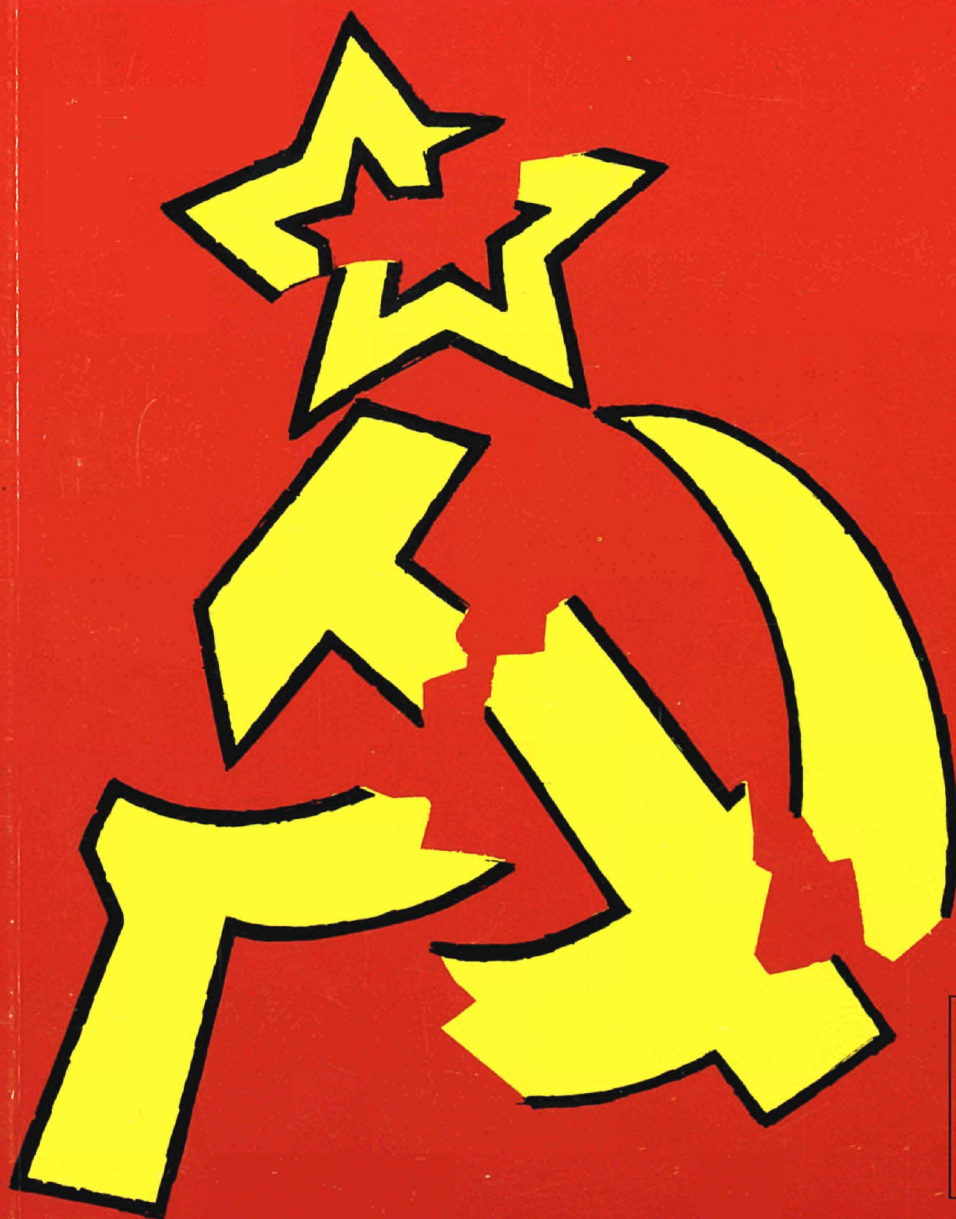


# The Soviet Union, 1980 to 1991

## Survey of the final years





# Country profile

## **The Soviet Union, 1980 to 1991**

### Survey of the final years



Cataloguing data can be found at the end of this publication.

**STATISTISCHES BUNDESAMT**

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**Statistisches Bundesamt**

**The Soviet Union, 1980 to 1991**

**Survey of the final years**



With some 290 million inhabitants and a total area of 22.4 million km<sup>2</sup>, the Soviet Union was the largest cohesive national territory in the world. Now it has ceased to exist, having broken up at the end of 1991, and new structures are emerging.

It is important for this new beginning and for the construction of new States and their economies to have information on the situation at the time when the new countries emerged. The "Survey of the final years" presents statistical data on the Soviet Union from 1980 to 1991, and in some cases on the individual republics. It is thus a vital source of information for all those who wish to develop economic ties with the new States or simply to find out about the country that was once a superpower.

A chapter by the Institut für Angewandte Wirtschaftsforschung (IAW) <sup>(1)</sup> analyses in detail and comments on the economic problems underlying the figures and the disintegration of the Soviet Union in 1991.

This publication is the prelude to a series of reports on the newly independent States of the former Soviet Union, beginning in 1992 with the Russian Federation.

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<sup>(1)</sup> Institute for Applied Economic Research

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## FOREWORD

Since the end of 1991, there has been no country called the Soviet Union. A world power which dominated vast areas of the globe and played a major role on its political stage, and whose frontiers marked the boundaries of the economic and intellectual lifestyles of the rest of the world, has ceased to exist.

Despite the wide variety of nations and regions which it bound together, the Soviet Union often appeared to the outside observer as a monolith. But from its ashes, new sovereign States have arisen. Its material and political legacy is being divided up among its successor States, which are moving towards either cooperation or full independence.

The economic problems which already existed have come to the forefront since the disintegration of the old system which was imposed on the whole area. All politicians and economists with responsibilities in this area must now endeavour to ensure that the necessary supplies reach the population and that new economic structures are built up to enable the new countries to become internationally competitive and share in the opportunities of a free market. The economies and governments of the rest of the world are called upon to take the initiative and both provide and exploit to the full every possible opportunity for cooperation with the former Soviet economy, to the benefit of all concerned, especially a population particularly hard-hit by the transition to a free-market economy.

If countries are to cooperate, they need information about each other. Data on the Soviet Union over the past decade are still required today, to enable the potential for initiatives to be analysed.

This Statistisches Bundesamt publication therefore presents facts and figures on the former Soviet Union and its republics, as they existed at the end of 1991 and the beginning of 1992. It was decided not to produce any detailed commentaries, in order to make the data available as quickly as possible.

The report was compiled with the assistance of colleagues from the former State Committee of the USSR on Statistics (Goskomstat), and in cooperation with statisticians from some of the independent republics, such as Russia. We should like to thank them all for their help.

A series of publications will follow this final report on the Soviet Union, describing the newly independent successor States. A report on the Russian Federation, at least, is planned for 1992.

With these data, the Statistisches Bundesamt hopes to make a major contribution towards the peaceful but rapid and effective changeover to new and more intensive patterns of East/West cooperation (to use an expression which, although in common use for decades, may well become obsolete in the future).

Wiesbaden

The President of the Statistisches Bundesamt

Egon Bolder



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## ZEICHENERKLÄRUNG/EXPLANATION OF SYMBOLS

0	= Weniger als die Hälfte von 1 in der letzten besetzten Stelle, jedoch mehr als nichts	Less than half of 1 at the last occupied digit, but more than nil
-	= nichts vorhanden	Magnitude zero
	= grundsätzliche Änderung innerhalb einer Reihe, die den zeitlichen Vergleich beein- trächtigt	General break in the series affecting comparison over time
.	= Zahlenwert unbekannt	Figure unknown
x	= Tabellenfach gesperrt, weil Aussage nicht sinnvoll	Tabular group blocked, because information is not meaningful

# GENERAL ABBREVIATIONS (1)

g	=	gram	kW	=	kilowatt (10 <sup>3</sup> Watt)
kg	=	kilogram	kWh	=	kilowatt hour (10 <sup>3</sup> Watt hour)
dt	=	100 kg	MW	=	megawatt (10 <sup>6</sup> Watt)
t	=	tonne (1000 kg)	MWh	=	megawatt hour (10 <sup>6</sup> Watt hour)
mm	=	millimetre	GW	=	gigawatt (10 <sup>9</sup> Watt)
cm	=	centimetre	GWh	=	gigawatt hour (10 <sup>9</sup> Watt hour)
m	=	metre	St	=	piece
km	=	kilometre	P	=	pair
m <sup>2</sup>	=	square metre	Mio.	=	million
ha	=	hectare (10 000 m <sup>2</sup> )	Mrd	=	billion
km <sup>2</sup>	=	square kilometre	JA	=	beginning of year
l	=	litre	JM	=	middle of the year
hl	=	hectolitre (100 l)	JE	=	end of the year
m <sup>3</sup>	=	cubic metre	JD	=	year average
tkm	=	tonne-kilometre	Vj	=	quarter
GRT	=	gross registered tonne	Hj	=	half-year
NRT	=	net registered tonne	D	=	average
tdw	=	dead-weight tonne (tdw = 1 016,05 kg)	MD	=	monthly average
kVA	=	kilovolt-ampere	cif	=	cost, insurance, freight included
Rbl	=	rouble	fob	=	free on board
USD	=	US dollar	DM	=	Deutsch mark

(1) Special abbreviations are allocated to the respective sections. With only few exceptions, provisional, revised and estimated figures are not marked as such. Detail may not add to total because of rounding.

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## INTRODUCTORY REMARK

The following facts and figures describe the final decade in the existence of the Soviet Union. In many cases, statistical data are also given on the individual republics. The bulk of the report refers to the period up to 1990 but there are a few data on the first half of 1991.

