . . . xxiii, xxvi, xxvii, xxxv, xli, xliv, 5, 6, 19, 33, 35, 51, 55, 61, 96, 105, 139, 147, 150, 154
soap 166
Social Bank 79

social security . . . 27
socks and stockings . . . 52-54, 124
soil . . . xxi, xxxvii, xli, 12, 19, 32, 48, 117, 137, 149
som-coupon . . . xxxvii, xl, 119, 134, 136
souvenirs . . . xxviii, 65
sovereignty . . . xx, 12, 69
Soviet . . . xix-xxi, xxiv, xxv, xxviii, xxix, xxxi-xxxiv, xxxvi, xxxvii, xli-xliii, 8, 11, 12, 19, 29, 36, 40, 42, 47, 51, 64, 69, 71-73, 78, 79, 84, 88, 89, 91, 93, 95, 96, 117, 120, 124, 126, 128, 138, 144-147
Soviet Socialist Republic (SSR) . . . xx, xxvii, xxxiv-xxxvi, xliii, 11, 12, 40, 69, 95, 96, 117, 147
Soviet Vneshekonombank . . . 126
spare parts . . . xlii, xlv, 13, 122, 144, 159, 163
sparkling wine . . . 48, 49
spinning . . . 97, 102, 103
standards and standardization . . . xix, xxviii, xxix, xxxvi, xl, xli, 5, 7-9, 21, 33-35, 39, 43, 50, 57, 59, 62, 65, 70, 89, 109, 125, 135, 137
state assets . . . 90, 91
State Bank . . . xxxi, 79
State Central Bank of Turkmenistan (SCBT) . . . xxxi, xxxii, 79, 85
State Committee for Geology . . . 162
State Committee for the Protection of Nature . . . 137
State Committee of Turkmenistan for State Property . . . 90
State Control Committee for Foreign Economic Relations . . . 32
state enterprises . . . xvii, xviii, xxii, xxiv, xxv, xxxi, xxxiii, xxxix, xli, 2, 3, 5-7, 14, 21, 29, 30, 34-36, 41, 56, 79-81, 84, 85, 90, 91, 95, 96, 110, 126, 138-141, 143
state farms . . . 17, 52
State Oil Company of the Azerbaijan Republic (SOCAR) . . . xx, 13, 36
state order system . . . xxxi, xli
State Planning Committee . . . 91
State Property Committee (SPC) . . . 33
State Property Fund . . . 147
State Statistics and Forecasting Committee . . . 121, 127, 146, 148, 151, 154-157, 159, 161, 164, 165
State Statistics Committee . . . 18, 22, 23, 26, 49, 52-54, 56, 59, 61, 63, 76, 82, 84, 93, 98, 101, 102, 104
State Tourist Organization . . . 80
Statoil . . . xxi, 16, 57
steel . . . 62-64, 111
stockings and socks . . . 52, 53, 54, 124
storage . . . xxxv, xliv, 100, 101, 148, 153
storage facilities . . . xxxv, xliv, 100, 101, 153
strategic goods . . . 29-32, 87, 133
students . . . xxiv, 17, 39, 88, 89, 137
subsidies . . . xxxi, xxxvii, 14, 28, 79, 85, 118, 133, 141
sugar . . . xxxii, 86
sulphanol . . . 58
sulphur . . . 57, 62, 107-110, 123, 157
sulphuric acid . . . 58, 59, 107-109, 160