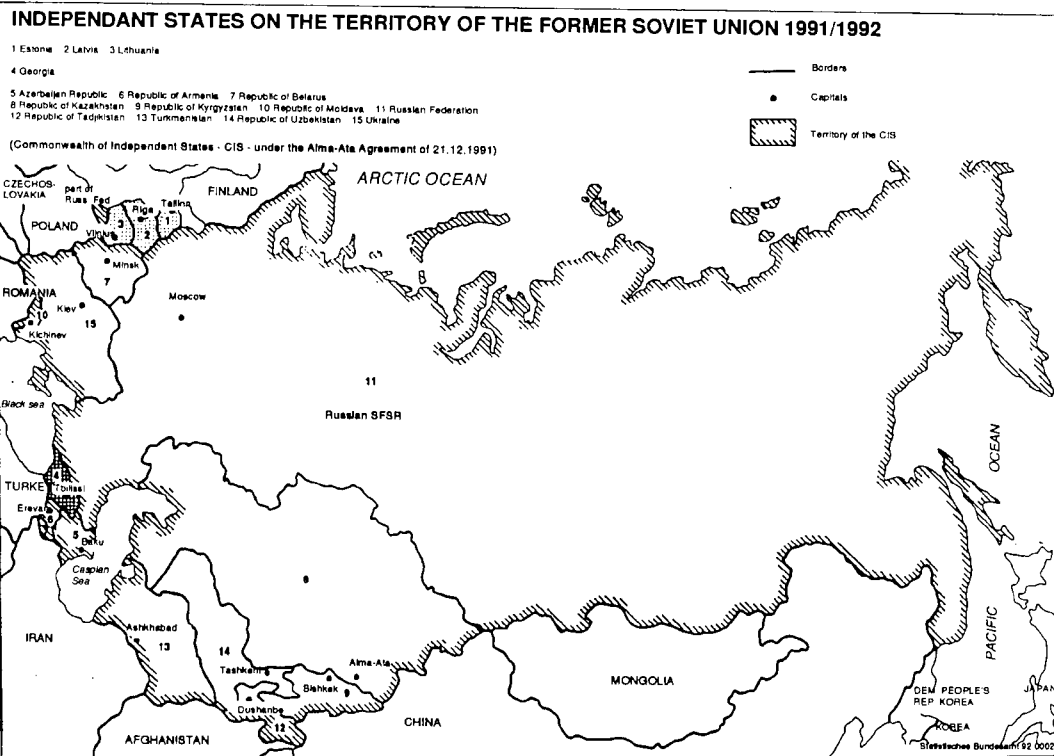
The most important sources were official Soviet statistics and publications, which are listed at the end of the report. In a few cases, statistics from international organizations were used.

The Institut für Angewandte Wirtschaftsforschung (IAW) in Berlin is responsible for the description of the economic problems surrounding the disintegration of the Soviet Union in 1991 which forms Section 17 of the report.

The names used in the various sections for the former Soviet republics, autonomous regions and cities are the official administrative names in use when the drafting was completed at the end of 1991. The same applies to the geographical names used in the maps. In using these designations and the borders shown, the Statistisches Bundesamt is not passing judgement on the legal status of any of the territories or confirming or recognizing any borders.







# 1 GENERAL SURVEY

## 1.1 BASIC DATA

### Unit

#### Area

Total area	1 000 km <sup>2</sup>	1980:	x	1990:	22 403.0
Arable land and permanent crops	1 000 km <sup>2</sup>		2 310.0		2 292.0

#### Population

Total population		17 January		12 January	
Results of population census	1 000	1979:	262 436	1989:	286 731
Mean population	1 000	1980:	265 542	1990:	289 350
Population increase	%	1970-1979:	8.6	1979-1989:	9.3
Population density	Inhabitants per km <sup>2</sup>	1980:	11.8	1990:	13.0
Live births	per 1 000 inhabitants		18.3		16.8
Deaths	per 1 000 inhabitants		10.3		10.3
Deaths in 1st year of life	per 1 000 live births		27.3		21.8
Life expectancy at birth					
Males	Years	1979-1980:	62.2		64.3
Females	Years		72.5		73.9

#### Health

Hospital beds	1 000	1980:	3 324.2	1990:	3 832.1
Inhabitants per hospital bed	Number		79.9		75.5
Doctors	1 000		887.8		1 139.7
Inhabitants per doctor	Number		300		254
Dentists	1 000		109.3		139.5
Inhabitants per dentist	Number		2 435		2 072

#### Education

Pupils at general schools	1 000	1980/81:	43 799.0	1990/91:	44 684.0
Students at technical colleges	1 000		4 611.7		4 096.8
Students at universities or equivalent	1 000		5 235.2		5 161.6

#### Employment

Manual and non-manual workers	1 000	1980:	112 498	1990:	112 936
Female	%		51.2		51.5
of which:					
Industry (1)	1 000		36 891		35 286
Agriculture and forestry	1 000		12 108		11 320
Unemployed	1 000		x		2 000

(1) Only those employed in the production industries.

Unit

**Agriculture, forestry and fisheries**

Index of agricultural production	1979/81 D = 100	1985:	111	1990:	116
Food production	1979/81 D = 100		111		121
per capita	1979/81 D = 100		106		112
Harvest volumes					
Wheat	1 000 t	1980:	92 500	1990:	101 900
Barley	1 000 t		40 100		52 500
Potatoes	1 000 t		67 000		63 600
Cattle	1 000		115 100		118 400
Timber extracted	Mio. m <sup>3</sup>		356.6		332.1
Fish catches	1 000 t	1984:	10 592.9	1989:	11 310.1

**Production industries**

Production index	1980 = 100	1980:	100	1990:	135
Power station capacity	Mio. kW		267		344
Electricity production	Mrd kW		1 294		1 726
Extraction of:					
Coal	Mio. t		716		703
Iron ore (Fe-content)	Mio. t	1985:	136		134
Crude oil	Mio. t	1980:	603		571
Natural gas	Mrd m <sup>3</sup>	1985:	599		759
Production of:					
Cement	Mio. t	1980:	125		137
Pig iron	Mio. t		107		110
Crude steel	Mio. t		148		154

**Foreign trade**

Imports	Mio. USD	1981:	72 960	1990:	120 867
Exports	Mio. USD		79 003		104 640

**Transport and communications**

Length of public railway network	1 000 km	1980:	141.8	1990:	147.5
Length of road network	1 000 km		1 341		1 838
Motor cars per 1 000 inhabitants	Number	1985:	44.7		56.8
Aeroflot passengers	Mio.	1980:	103.8		137.7
Telephones	Mio.		23.7		41.4
Television sets	Mio.		66.8		93.1

**Tourism**

Foreign visitors	1 000	1984:	4 203	1990:	7 204
Foreign currency receipts	Mio. USD		160	1988:	216

	<u>Unit</u>				
<b>Money and credit</b>					
Official exchange rate	Rbl per DM 100	1985:	30.24	June 1991:	33.86
Average per capita savings deposit	Rbl		793	1990:	1 319
<b>Public finance</b>					
State budget					
Income	Mrd Rbl	1985:	372.6	1990:	471.8
Expenditure	Mrd Rbl		386.5		513.2
Foreign debt (gross)	Mrd USD		28.9		52.2
<b>National accounts</b>					
Gross social product					
at current prices	Mrd Rbl	1980:	619	1990:	1 000
	1980 = 100		100		162
at constant prices	1980 = 100		100		135

1.2 IMPORTANT ECONOMIC AND SOCIAL INDICATORS  
FOR THE SOVIET UNION AND SELECTED INDUSTRIAL COUNTRIES (1)

Country	Nutrition		Health		Education	
	Calorie intake 1986		Life expectancy at birth 1990	Inhabitant per hospital bed 1984	Percentage of	
	per capita/day				Literacy in the population (aged 15 and over)	Registered pupils in the popu- lation of primary school
	kcal <sup>(3)</sup>	% requir- ement <sup>(4)</sup>	Years	Number	1990	age 1987 <sup>(2)</sup>
FR of Germany	3 528	130	75	89	99	101
France	3 336	130	76	170	99	113
Great Britain and Northern Ireland	3 256	128	76	x	99	106
Italy	3 523	139	76	103(79)	97(86)	95
Japan	2 864	122	78	66(87)	100(84)	102
Canada	3 462	129	77	150(87)	99(80)	105
Soviet Union	3 399	133	70	76(90)	98(89)	105
United States	3 645	138	76	171(80)	99(79)	100

For footnotes, please see end of table.

1.2 IMPORTANT ECONOMIC AND SOCIAL INDICATORS  
FOR THE SOVIET UNION AND SELECTED INDUSTRIAL COUNTRIES (1)

Indicator	Agriculture		Energy	Foreign trade	Transport	Communications		Social product
	% share of		Energy consumption per capita 1988	% of total exports accounted for by manufactured products (5) 1988	Motor cars 1986	Number of main telephone lines 1989	Television sets 1987	Per capita gross social product at market prices 1988
	Gross domestic product accounted for by agriculture 1988	Total labour force working in agriculture 1988						
	Country						per 1 000 inhabitants	
	%		kg "oil unit" (6)	%	number			USD
FR of Germany	2	4	4 421	90	463	460	385 <sup>(7)</sup>	18 480
France	4	6	3 704	76	394	454	333 <sup>(7)</sup>	16 090
Great Britain and Northern Ireland	2(86)	2	3 756	82	318	427	347 <sup>(7)</sup>	12 810
Italy	4	8	2 608	89	408	350	257 <sup>(7)</sup>	13 330
Japan	3(87)	7	3 306	98	250	416	587	21 020
Canada	4(84)	4	9 683	62	455(87)	581(90)	584	16 960
Soviet Union	25(90)	18(90)	4 512	24(87)	57(90)	139	321(89)	8 160(87)
United States	2(85)	3	7 655	78	561(88)	524	811	19 840

- (1) Figures in brackets indicate the year in question.  
(2) Figures over 100% occur as a result of the survey method based on educational stages, whereby some pupils surveyed were in the wrong age group.  
(3) 1 kilocalorie = 4.187 kilojoules.  
(4) 1984/86 average.  
(5) SITC headings 5-8.  
(6) 1 kg oil unit = 0.043 gigajoules.  
(7) Licences.



## 1.3 SELECTED DEMOGRAPHIC DATA BY REPUBLIC

Republic	1979		1989		1979-1989		1989	
	Population (1)						Manual and non-manual workers	
	million		%		%		total	as % of population
							million	
increase								
Total	262.4	286.7	100.0	9.3	115.4	40.2		
Russian SFSR	137.6	147.4	51.4	7.1	65.6	44.5		
Ukraine	49.8	51.7	18.0	3.8	20.2	39.1		
Rep. of Belorussia	9.6	10.2	3.6	6.3	4.3	42.2		
Rep. of Uzbekistan	15.4	19.9	6.9	29.2	5.1	25.6		
Kazakh SSR	14.7	16.5	5.8	12.2	6.5	39.4		
Rep. of Georgia	5.0	5.4	1.9	8.0	2.2	40.7		
Rep. of Azerbaijan	6.0	7.0	2.5	16.7	2.1	30.0		
Lithuania	3.4	3.7	1.3	8.8	1.5	40.5		
Rep. of Moldova	3.9	4.3	1.5	10.3	1.5	34.9		
Latvia	2.5	2.7	0.9	8.0	1.2	44.4		
Rep. of Kyrgyzstan	3.5	4.3	1.5	22.9	1.2	27.9		
Rep. of Tadzhikistan	3.8	5.1	1.8	34.2	1.2	23.5		
Rep. of Armenia	3.0	3.3	1.1	10.0	1.3	39.4		
Turkmen SSR	2.8	3.5	1.2	25.0	0.9	25.7		
Estonia	1.5	1.6	0.5	6.7	0.7	43.8		

(1) Results of the population censuses of 17.1.1979 and 12.1.1989.

#### 1.4 SELECTED ECONOMIC DATA BY REPUBLIC

Republic	1990			Agricultural output		
	Produced national income		Industrial production	Growth 1986/90 D	1986-1990 D	
	Total	per capita	Total	Total	in relation to 1981-1985 D	
	1985 = 100			Mrd Rbl	Percentage	
<b>Total</b>	106.8	102.3	113	220.8	100.0	109.7
Russian SFSR	104.4	100.9	114	103.0	46.6	111.5
Ukraine	112.4	110.5	116	49.1	22.2	108.1
Rep. of Belorussia	117.6	114.4	129	12.5	5.7	110.6
Rep. of Uzbekistan	114.0	100.9	118	10.5	4.8	102.9
Kazakh SSR	105.1	99.4	116	15.4	7.0	115.8
Rep. of Georgia	95.9	92.8	103	3.1	1.4	96.9
Rep. of Azerbaijan	91.9	85.7	99	3.8	1.7	97.4
Lithuania	109.0	103.9	117	4.8	2.2	111.6
Rep. of Moldova	112.9	108.9	121	4.8	2.2	104.3
Latvia	117.3	113.2	115	2.9	1.3	107.4
Rep. of Kyrgyzstan	120.6	110.2	118	2.9	1.3	116.0
Rep. of Tadjikistan	96.2	82.8	116	2.4	1.1	104.3
Rep. of Armenia	95.8	92.8	92	1.2	0.5	85.7
Turkmen SSR	111.8	98.4	120	2.6	1.2	123.8
Estonia	118.1	113.7	111	1.8	0.8	105.9

#### 1.5 LABOUR PRODUCTIVITY BY REPUBLIC, 1990 (1985 = 100)

Republic	Total (1)	Industry (2)	Construction (2)	Agriculture (2)
<b>Total</b>	107	120	119	120
Russian SFSR	107	122	122	123
Ukraine	116	121	118	128
Rep. of Belorussia	119	130	131	137
Rep. of Uzbekistan	96	111	105	110
Kazakh SSR	101	119	118	119
Rep. of Georgia	97	110	101	107
Rep. of Azerbaijan	86	103	101	76
Lithuania	108	122	111	113
Rep. of Moldova	116	125	123	117
Latvia	122	129	126	103
Rep. of Kyrgyzstan	111	119	114	116
Rep. of Tadjikistan	87	108	111	99
Rep. of Armenia	93	101	112	90
Turkmen SSR	98	115	104	129
Estonia	120	123	115	105

(1) National income (MPS) per average employee.

(2) Output of the branch per average employee.

## 2. AREA

As the largest cohesive national territory in the world, the Soviet Union occupied roughly one-sixth of the inhabited land mass. The Federal Rep. of Germany, Switzerland and Austria could have fitted 46 times over into its total area of 22 403 000 km<sup>2</sup>. With frontiers approximately 60 000 km long, the Soviet Union had borders with 12 other countries, and with the Baltic in the west, the Black Sea in the south, the Sea of Japan, the Sea of Okhotsk and the Bering Sea in the east, and the Arctic Ocean in the north.

The topography varies from broad plains to hills and mountains and high alpine ranges. These land forms divide the area broadly into the East European Plain and the Urals, the dividing line between Europe and Asia. Beyond the Urals begins the West Siberian Plain, and to the south stretches the Turan Plain, with its sandy desert. The Central Siberian upland is a low mountain range, whilst vast mountain belts are found in the Eastern Siberian uplands, east of the Lena river. The southern mountains form part of the European/Asiatic mountain range stretching from the Caucasus across Pamir, Tien Shan and Altai to the Sayan-Baikal mountain chain. With its vast north-south range (over 4 500 km), the Soviet Union has four climatic zones: arctic, sub-arctic, temperate and sub-tropical. The enormous land mass and distances from the sea mean that the summers are relatively warm and the winters cold. The lowest temperatures on earth have been recorded in north-eastern Siberia.

The vegetation zones are also extremely varied. The north of Russia comprises arctic wastes and tundra, and is almost entirely devoid of trees; in Siberia there are coniferous taiga forests, with mixed and broad-leaved forests to the south. The European part of the country is also largely covered with mixed and broad-leaved forest, whilst in the south the steppes stretch from the Ukraine to the Altai, with deserts and semi-deserts in Central Asia.

In the vast majority of the former Soviet Union, the soil is unsuitable for agricultural use. More than two-fifths of the surface are permafrost (tundra zone, Eastern Siberia) and 9% is desert. The fertile black-earth belt lies in the centre of the East European Plain, mainly in the Ukraine.

### 3. POPULATION

At the beginning of 1991, 290.1 million people lived in the Soviet Union, 1.5 million more than at the beginning of 1990. Natural population growth in 1990 was thus lower than in any other post-war year, owing to a lower birth rate, a higher mortality rate and a rise in emigration.

Between the last two population censuses of 1979 and 1989, average annual population growth in the Soviet Union was 0.9%. Whilst there was a growth rate of only 0.6% for the Russian people, it was highest for those in Central Asia, varying between 2.2% for Kazakhs and 3.8% for Tadzhiks. Over the last decade, the highest absolute growth rate amongst the peoples of the Soviet Union was for the Russians, with 7.8 million, and the second highest among the Uzbeks, at 4.2 million.

In 1990, 452 262 people left the Soviet Union, almost twice as many as in 1989. Emigration affected most of the republics. 266 700 people (59%) went to Israel and 141 600 (31.3%) to the Federal Rep. of Germany.

Within the country, the Russians migrate more than the other peoples and nationalities of the Soviet Union. 25 million of the 145 million Russians live outside Russia, forming a large percentage of the total population of Kazakhstan (38%), Latvia (34%), Estonia (30%) and the Ukraine (22%).

For several peoples and nationalities, there has been a fundamental change in the character of internal migration. With national conflicts becoming more acute over the past few years, a new category of migrants has arisen, namely refugees - those forced to migrate. In 1990, there was a refugee problem in eight republics and more than half of the regions of Russia. By the end of 1990, there were over 600 000 refugees in the Soviet Union.

According to the results of the 1989, population census, 128 different peoples and nationalities live in the Soviet Union, all of them represented in Russia. In 1989, Russians comprised 51% of the total population, followed by Ukrainians with 15.4% and Uzbeks with 5.8%. The smallest ethnic groups are the Enets with 209 and the Orokes with 190 people.

When asked to give their nationality, in 1989 2 039 000 people stated that they were Germans, i.e. 103 000 more than in 1979. About half gave German as their mother tongue. Germans are settled principally in Kazakhstan (958 000), Russia (842 000) and Kyrgyzstan (101 000).

In 1990, there were nine marriages per 1 000 inhabitants in the Soviet Union and three divorces. When founding a new family, approximately two-thirds of men and women marry someone from a different nationality.

In 1990, the average female life expectancy in the Soviet Union was 74 years, compared with 64 years for men.

On average, there are 13 inhabitants per km<sup>2</sup>. The most densely populated areas are Moldova, with 129, and Armenia with 111 inhabitants per km<sup>2</sup>, whereas in Kazakhstan, Turkmenia and Russia there are fewer than 10. In the Evenki autonomous district, which has twice the surface area of the Federal Rep. of Germany, there are only 25 000 inhabitants altogether.

### 3.1 TOTAL POPULATION AND POPULATION DENSITY (1)

Survey item	Unit	1970	1979	1985 <sup>(2)</sup>	1988	1989	1990 <sup>(2)</sup>
Population	1 000	241 720	262 436	277 145	284 510	286 731	289 350
male	1 000	111 399	122 329	130 128	134 061	135 361	136 866
female	1 000	130 321	140 107	147 017	150 449	151 370	152 484
Population density in relation to total area (3)	Inhabitant per km <sup>2</sup>	10.8	11.8	12.4	12.8	12.9	13.0

(1) Results of the population census, as at the beginning of the year.

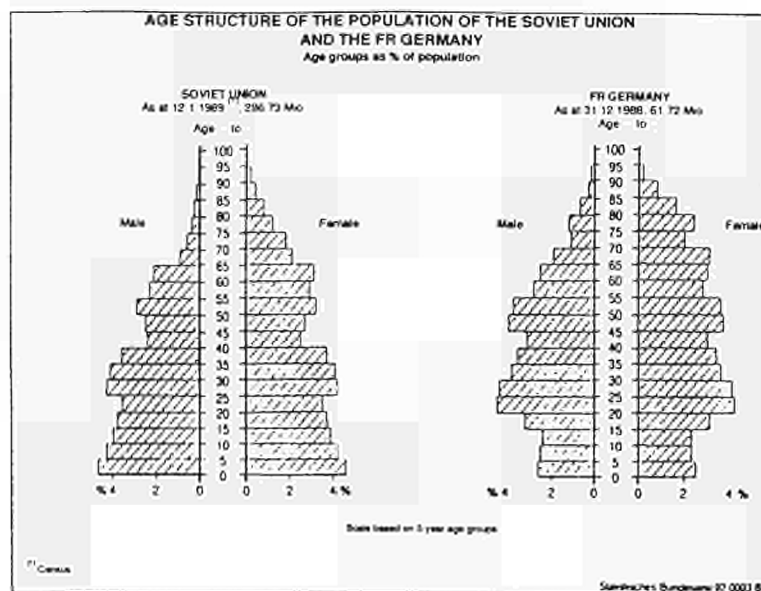
(2) As at the middle of the year.

(3) 22 403 000 km<sup>2</sup>, including the areas of the White Sea (90 000 km<sup>2</sup>) and the Sea of Azov (37 300 km<sup>2</sup>).

### 3.2 POPULATION BY AGE GROUP (1) (% of total population)

Age	1970		1979		1989	
	Total	Male	Total	Male	Total	Male
under 5	8.5	4.3	8.6	4.4	9.3	4.7
5 - 10	10.1	5.2	8.2	4.1	8.5	4.3
10 - 15	10.4	5.3	8.0	4.1	7.9	4.0
15 - 20	9.1	4.6	9.4	4.8	7.5	3.8
20 - 25	7.0	3.5	9.1	4.6	7.1	3.6
25 - 30	5.7	2.8	8.1	4.1	8.5	4.3
30 - 35	8.7	4.3	5.5	2.8	8.2	4.1
35 - 40	6.9	3.4	6.0	2.9	7.3	3.6
40 - 45	7.9	3.6	7.3	3.5	4.9	2.4
45 - 50	5.1	2.0	6.3	3.0	5.2	2.5
50 - 55	3.8	1.4	6.5	2.8	6.1	2.9
55 - 60	5.0	1.8	4.0	1.4	5.2	2.3
60 - 65	4.1	1.4	3.4	1.1	5.2	2.1
65 - 70	3.2	1.0	3.7	1.2	3.0	0.9
70 and over	4.5	1.4	5.9	1.6	6.0	1.6

(1) Results of the population censuses.