Sultanates . . . 69
Sumgait . . . xxv, xxvi, xxviii, 17, 42, 46, 53, 54, 63, 64
Sumgait Aluminium Plant . . . xxviii, 63, 64
Supreme Soviet of Turkmenistan . . . 84
Surkhan-Dar'ya . . . 123
suspended matter . . . 97
sweaters . . . 153
Sweden, Swedish . . . 36
Switzerland, Swiss . . . 102, 128
synthetic resin . . . 58, 160
synthetic rubber . . . 58
Syr-Dar'ya . . . 117, 120, 122, 137, 149
systemic transformation facility (STF) . . . 28, 132
T-shirts . . . 52
tableware . . . xxviii, 65
Tabriz . . . 20
Taiwan Province of China . . . 128
Tajikistan . . . xvii, xxxvii, 1, 27, 34, 70, 117, 120, 128, 134, 136, 158
Tamerlane . . . 117
tanning . . . 90, 92
Taraggi Association . . . 65
tariffs . . . xl, 87, 135
Tashauz . . . 78
Tashkent . . . xxxvi, xl, xliii, xlvi, 117, 119, 120, 127, 136, 138, 143, 148, 150, 153, 166
Tashkent Aircraft Factory . . . xlvi, 166
Tatars . . . 74
tax . . . xviii, xxiii, xxxii, xl, 1, 4, 8, 15, 28, 30, 85, 87, 92, 133, 142
Tbilisi . . . 20
TC Ziraat Bankasi . . . 21
tea . . . xxi, 16, 17, 32, 47-49
technical assistance . . . xxvi, xxxv, xli, xliii, 46, 98, 99, 132, 136, 143, 150
Technical Assistance for the Commonwealth of Independent States (TACIS) . . . xxvi, 46
technical education and skills . . . xxxiv, 38, 39, 88, 95
technology . . . xviii, xix, xxiv, xxv, xxvii, xxviii, xxxvi, xlv, xlvi, 3-8, 35, 39, 40, 43, 51, 55, 56, 59, 62-65, 92, 95, 105, 110, 112, 123, 125, 138, 142, 143, 150, 154, 159, 167
Tecnologie Progetti Lavori . . . 86
telecommunications . . . xxii, xxvi, xxx, xxxviii, 20, 46, 78, 79, 92, 96, 125, 141, 148, 150
television sets . . . 166
tellurium . . . 62
terms of trade . . . xxxvii, xxxix, 118, 129
textile industry and textiles . . . xxii-xxiv, xxvi, xxx, xxxv, xxxviii-xl, xlii-xliv, 19, 31, 39, 41, 42, 51-54, 78, 86, 93, 97, 102-104, 123, 124, 128, 134, 141, 144, 148, 149, 153, 154
Tien Shan mountains . . . 120

tiles . . . xxxvi, 61, 109, 162
timber, lumber . . . xliv, 32, 55, 94, 149, 156, 157
tobacco . . . xxi, xxvi, xliii, xliv, 16, 17, 30, 42, 47, 48, 50, 51, 139, 149, 153
tourism . . . xxii, xxxi, xxxix, 22, 80, 92, 127, 139, 140
toys . . . xxviii, 65
tractors and related equipment . . . 64, 112, 165
trade . . . xix-xxv, xxix-xxxii, xxxvii, xxxix, xl, xliii, 1, 9, 11, 12, 15, 16, 20, 22-25, 27, 29-31, 33-36, 41, 43, 52, 70-73, 78-81, 83, 84, 86-88, 90-92, 94, 97, 102, 117-119, 124, 126-129, 131, 133-135, 138, 139, 142, 147-150
training . . . xvii, xviii, xxxii, 1, 4-6, 39, 88, 89, 95, 136, 146, 150
Transcaucasus . . . 16, 57
transformers . . . 65, 165
transport and communications . . . xxii, xxvi, xxx, xxxi, xxxvi, xxxviii-xlv, 12, 13, 19, 20, 41, 46, 74, 78, 85, 110, 112, 124, 125, 131, 138, 139, 148, 164, 165
trucks . . . xlvi, 36, 50, 112, 125, 164, 165
tubes . . . 62
tungsten . . . xxxviii, xlv, 120, 122, 162
Turkestan Autonomous Soviet Socialist Republic (ASSR) . . . xxxvi, xxxvii, 117
Turkey, Turkish . . . xxi, xxvi, xxvii, xxxv, xliii, 9, 12, 15-17, 20-22, 25, 31, 34, 42, 46, 51, 55, 57, 58, 77, 83, 87, 92, 98, 103, 107, 112, 125, 128, 134, 135, 150
Turkmen Soviet Socialist Republic (SSR) . . . 69
Turkmenbank . . . 79
Turkmenbashi . . . xxxiv, 78, 81, 86, 97, 105
Turkmenistan, Turkmen . . . xvii, xxii, xxviii-xxxvi, 1, 20, 24, 27, 29, 30, 32, 69-111, 120, 134, 143, 159
Turkmenistan Business Support Organization . . . 91
Turkmenseyahat . . . 80
tyres . . . 58, 143
Ukraine, Ukrainian . . . xxxvii, 1, 11, 24, 27, 29, 30, 57, 70, 74, 81, 83, 117, 134
underwear . . . 52, 54
unemployment . . . xxxii, xxxiii, xxxiv, 14, 89, 95, 119, 145, 146
Union of Entrepreneurs . . . xli, 140
Union of Soviet Socialist Republics (USSR) . . . xvii, xix-xxv, xxvii-xlvi, 1, 2, 8, 9, 11-13, 15-20, 22-31, 33, 38-41, 43, 46, 49, 51-53, 55, 57-59, 64, 65, 70, 71, 74-81, 83-87, 94-97, 101, 102, 104, 105, 108, 110, 111, 118-121, 123, 124, 126-135, 137, 140, 143-158, 160-165
union transfers . . . xxiii, xxix, xxxi, 27, 28, 73, 81, 85, 127
United Arab Emirates (UAE) . . . 91, 107
United Kingdom (UK), British . . . xxi, xxvi-xxviii, xliv, 16, 20, 25, 36, 42, 46, 55, 57, 63, 64, 69, 139, 142, 153, 163
United Nations . . . xxvi, xliii, 12, 46, 75, 77, 143, 150
United Nations Development Programme (UNDP) . . . xxvi, xxxv, xliii, 46, 98, 150
United Nations Industrial Development Organization (UNIDO) . . . xxvi, xliii, 41, 46, 50, 53, 54, 120, 131, 147, 150, 155

United States of America (USA, US) . . . . xxiv, xxvi, xxviii, xxx, xxxv, xlv, 17, 36, 48-50, 64, 77, 87, 91, 98, 103, 107, 112, 125, 142, 159, 163
United States Agency for International Development (USAID) 138
universities 39, 137
University of Ashgabat 88
uranium . . . . xxxviii, xlv, 120, 123, 137, 162, 163
UZ Tobacco . . . . xliv, 153
Uzbekistan, Uzbek . . . . xvii, xxx, xxxvi-xlvi, 1-4, 27, 69, 73, 75, 78, 83, 97, 102, 117-131, 133-166
Uzbekinvest 142
Uzbekistan Business Union 140
Uzbekistan State Fund 138
Uzcontractorg 134
Uzgosfund 138, 139
vegetable oil . . . . xliii, 94, 100, 124, 149, 152
vegetables . . . . xxi, xxxv, xliii, 16, 17, 47, 75, 77, 97, 100, 122, 140, 151
vehicles . . . . xxxvi, 28, 65, 112
Veneshtorgbank 20
Viet Nam 129
vineyards 49, 50, 75
Virginia 50, 51
Vneshekonombank 126
Vodka 48, 49
wages 15, 133
wallpaper adhesives 160
war . . . . xx, xxi, xxxvii, xlii, 1, 11, 12, 15, 16, 25, 36, 51, 69, 71, 117, 122, 144
waste . . . . xxxvi, xli, xlv, 32, 42, 43, 54, 57, 59, 109, 137, 149, 161
water . . . . xxi, xxv, xxvi, xxx, xxxviii, xli, xliv, xlv, 12, 19, 32, 42, 46, 48, 73, 75, 78, 92, 120, 122, 137, 149, 152, 161
weaving 52, 90, 92, 95, 154
wheat 75, 100, 129
wine . . . . xxii, xxiv, xxvi, xxxv, 12, 19, 30, 39, 48-50, 97, 100, 102
wolfram 122
wolframite . . . . xxxviii, 120
women 39, 40, 95, 146
wood . . . . xxvii, xxxvi, 25, 38, 55, 93, 109, 156
woodworking . . . . xliv, 13, 124, 146, 157
wool . . . . xxvi, xxxv, xxxviii, xliii, xliv, 51-54, 92, 102, 103, 110, 122, 149, 153
World Bank . . . . xxvi, xxxiv, 12-14, 17, 18, 20-22, 24-29, 32, 33, 38, 39, 42, 46-48, 52-54, 57, 58, 60, 62, 65, 66, 71, 74, 76-78, 80, 81, 83, 89, 95, 96, 101, 104, 106, 108, 110, 111, 121-125, 127-130, 132, 140, 143, 145, 149, 152, 154-156, 158, 160, 161, 163, 164

yarn . . . 52, 102, 103, 154
Yerevan . . . 20
Yevlakh . . . 52
yields . . . 17, 33, 75, 122
Yugoslavia . . . 129
Zakataly . . . 51
Zenith Electronics . . . 166
zinc . . . xxxviii, xlv, 16, 19, 62, 120, 122, 123, 162

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