### 3.3 AREA, POPULATION AND POPULATION DENSITY BY REPUBLIC (1)

Republic	Capital	Area	1970	1989	1990 (2)	1970	1990 (2)
			Population			Population density	
			1 000 km <sup>2</sup>	1 000		Inhabitants per km <sup>2</sup>	
<b>Total</b>		22 403.0 <sup>(3)</sup>	241 720	286 731	288 624	10.8	13.0
Russian SFSR	Moscow	17 075.4	130 079	147 400	148 041	7.6	8.7
Ukraine	Kiev	603.7	47 126	51 707	51 839	78.1	85.9
Rep. of Belorussia	Minsk	207.6	9 002	10 200	10 259	43.3	49.4
Rep. of Uzbekistan	Tashkent	447.4	11 799	19 905	20 322	26.4	45.4
Kazakh SSR	Alma-Ata	2 717.3	13 009	16 536	16 691	4.8	6.1
Rep. of Georgia	Tbilisi	69.7	4 686	5 443	5 456	67.2	78.3
Rep. of Azerbaijan	Baku	86.6	5 117	7 038	7 131	59.1	82.3
Lithuania	Vilnius	65.2	3 128	3 690	3 723	48.0	57.1
Rep. of Moldova	Kishinyov	33.7	3 569	4 338	4 362	105.9	129.4
Latvia	Riga	64.5	2 364	2 680	2 687	36.7	41.7
Rep. of Kyrgyzstan	Bishkek	198.5	2 934	4 290	4 367	14.8	22.0
Rep. of Tadzhikistan	Dushanbe	143.1	2 900	5 109	5 248	20.3	36.7
Rep. of Armenia	Yerevan	29.8	2 492	3 288	3 293	83.6	110.5
Turkmen SSR	Ashkhabad	488.1	2 159	3 534	3 622	4.4	7.4
Estonia	Tallinn	45.1	1 356	1 573	1 583	30.1	35.1

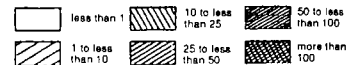
(1) Results of the population censuses of 15.1.1970 and 12.1.1989. (2) As at the beginning of the year.

(3) Including the area of the White Sea (90 000 km<sup>2</sup>) and the Sea of Azov (37 300 km<sup>2</sup>).

# POPULATION DENSITY IN THE SOVIET UNION

● Selected major cities

Inhabitants per km





### 3.4 AREA, POPULATION AND POPULATION DENSITY BY AUTONOMOUS REPUBLIC (1)

Republic	Capital	Area	1970	1989	1990 (2)	1970	1990 (2)
			Population			Population density	
		1 000 km <sup>2</sup>	1 000			Inhabitants per km <sup>2</sup>	
Russian SPSR							
Bashkir ASSR	Ufa	143.6	3 818	3 950	3 964	26.6	27.6
Buryat ASSR	Ulan-Ude	351.3	812	1 041	1 049	2.3	3.0
Dagestan ASSR	Makhachkala	50.3	1 429	1 803	1 823	28.4	36.2
Kabardino-Balkar ASSR	Malchik	12.5	588	760	768	47.1	61.5
Kalmyk ASSR	Elista	76.1	268	323	325	3.5	4.3
Karelian ASSR	Petrozavodsk	172.4	713	791	796	4.1	4.6
Komi ASSR	Syktyvkar	415.9	965	1 261	1 265	2.3	3.0
Mari ASSR	Joskar-Ola	23.2	685	749	754	29.5	32.5
Mordvinian ASSR	Saransk	26.2	1 029	965	964	39.3	36.8
North Ossetian ASSR	Vladikavkaz	8.0	552	634	638	69.1	79.7
Tatar ASSR	Kazan	68.0	3 131	3 638	3 658	46.0	53.8
Tuvianian ASSR	Kyzyl	170.5	231	309	314	1.4	1.8
Udmurt ASSR	Izhevsk	42.1	1 418	1 609	1 619	33.7	38.5
Checheno-Ingush ASSR	Grozny	19.3	1 065	1 276	1 290	55.2	66.8
Chuvash ASSR	Cheboksary	18.3	1 224	1 336	1 340	66.9	73.2
Yakut SSR	Yakutsk	3 103.2	664	1 081	1 099	0.2	0.4
Rep. of Uzbekistan							
Kara-Kalpak ASSR	Nukus	164.9	700	1 215	1 245	4.2	7.5
Rep. of Georgia							
Abkhaz ASSR	Suchumi	8.6	487	536	538	56.6	62.5
Adzhar ASSR	Batumi	3.0	310	393	328	103.3	127.3
Rep. of Azerbaijan							
Nakhichevan ASSR	Nakhichevan	5.5	202	295	300	36.8	54.6

(1) Results of the population censuses of 15.1.1970 and 12.1.1989.

(2) As at the beginning of the year.

## 3.5 URBAN AND RURAL POPULATION BY REPUBLIC (1)

Republic	Unit	15.1.1970		17.1.1979		1990 (2)	
		Urban	Rural	Urban	Rural	Urban	Rural
Total	1 000	135 991	105 729	163 586	98 850	190 583	98 041
	%	56.3	43.7	62.3	37.7	66.0	34.0
Russian SFSR	1 000	80 981	49 098	95 374	42 177	109 239	38 802
	%	62.3	37.7	69.3	30.7	73.8	26.2
Ukraine	1 000	25 688	21 438	30 512	19 243	34 869	16 970
	%	54.5	45.5	61.3	38.7	67.3	32.7
Rep. of Belorussia	1 000	3 908	5 094	5 263	4 297	6 799	3 460
	%	43.4	56.6	55.1	44.9	66.3	33.7
Rep. of Uzbekistan	1 000	4 322	7 477	6 348	9 043	8 282	12 040
	%	36.6	63.4	41.2	58.8	40.8	59.2
Kazakh SSR	1 000	6 538	6 471	7 920	6 764	9 586	7 105
	%	50.3	49.7	53.9	46.1	57.4	42.6
Rep. of Georgia	1 000	2 240	2 446	2 601	2 414	3 058	2 398
	%	47.8	52.2	51.9	48.1	56.1	43.9
Rep. of Azerbaijan	1 000	2 564	2 553	3 200	2 828	3 840	3 291
	%	50.1	49.9	53.1	46.9	53.8	46.2
Lithuania	1 000	1 571	1 557	2 062	1 336	2 549	1 174
	%	50.2	49.8	60.7	39.3	68.5	31.5
Rep. of Moldova	1 000	1 130	2 439	1 551	2 396	2 069	2 293
	%	31.7	68.3	39.3	60.7	47.4	52.6
Latvia	1 000	1 477	887	1 726	795	1 913	774
	%	62.5	37.5	68.5	31.5	71.2	28.8
Rep. of Kyrgyzstan	1 000	1 098	1 836	1 366	2 163	1 664	2 703
	%	37.4	62.6	38.7	61.3	38.1	61.9
Rep. of Tadjikistan	1 000	1 077	1 823	1 325	2 476	1 689	3 559
	%	37.1	62.9	34.9	65.1	32.2	67.8
Rep. of Armenia	1 000	1 482	1 010	1 993	1 038	2 254	1 039
	%	59.5	40.5	65.8	34.2	68.4	31.6
Turkmen SSR	1 000	1 034	1 125	1 323	1 436	1 638	1 984
	%	47.9	52.1	48.0	52.0	45.2	54.8
Estonia	1 000	881	475	1 022	444	1 134	449
	%	65.0	35.0	69.7	30.3	71.6	28.4

(1) Results of the population censuses of 15.1.1970 and 17.1.1979.

(2) As at the beginning of the year.

3.6 POPULATION IN CITIES WITH 500 000 INHABITANTS OR OVER <sup>(1)</sup>  
(1 000)

City	1970	1979	1987 (2)	1989	1990 (2)
Moscow, capital (3)	7 157	8 113	8 829	8 970	9 003
City proper	7 022	7 933	8 634	8 772	8 803
Saint Petersburg (3)	4 027	4 588	4 959	5 024	5 035
City proper	3 550	4 073	4 378	4 460	4 468
Kiev	1 627	2 137	2 511	2 595	2 616
Tashkent	1 385	1 780	1 969	2 072	2 094
Baku (3)	1 266	1 550	1 703	1 759	1 780
City proper	852	1 022	1 145	1 150	1 149
Kharkov	1 223	1 444	1 578	1 610	1 618
Minsk	907	1 262	1 521	1 589	1 613
Nizhny Novgorod	1 170	1 344	1 418	1 438	1 443
Novosibirsk	1 161	1 312	1 412	1 437	1 443
Yekaterinburg	1 025	1 211	1 329	1 365	1 372
Tbilisi	901	1 066	1 218	1 260	1 268
Samara	1 038	1 206	1 245	1 254	1 258
Yerevan	764	1 019	x	1 202	x
Dnepropetrovsk	904	1 066	1 157	1 178	1 187
Omsk	821	1 014	1 128	1 148	1 159
Chelyabinsk	875	1 030	1 118	1 142	1 148
Alma-Ata	730	910	1 075	1 128	1 147
Donetsk	882	1 024	1 089	1 113	1 117
Odessa	892	1 046	1 111	1 115	1 106
Kazan	869	993	1 072	1 094	1 103
Perm	850	999	1 071	1 091	1 094
Ufa	780	978	1 057	1 082	1 094
Rostov-na-Donu	789	934	1 002	1 019	1 025
Volgograd	815	929	987	999	1 005
Krasnoyarsk	648	796	890	913	922
Riga	732	835	895	915	917
Saratov	757	856	896	905	909
Voronezh	660	783	867	887	895
Zaporozhye	658	781	861	884	891
Lviv	553	667	761	791	798
Krivoy Rog	581	650	694	713	717
Kishinyov	349	503	633	667	676
Vladivostok	441	550	615	634	643
Izhevsk	422	549	615	635	642
Togliatti	251	502	606	631	642
Ulyanovsk	351	464	579	625	638
Yaroslavl	517	597	626	633	636
Irkutsk	451	550	612	626	635
Krasnodar	460	560	609	621	627
Bishkek	429	533	591	616	625
Karaganda	523	572	607	614	613
Khabarovsk	436	528	586	601	608
Barnaul	439	535	588	602	603
Dushanbe	374	494	568	596	602
Novokuznetsk	496	541	588	600	601

For footnotes, please see end of table.

3.6 POPULATION IN CITIES WITH 500 000 INHABITANTS OR OVER (1)  
(1 000)

City	1970	1979	1987 (2)	1989	1990 (2)
Vilnius	372	481	x	583	593
Orenburg	343	459	537	547	552
Penza	374	483	531	543	548
Tula	462	514	536	540	543
Ryazan	350	453	501	515	522
Kemerovo	374	462	513	520	521
Mariupol	417	503	515	519	520
Astrakhan	410	461	501	509	510
Nikolayev	362	440	494	503	508
Naberezhnyje Chelny	38	301	468	500	507
Tomsrk	338	421	480	502	506
Gomel	272	383	484	501	506
Lugansk	x	x	491	x	501

(1) Results of the population censuses of 15.1.1970, 17.1.1979 and 12.1.1989.

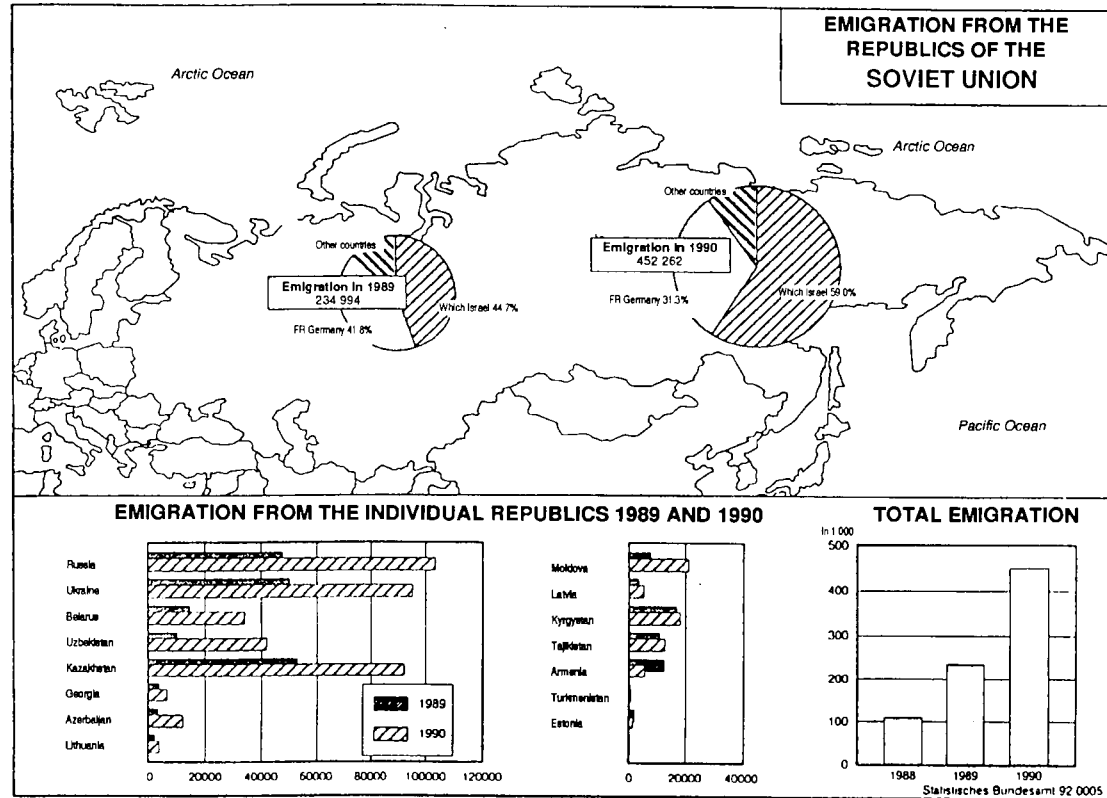
(2) As at the beginning of the year.

(3) Conurbation.

3.7 EMIGRANTS BY REPUBLIC (1)

Republic	1987	1988	1989	1990
<b>Total</b>	<b>39 129</b>	<b>108 189</b>	<b>234 994</b>	<b>452 262</b>
Russian SFSR	9 697	20 705	47 521	103 609
Ukraine	6 643	17 746	50 020	95 375
Rep. of Belorussia	757	3 204	14 612	34 094
Rep. of Uzbekistan	1 112	3 580	10 099	41 934
Kazakh SSR	7 113	23 579	52 927	92 307
Rep. of Georgia	730	867	3 449	6 386
Rep. of Azerbaijan	322	501	2 976	12 082
Lithuania	684	666	1 796	3 611
Rep. of Moldova	1 794	2 219	7 488	21 036
Latvia	525	1 051	3 066	4 910
Rep. of Kyrgyzstan	1 391	10 618	16 757	18 035
Rep. of Tadzhikistan	1 650	6 000	10 463	12 468
Rep. of Armenia	5 932	15 815	12 188	5 221
Turkmen SSR	9	56	57	302
Estonia	770	1 582	1 575	892

(1) Data from the Ministry of the Interior.



### 3.8 POPULATION BY SELECTED ETHNIC GROUPS AND LANGUAGES (1)

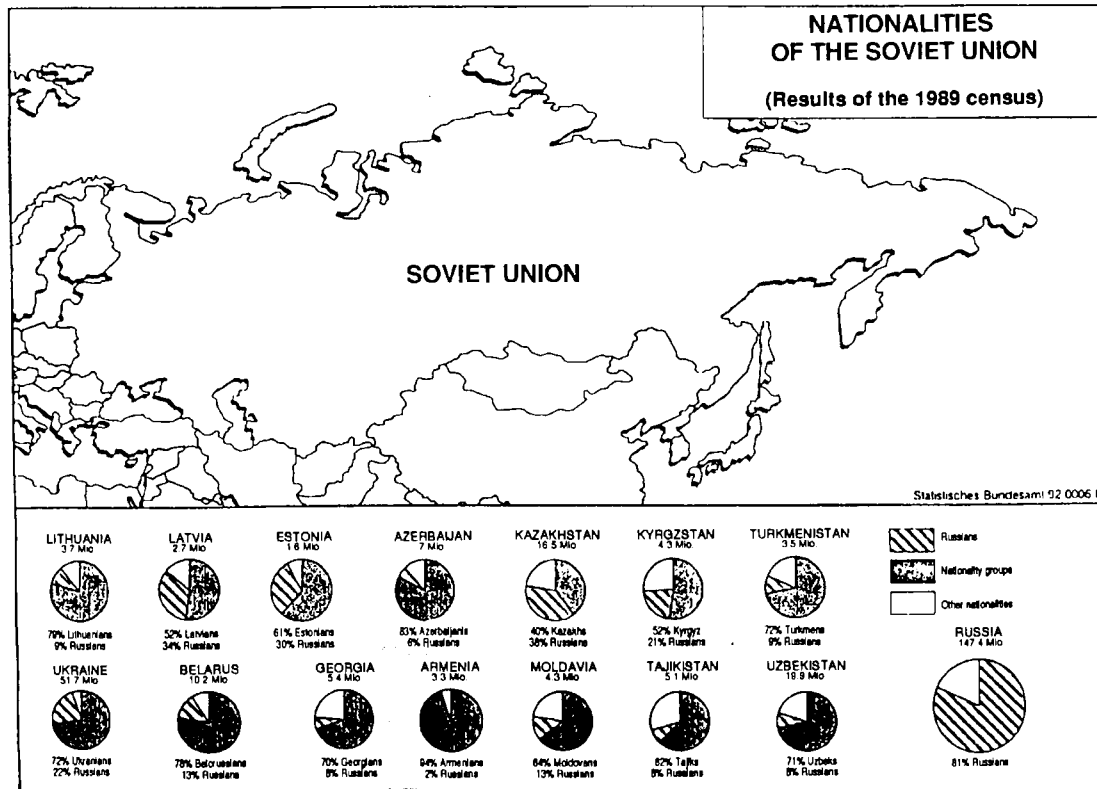
Ethnic groups	1970	1979	1989	1989	
	Numbers belonging to the ethnic groups			Language of own ethnic group	Second language Russian
	1 000			Percentage	
Russians	129 015	137 397	145 155	99.8	0.2
Ukrainians	40 753	42 347	44 186	81.1	56.2
Uzbeks	9 195	12 456	16 698	98.3	23.8
Belorussians	9 052	9 463	10 036	70.9	54.7
Kazakhs	5 299	6 556	8 136	97.0	60.5
Azerbaijanis	4 380	5 477	6 770	97.7	34.4
Tatars	5 783	6 185	6 649	83.2	70.8
Armenians	3 559	4 151	4 623	91.7	47.1
Tadjiks	2 136	2 898	4 215	97.7	27.7
Georgians	3 245	3 571	3 981	98.2	33.1
Moldavians	2 698	2 968	3 352	91.6	53.8
Lithuanians	2 665	2 851	3 067	97.7	37.9
Turkmen	1 525	2 028	2 729	98.5	27.7
Kirgiz	1 452	1 906	2 529	97.8	35.2
Germans	1 846	1 936	2 039	48.8	45.0
Chuvash	1 694	1 751	1 842	76.5	65.1
Latvians	1 430	1 439	1 459	94.8	64.4
Bashkirs	1 240	1 371	1 449	72.3	71.8
Jews	2 100	1 762	1 378	11.1	10.1
Mordvins	1 263	1 192	1 154	67.1	62.6
Poles	1 168	1 151	1 126	30.5	43.9
Estonians	1 007	1 020	1 027	95.5	33.9

(1) Results of the population censuses of 15.1.1970, 17.1.1979 and 12.1.1989.

3.9 ETHNIC GROUPS WITH A POPULATION OF OVER 500 000 IN 1989 (1 000)

Ethnic group	Russ.	Ukr.	Belor.	Uzb.	Kaz.	Geo.	Azerb.	Lit.	Mold.	Lat.	Kyrg.	Tadj.	Arm.	Turkm.	Est.
Russians	119 866	11 356	1 342	1 653	6 228	341	392	344	562	906	917	388	52	334	475
Ukrainians	4 363	37 419	291	153	896	52	32	45	600	92	108	41	8	36	48
Belorussians	1 206	440	7 905	29	183	9	8	63	20	120	9	7	1	9	28
Uzbeks	127	20	4	14 142	332	1	1	1	1	1	550	1 198	317	1	x
Kazakhs	636	11	2	808	6 535	3	2	1	1	1	37	11	88	x	x
Georgians	131	23	3	5	9	3 787	14	1	1	1	1	1	1	1	1
Azerbaijanis	336	37	5	44	90	308	5 805	1	3	3	16	4	85	33	1
Lithuanians	70	11	7	2	11	1	1	2 924	1	35	x	x	x	x	3
Moldavians	173	325	5	6	33	3	2	2	2 795	3	2	1	1	3	1
Latvians	47	7	3	1	3	1	x	4	x	1 388	x	x	x	1	3
Kirgiz	42	2	1	175	14	x	x	x	x	x	2 230	64	x	x	x
Tadjiks	38	4	1	934	26	1	1	1	1	x	34	3 172	x	3	x
Armenians	532	54	5	51	19	437	391	2	3	3	4	6	3 084	32	x
Turkmens	40	3	1	122	4	x	x	x	x	x	1	20	x	2 537	x
Estonians	46	4	1	1	3	2	x	1	x	3	x	x	x	x	963
Tatars	5 522	87	x	468	328	4	28	5	x	5	70	72	x	39	4
Germans	842	38	x	40	958	x	x	x	7	4	101	33	x	4	4
Chuvash	1 774	20	x	x	22	x	x	x	x	x	x	x	x	x	x
Bashkirs	1 345	x	x	35	42	x	x	x	x	x	x	7	x	5	x
Jews	537	486	112	65	18	10	25	12	66	23	6	10	x	x	5
Mordvins	1 073	19	x	12	30	x	x	x	x	x	x	6	x	x	x
Poles	95	219	418	x	60	x	x	258	5	60	x	x	x	x	x
Chechen	899	x	x	x	50	x	x	x	x	x	x	x	x	x	x
Udmurts	715	9	x	x	16	x	x	x	x	x	x	x	x	x	x
Mari	644	7	x	x	12	x	x	x	x	x	x	x	x	x	x
Avars	544	x	x	x	x	4	44	x	x	x	x	x	x	x	x
Ossetes	402	6	x	6	4	164	1	x	x	x	x	8	x	2	x
Other	4 977	845	46	1 058	538	273	274	10	269	19	172	44	73	79	28





### 3.10 POPULATION BY RELIGIOUS AFFILIATION <sup>(1)</sup>

Denomination	1 000	Percentage
Christians	105 230	36.7
Orthodox	90 320	31.5
Protestants	9 462	3.3
Roman Catholics	5 448	1.9
Muslims	34 121	11.9
Jews	3 154	1.1
No religious affiliation	85 159	29.7
Atheists	58 780	20.5
Other	287	0.1

(1) Results of the population census of 1989.

### 3.11 BIRTHS AND DEATHS BY REPUBLIC

Republic	1970	1980	1990	1970	1980	1990
	Live births			Deaths		
	per 1 000 inhabitants					
Total	17.4	18.3	16.8	8.2	10.3	10.3
Russian SFSR	14.6	15.9	13.4	8.7	11.0	11.2
Ukraine	15.2	14.8	12.7	8.8	11.3	12.1
Rep. of Belorussia	16.2	16.0	13.9	7.6	9.9	10.7
Rep. of Uzbekistan	33.6	33.9	33.7	5.5	7.5	6.1
Kazakh SSR	23.4	23.9	21.7	6.0	8.0	7.7
Rep. of Georgia	19.2	17.6	17.0	7.3	8.5	8.4
Rep. of Azerbaijan	29.2	25.2	26.4	6.7	7.0	6.2
Lithuania	17.6	15.1	15.3	8.9	10.5	10.7
Rep. of Moldova	19.4	19.8	17.7	7.4	10.1	9.7
Latvia	14.5	14.1	14.1	11.2	12.7	13.0
Rep. of Kyrgyzstan	30.5	29.6	29.3	7.4	8.4	7.0
Rep. of Tadzhikistan	34.8	37.0	38.8	6.4	8.1	6.2
Rep. of Armenia	22.1	23.0	24.0	5.1	5.6	6.6
Turkmen SSR	35.2	34.3	34.2	6.6	8.3	7.0
Estonia	15.8	15.1	14.2	11.1	12.3	12.3

### 3.12 INFANT AND MATERNAL MORTALITY BY REPUBLIC

Republic	1980	1985	1989	1980	1985	1989
	Infant mortality (in the first year of life)			Maternal mortality		
	per 10 000 live births					
Total	273	260	227 (1)	5.6	4.8	4.4
Russian SFSR	221	207	178	6.8	5.4	4.9
Ukraine	166	157	130	4.5	4.0	3.3
Rep. of Belorussia	163	145	118	2.9	1.7	2.5
Rep. of Uzbekistan	470	453	377	4.6	4.9	4.3
Kazakh SSR	327	301	259	5.6	4.8	5.3
Rep. of Georgia	254	240	196	2.6	2.3	5.5
Rep. of Azerbaijan	304	294	262	3.9	4.1	2.9
Lithuania	145	142	107	2.7	2.2	2.9
Rep. of Moldova	350	309	204	6.4	5.0	3.4
Latvia	154	130	111	2.5	3.0	5.7
Rep. of Kyrgyzstan	433	419	322	4.9	4.3	4.3
Rep. of Tadjikistan	581	468	432	9.4	5.9	3.9
Rep. of Armenia	262	248	204	2.7	2.2	3.5
Turkmen SSR	536	524	547	4.1	5.7	5.5
Estonia	171	140	147	2.7	4.7	4.1

(1) 1990: 218.

### 3.13 LIFE EXPECTANCY OF NEWBORN CHILDREN BY SEX AND REPUBLIC

Republic	1969-1970		1979-1980		1990	
	Male	Female	Male	Female	Male	Female
	years					
<b>Total</b>	64.4	73.4	62.2	72.5	64.3	73.9
Russian SFSR	63.1	73.3	61.5	73.0	63.9	74.4
Ukraine	66.5	74.4	64.6	74.0	65.7	75.0
Rep. of Belorussia	68.1	75.8	65.9	75.6	66.4	75.9
Rep. of Uzbekistan	68.5	74.6	64.0	70.7	66.2	72.6
Kazakh SSR	64.1	74.9	61.6	71.9	64.0	73.2
Rep. of Georgia	68.1	75.2	67.1	74.8	69.0	76.3
Rep. of Azerbaijan	65.3	72.6	64.2	71.8	66.9	74.8
Lithuania	67.0	74.9	65.5	75.4	66.5	76.4
Rep. of Moldova	66.0	71.8	62.4	68.8	65.2	72.0
Latvia	65.5	74.4	63.6	73.9	64.3	74.6
Rep. of Kyrgyzstan	63.6	71.8	61.1	70.1	64.5	72.8
Rep. of Tadjikistan	67.8	71.6	63.7	68.6	67.0	72.1
Rep. of Armenia	70.1	75.4	69.5	75.7	68.4	75.2
Turkmen SSR	65.2	71.3	61.1	67.8	62.9	69.7
Estonia	65.5	74.5	64.2	74.2	64.9	74.9

### 3.14 MARRIAGES AND DIVORCES BY REPUBLIC

Republic	1970	1980	1989	1970	1980	1989
	Marriages			Divorces		
	per 1 000 inhabitants					
Total	9,7	10,3	9,4 <sup>(1)</sup>	2,6	3,5	3,4 <sup>(2)</sup>
Russian SFSR	10,1	10,6	9,4	3,0	4,2	3,9
Ukraine	9,8	9,3	9,5	2,9	3,6	3,7
Rep. of Belorussia	9,3	10,1	9,6	1,9	3,2	3,4
Rep. of Uzbekistan	9,1	10,9	10,0	1,1	1,4	1,5
Kazakh SSR	9,5	10,6	10,0	1,6	2,6	2,8
Rep. of Georgia	7,8	10,0	7,0	1,1	1,3	1,4
Rep. of Azerbaijan	6,8	9,8	10,4	1,3	1,2	1,7
Lithuania	9,5	9,2	9,3	2,2	3,2	3,3
Rep. of Moldova	9,4	11,5	9,2	2,1	2,8	2,9
Latvia	10,1	9,7	9,1	4,6	5,0	4,2
Rep. of Kyrgyzstan	9,2	10,7	9,7	1,2	1,8	1,9
Rep. of Tadzhikistan	9,2	10,7	9,2	1,1	1,5	1,5
Rep. of Armenia	7,3	10,5	7,8	1,0	1,1	1,2
Turkmen SSR	8,6	9,8	9,8	1,2	1,4	1,4
Estonia	9,1	8,8	8,0	3,2	4,2	3,8

(1) 1990: 9.2.

(2) 1990: 3.3.

#### 4. HEALTH

In the Soviet Union, health care was almost entirely State-run. From medical check-ups to the handing out of medicines, medical care was free of charge for all citizens.

In 1990, there were over 24 000 hospitals, 5 300 accident wards and almost 30 000 gynaecological advisory centres and children's clinics. In the 44 000 works-run and government-run out-patient departments, medical check-ups were carried out for particular age and risk groups (112.5 million preventive examinations in 1980 and 121.9 million in 1989).

On average, there was one doctor per 254 inhabitants of the Soviet Union in 1990 and one dentist for over 2 000 inhabitants.

Statistics were available only on notifiable diseases. In addition, those with alcohol- or drug-related illnesses were treated in government establishments to prevent or cure dependency - some 1 million persons with alcohol-related illnesses, 44 000 drug abusers and 19 000 pill or substance abusers.

Although infant mortality has declined steadily over the past few years, the 1990 mortality rate, at 21.8 per 1 000 live births, was still 2.2 to 4.4 times higher than in the USA, France, the United Kingdom, Germany or Japan. In the Central Asian republics, which have the highest birth rates, infant mortality rates are 26.4 to 45.2 per 1 000 live births. The main causes of death in very young children in those areas are infectious diseases and digestive disorders. The numbers of paediatricians and beds in gynaecological units are lower than the Union average.

In 1989, 2 200 pregnant women or women in childbirth died, almost one-third of them from abortions outside officially recognized establishments. Some 7 million abortions are carried out every year, on one in ten women between the ages of 15 and 49.

#### 4.1 MEDICAL ESTABLISHMENTS

Establishments	1970	1980	1985	1988	1989	1990
Hospitals	26 234	23 107	23 309	23 519	23 711	24 055
Russian SFSR	13 784	12 472	12 526	12 622	12 697	12 762
Ukraine	4 693	3 843	3 833	3 830	3 856	3 882
Rep. of Belorussia	1 024	873	881	879	880	874
Rep. of Uzbekistan	1 262	1 153	1 267	1 319	1 344	1 373
Karakh SSR	1 972	1 695	1 744	1 763	1 778	1 788
Rep. of Georgia	573	459	435	423	422	422
Republic of Azerbaijan	779	756	743	738	744	894
Lithuania	273	204	199	199	192	197
Rep. of Moldova	364	337	321	321	319	334
Latvia	211	183	184	185	202	204
Rep. of Kyrgyzstan	273	265	278	292	298	307
Rep. of Tadjikistan	294	281	318	341	347	365
Rep. of Armenia	261	171	171	178	179	181
Turkmen SSR	283	270	283	306	332	347
Estonia	188	145	126	123	121	125
Out-patient departments	37 360	36 122	39 089	41 310	42 816	43 916
First-aid stations	x	4 387	4 989	x	5 300	5 341
Gynaecological units and children's hospitals	20 955	24 293	27 897	x	29 201	29 843
Sanatoriums and health resort establishments	4 157	4 909	5 490	5 802	5 840	5 853

#### 4.2 BEDS IN MEDICAL ESTABLISHMENTS (1 000)

Establishments	1970	1980	1985	1988	1989	1990
Hospitals	2 663.3	3 324.2	3 607.7	3 762.6	3 822.3	3 832.1
of which:						
General medicine	544.0	761.7	838.8	876.2	899.3	912.1
Surgery	351.2	471.6	516.5	542.1	556.2	563.1
Gynaecology	154.5	184.1	197.6	206.1	208.3	208.8
Psychiatry	267.9	314.3	334.3	339.6	347.0	349.8
Tuberculosis	271.9	230.6	218.9	209.7	205.9	202.5
Ear, nose and throat departments	46.6	51.0	55.2	59.2	60.4	61.1
Maternity wards	x	224.1	242.0	253.6	256.3	257.7
Children's wards (1)	x	404.1	428.5	438.1	439.4	438.8
Sanatoriums	461.1	550.4	599.7	613.5	608.9	600.3
Health resort establishments (prophylactic)	118.0	211.6	259.4	295.0	305.8	313.7

(1) Other than for infectious diseases.

#### 4.3 BEDS IN HOSPITALS BY REPUBLIC

Republic	1970	1980	1990	1970	1980	1990
	1 000			per 10 000 inhabitants		
<b>Total</b>	2 663.3	3 324.2	3 832.1	109.4	124.9	132.6
Russian SFSR	1 469.3	1 801.9	2 037.6	112.5	129.6	137.5
Ukraine	511.0	627.1	700.3	107.9	125.4	135.5
Rep. of Belorussia	94.2	120.8	135.1	104.1	125.2	132.3
Rep. of Uzbekistan	123.5	182.8	254.9	101.7	113.1	123.7
Kazakh SSR	156.4	195.8	227.8	118.4	130.1	136.2
Rep. of Georgia	43.1	54.1	60.0	91.5	107.1	110.7
Republic of Azerbaijan	48.8	60.0	72.7	93.4	96.8	102.2
Lithuania	32.4	41.2	46.2	102.4	119.8	124.4
Rep. of Moldova	35.8	48.0	57.4	99.0	120.0	131.4
Latvia	28.1	34.5	39.5	118.9	136.8	148.1
Rep. of Kyrgyzstan	31.9	43.7	52.6	106.7	119.7	119.8
Rep. of Tadjikistan	29.2	39.6	56.5	97.7	98.8	105.8
Rep. of Armenia	21.9	26.0	30.5	85.6	83.4	89.8
Turkmen SSR	22.6	30.3	42.0	101.7	104.5	113.3
Estonia	15.1	18.4	19.0	110.3	124.1	121.0

#### 4.4 DOCTORS, DENTISTS AND MIDDLE-RANKING MEDICAL STAFF

Survey item	Unit	1970	1980	1985	1988	1989	1990
Doctors and dentists	1 000	668.4	997.1	1 170.4	1 255.7	1 278.3	1 279.2
Inhabitants per doctor	Number	364.0	267.0	237.0	228.0	225.0	226.0
Doctors	1 000	577.3	887.8	1 047.4	1 119.1	1 137.8	1 139.7
Inhabitants per doctor	Number	422.0	300.0	265.0	256.0	253.0	254.0
Dentists	1 000	91.1	109.3	123.0	136.6	140.5	139.5
Inhabitants per dentist	Number	2 671.0	2 435.0	2 258.0	2 099.0	2 048.0	2 072.0
Pharmacists	1 000	47.7	75.2	91.0	103.0	113.9	x
Middle-ranking medical staff	1 000	2 123.0	2 814.3	3 158.9	3 351.7	3 386.0	3 420.2

#### 4.5 DOCTORS BY SELECTED SPECIALITY (1 000)

Survey item	1970	1980	1985	1988	1989	1990
Doctors, total	577.3	887.8	1 047.4	1 119.1	1 137.8	1 139.7
of which:						
General practitioners	134.6	229.4	286.1	309.1	318.4	317.9
Paediatricians	80.8	116.4	140.2	154.6	157.9	159.6
Surgeons	67.2	105.9	120.6	135.9	144.4	149.1
Gynaecologists	41.4	59.4	66.9	73.0	74.5	75.7
Psychiatrists	14.5	23.8	30.3	36.0	37.3	37.1
Ear, nose and throat specialists	15.8	20.2	21.3	22.2	22.4	22.5

#### 4.6 DOCTORS AND DENTISTS BY REPUBLIC

Republic	1970	1980	1990	1970	1980	1990
	1 000			per 10 000 inhabitants		
<b>Total</b>	668.4	997.1	1 279.2	27.4	37.5	44.2
Russian SFSR	378.4	560.7	694.7	29.0	40.3	46.9
Ukraine	131.0	182.7	227.2	27.7	36.5	44.0
Rep. of Belorussia	23.4	32.7	41.4	25.8	33.9	40.5
Rep. of Uzbekistan	24.4	46.0	73.7	20.1	28.5	35.8
Kazakh SSR	28.8	47.8	68.9	21.8	31.8	41.2
Rep. of Georgia	17.1	24.2	32.1	36.4	48.1	59.2
Republic of Azerbaijan	13.1	20.7	28.0	25.0	33.4	39.3
Lithuania	8.7	13.4	17.1	27.5	38.9	46.1
Rep. of Moldova	7.4	12.5	17.4	20.5	31.4	40.0
Latvia	8.5	11.1	13.2	35.9	43.9	49.6
Rep. of Kyrgyzstan	6.2	10.6	16.1	20.8	29.1	36.7
Rep. of Tadjikistan	4.7	9.4	14.5	15.9	23.5	27.1
Rep. of Armenia	7.3	10.9	14.5	28.7	34.8	42.8
Turkmen SSR	4.8	8.2	13.2	21.3	28.3	35.7
Estonia	4.6	6.2	7.2	33.1	41.6	45.7

#### 4.7 REGISTERED ILLNESSES (1 000)

Illnesses	1970	1980	1985	1988	1989	1990
Typhus abdominalis and paratyphoid fever (types A, B and C)	22.5	16.9	17.6	11.5	9.5	8.6
Acute intestinal infection	2 078	1 324	1 601	1 815	1 464	1 279
Salmonella infection	x	110	76	134	157	161
Diphtheria	1.1	0.4	1.5	0.9	0.8	1.4
Pertussis (whooping cough)	39.5	13.9	53.9	45.4	37.1	33.6
Scarlet fever	470	230	278	215	225	180
Tetanus	0.7	0.3	0.3	0.2	0.2	0.2
Acute poliomyelitis	0.3	0.2	0.1	0.2	0.1	0.3
Measles	472	356	273	165	52	47
Viral hepatitis	404	802	934	716	910	914
Influenza and acute infection of the respiratory organs	55 842	60 359	71 869	79 906	68 108	64 635
Aids (1)	x	x	x	5	23	49(2)

(1) Number of cases.

(2) As at 1 July 1991: 61 had developed the disease and 1 242 were infected with Aids.



**4.8 ALCOHOLISM AND DRUG ADDICTION BY REPUBLIC**  
(per 100 000 inhabitants)

Republic	1980	1985	1990	1980	1985	1990
	Alcoholism			Drug addiction		
Total	206	217	123	1.3	3.5	4.8
Russian SFSR	244	265	152	1.3	2.1	4.4
Ukraine	219	226	138	1.5	9.1	7.5
Rep. of Belorussia	272	256	107	0.4	0.5	2.1
Rep. of Uzbekistan	61	59	41	0.7	2.6	3.7
Kazakh SSR	161	170	101	1.3	3.4	4.3
Rep. of Georgia	45	35	15	3.0	2.1	6.9
Republic of Azerbaijan	28	21	15	0.1	1.1	5.7
Lithuania	197	191	x	0.5	0.9	x
Rep. of Moldova	234	299	127	0.1	1.0	1.9
Latvia	296	288	130	0.4	1.8	5.0
Rep. of Kyrgyzstan	119	105	62	3.1	3.4	4.3
Rep. of Tadjikistan	51	70	31	0.4	0.8	2.2
Rep. of Armenia	27	18	15	0.6	1.1	1.0
Turkmen SSR	61	59	41	12.8	13.1	7.9
Estonia	137	192	60	0.2	0.2	1.5

**4.9 MORTALITY BY SELECTED CAUSE OF DEATH**

Cause of death	1986	1987	1988	1989	1990
Infectious and parasitic diseases	59 366	59 825	57 894	51 632	47 989
Sepsis	6 446	6 513	6 270	5 340	4 204
Malignant neoplasms	434 415	447 173	459 349	470 158	480 321
of the stomach	86 826	87 201	86 638	86 052	85 681
of the colon	19 314	20 170	21 249	22 125	23 466
of the trachea, bronchi and lungs	89 084	93 138	97 711	100 882	103 035
of the female mammary glands	25 143	25 681	26 150	27 674	28 270
Leukaemia	13 470	13 545	13 983	13 817	13 645
Diabetes mellitus	9 965	11 123	13 275	16 266	18 203
Circulatory diseases	1 523 425	1 574 380	1 606 390	1 562 588	1 578 685
of which:					
Chronic-rheumatic heart disease	16 994	16 914	15 714	15 481	15 014
Hypertonia and diseases linked to high blood pressure	15 014	15 255	16 507	17 911	22 499
Ischaemic heart disease	853 035	866 852	857 734	826 398	824 861
Acute myocardial infarction	85 594	90 897	90 533	93 771	98 607
Diseases of the cerebro- vascular system	518 387	535 782	550 669	533 370	543 351
Pneumonia	61 125	57 885	57 803	47 338	43 212
Bronchitis, emphysema and asthma	75 983	80 941	89 320	92 160	98 627
Nephritis, nephrotic syndrome and nephrosis	12 414	12 224	13 083	13 402	13 015
Specific diseases arising during the perinatal period	40 875	42 439	37 963	36 269	35 682
Suicides	52 830	54 105	55 519	60 278	60 788
Murders	15 926	17 018	21 241	27 789	32 066
Aids	x	x	3	14	30 <sup>(1)</sup>

(1) As at 1 September 1991: 47 deaths.

## 5 EDUCATION

All children receive the same school education in the Soviet Union from the first to the eighth classes, after which they can choose to continue at a general school, to change over to a specialized school (these types of schooling complete "middle-level education") or to go on to a technical college. One in ten of the population aged 15 and over has a degree or the equivalent, with a particularly high percentage of graduates in Georgia, Armenia, Estonia and Latvia, whereas the Central Asian Republics and Moldova have the lowest percentage of graduates. At the beginning of the 1990/91 academic year, there were 911 higher educational establishments in the Soviet Union, with approximately 5.2 million students, over half of them in the Russian Federation. Degrees can be obtained by direct study or via evening or correspondence courses, with the same forms of study being available to adults wishing to receive a general or technical education.

The high percentage of women in the labour force meant that provision had to be made for the care of small children in government establishments. Fifty five per cent of pre-school children are looked after in crèches or kindergartens, but there are too few such establishments, especially in Central Asia and Moldova, and in some cases they are filled to overflowing. In 1990, 2.1 million applications for child care had to be refused. There are many out-of-school facilities for schoolchildren: over 5 000 pioneer houses with a wide range of leisure activities, 3 000 scientific/technical establishments, 9 500 music, art and ballet schools and 9 000 sports schools. A total of 14 to 15 million children go to pioneer camps every year.

An essential feature of the educational system is adult education. In 1990/91, almost 36 million people were involved in retraining or further education, and in addition over 1 million members of the working population attended evening classes at general schools, 1.3 million studied in technical colleges (32% of all students at such colleges) and 2.1 million at universities or the equivalent via evening and correspondence courses (41% of all university-level students).

Not all pupils and students in the republics could be educated fully in their own mother tongue. Only 21% of children in Belorussia are educated in Belorussian, although almost four-fifths of the population are Belorussians. Over 60 million people live outside their national area, and this means that children are not educated in their mother tongue in every case. In Russia, for example, there are no schools for Ukrainians or Belorussians or many other nationalities.

It is impossible for the children of the 2 million Germans to be educated in German. Their mother tongue is simply one subject like the others. Educational literature was published in 65 languages in the multinational country, but sample surveys indicate substantial shortcomings in educational material.

### 5.1 POPULATION BY LEVEL OF EDUCATION (1)

Survey item	1970	1979	1989	1970	1979	1989
	Million			per 1 000 inhabitants aged 15 and over		
<b>Total</b>	95.0	137.8	172.2	483	699	812
Higher education completed	8.3	14.8	23.0	42	75	108
Higher education not completed	2.6	3.2	3.6	13	16	17
Specialized education	13.4	23.4	38.6	68	119	182
General middle-level education	23.4	45.1	64.6	119	229	305
Middle-level education not completed	47.3	51.3	42.4	241	260	200

(1) Results of the population censuses.

### 5.2 POPULATION BY LEVEL OF EDUCATION AND REPUBLIC (1) (per 1 000 inhabitants)

Republic	1979	1989	1979	1989	1979	1989
	Population with higher and middle- level education		of which Higher education completed      Middle-level education completed (2)			
<b>Total</b>	699	812	75	108	364	504
Russian SFSR	697	806	77	113	348	483
Ukraine	681	794	71	104	375	506
Rep. of Belorussia	652	770	70	108	357	494
Rep. of Uzbekistan	765	867	70	92	443	577
Kazakh SSR	722	838	69	99	376	541
Rep. of Georgia	774	877	115	151	461	574
Rep. of Azerbaijan	770	878	77	105	424	581
Lithuania	609	753	67	106	294	466
Rep. of Moldova	634	755	59	87	315	464
Latvia	695	838	80	115	357	489
Rep. of Kyrgyzstan	717	842	68	94	397	564
Rep. of Tadjikistan	707	837	60	75	365	551
Rep. of Armenia	814	901	104	138	456	577
Turkmen SSR	748	864	64	83	392	568
Estonia	679	801	81	117	345	474

(1) Results of the population censuses.

(2) Including higher education not completed.

### 5.3 SCHOOLS AND OTHER EDUCATIONAL ESTABLISHMENTS <sup>(1)</sup>

Establishments	1970/1971	1980/1981	1985/1986	1988/1989	1989/1990	1990/1991
Pre-school establishments <sup>(2)</sup>	102 730	127 744	140 146	147 422	150 723	152 252
Crèches <sup>(2)</sup>	19 596	12 053	9 578	7 870	7 279	6 087
Kindergartens <sup>(2)</sup>	83 134	115 691	130 568	139 552	143 444	146 165
General schools <sup>(3)</sup>	187 671	142 382	137 107	131 648	132 075	132 941
Technical colleges	5 351	8 132	8 353	7 959	8 142	x
Specialized schools	4 223	4 383	4 495	4 517	4 539	4 556
Institutes of higher education	805	883	894	898	904	911
Universities	51	68	69	69	69	71

(1) As at the beginning of the school year.

(2) As at 1 January of the last-named year.

(3) Excluding schools for mentally or physically handicapped children.

### 5.4 CHILDREN, PUPILS AND STUDENTS BY EDUCATIONAL ESTABLISHMENT <sup>(1)</sup> (1 000)

Establishment	1970/1971	1980/1981	1985/1986	1988/1989	1989/1990	1990/1991
Pre-school establishments <sup>(2)</sup>	9 281.0	14 337.0	16 140.0	17 354.0	17 222.0	16 247.0
Crèches <sup>(2)</sup>	2 579.0	4 181.0	4 594.0	4 789.0	4 504.0	3 638.0
Kindergartens <sup>(2)</sup>	6 702.0	10 156.0	11 546.0	12 565.0	12 718.0	12 609.0
General schools <sup>(3)</sup>	48 830.0	43 799.0	43 902.0	43 552.0	44 025.0	44 684.0
Technical colleges	2 380.0	3 971.5	4 173.8	4 048.0	3 890.5	3 614
Specialized schools	4 388.0	4 611.7	4 498.0	4 372.0	4 231.4	4 096.8
Institutes of higher education <sup>(4)</sup>	4 581.0	5 235.2	5 147.2	4 999.0	5 178.2	5 161.6
Universities	503.5	609.4	590.2	593.7	627.7	658.0

(1) As at the beginning of the school year, including adult education at the same establishments.

(2) As at 1 January of the last-named year.

(3) Excluding schools for mentally or physically handicapped children.

(4) Excluding foreign students.

**5.5 PUPILS AND STUDENTS BY REPUBLIC <sup>(1)</sup>**  
(1 000)

Republic	1970/1971	1980/1981	1985/1986	1988/1989	1989/1990	1990/1991
<b>Total</b>	79 634	100 201	108 648	110 757	105 261	101 411
Russian SFSR	43 397	52 437	56 953	58 625	55 202	52 965
Ukraine	14 529	18 429	19 579	20 092	19 382	18 800
Rep. of Belorussia	2 831	3 627	3 913	4 054	3 947	3 885
Rep. of Uzbekistan	4 216	5 950	6 520	6 518	6 582	6 779
Kazakh SSR	4 697	6 262	6 810	6 794	6 285	6 132
Rep. of Georgia	1 349	1 487	1 635	1 553	1 502	1 542
Rep. of Azerbaijan	1 808	2 361	2 452	2 295	2 173	1 990
Lithuania	946	1 248	1 324	1 386	1 402	1 069
Rep. of Moldova	1 198	1 665	1 799	1 682	1 607	1 470
Latvia	662	898	1 136	1 164	987	832
Rep. of Kyrgyzstan	1 049	1 492	1 647	1 596	1 576	1 546
Rep. of Tadzhikistan	965	1 481	1 647	1 681	1 649	1 669
Rep. of Armenia	907	1 211	1 308	1 297	1 110	978
Turkmen SSR	700	1 042	1 252	1 294	1 247	1 262
Estonia	380	611	673	726	610	492

(1) As at the beginning of the school year, including adults being retrained or receiving further education, regardless of establishment.

**5.6 TEACHING STAFF <sup>(1)</sup>**  
(1 000 )

Establishments	1970/1971	1975/1976	1980/1981	1985/1986	1989/1990	1990/1991
General schools	2 470	2 520	2 435	2 598	3 040	3 129
Technical colleges	182	218	230	246	251	x
Specialized schools	192	229	244	250	260	246
Institutes of higher education	278	318	365	377	404	419

(1) As at the beginning of the school year.

5.7 PUPILS AND STUDENTS LEARNING IN THEIR MOTHER TONGUE 1990/91  
(percentage)

Republics	Language	General day schools	Technical colleges	Specialized schools	Institutes of higher education	For information: native population in republic
Russian SFSR	Russian	98.1	99.9	99.6	98.8	81.5
Ukraine	Ukrainian	47.9	32.9	21.1	15.2	72.7
Rep. of Belorussia	Belorussian	20.8	x	0.2	0.4	77.9
Rep. of Uzbekistan	Uzbek	78.1	79.7	71.1	65.1	71.4
Kazakh SSR	Kazakh	32.3	16.4	8.7	13.6	39.7
Rep. of Georgia	Georgian	68.8	75.9	87.8	85.7	70.1
Rep. of Azerbaijan	Azerbaijani	86.1	82.8	87.7	77.3	82.7
Lithuania	Lithuanian	x	84.4	88.1	90.7	79.6
Rep. of Moldova	Moldavian	60.2	61.7	44.9	45.0	64.5
Latvia	Latvian	53.2	54.9	49.9	56.0	52.0
Rep. of Kyrgyzstan	Kyrgyz	55.7	49.2	18.0	23.4	52.4
Rep. of Tadzhikistan	Tadjik	67.2	66.1	38.2	48.2	62.3
Rep. of Armenia	Armenian	86.9	96.7	98.1	81.7	93.3
Turkmen SSR	Turkmen	76.6	58.0	17.1	23.6	72.0
Estonia	Estonian	63.0	57.0	65.4	79.8	61.5

5.8 STUDENTS ABROAD BY SELECTED HOST COUNTRY

Host country	1984	1985	1986	1987	1988
Germany	268	618	689	657	920
Federal Republic of Germany	x	92	82	x	108
Former GDR	268	526	607	657	812
United States	196	83	97	77	166
China	69	132	230	165	x
Hungary	151	169	176	183	147
Czechoslovakia	149	140	116	98	111
France	113	x	95	88	84
Cuba	85	49	82	78	74
Great Britain and Northern Ireland	8	52	x	60	x
Finland	x	26	30	34	35
Poland	9	8	6	10	34

## 6 EMPLOYMENT

In 1990, a total of 138.5 million people were employed in the different branches of the national economy, 0.8 million fewer than in 1989. Job losses were greatest in the State sector (2.3 million).

In 1990, 114.3 million people (82.4%) worked in that State sector and 19.2 million (14.0%) in the cooperative sector, 11.6 million of them as kolkhoz farmers. There were also 4.9 million (3.5%) in the private sector.

There was an increase in the number of persons of working age who were not employed in the national economy and were neither training nor studying. Currently, there are over 9 million such persons, including some 4 million military personnel. Roughly 2 million of the temporarily unemployed may be taken to be genuinely unemployed, but since there were no official unemployment statistics in the Soviet Union before 1 July 1991, other authors consider a figure of approximately 6 million unemployed, or 3.8% of the population of working age, to be more realistic.

The labour discipline of those working in the production industries has deteriorated. In 1990, some 53 million working days were lost in industry and construction, which means that an average of some 200 000 persons did not turn up for work on any given day, and that products valued at around 5 000 million roubles were not produced (1.7 times more than the 1986/88 average).

The increase in lost working time was due mainly to strikes and nationality conflicts. In 1990, over 10 million working days were lost through strikes, i.e. every day approximately 40 000 employees did not report for work and caused a loss of output to the value of approximately 1 000 million roubles.

### 6.1 EMPLOYEES IN THE MATERIAL AND NON-MATERIAL BRANCHES OF THE ECONOMY <sup>(1)</sup> (percentage)

Survey item	1970	1980	1985	1988	1989	1990
Total	100.0	100.0	100.0	100.0	100.0	100.0
Material branches	77.2	74.0	73.2	72.4	72.2	72.0
Non-material branches	22.8	26.0	26.8	27.6	27.8	28.0

(1) Excluding trainees.

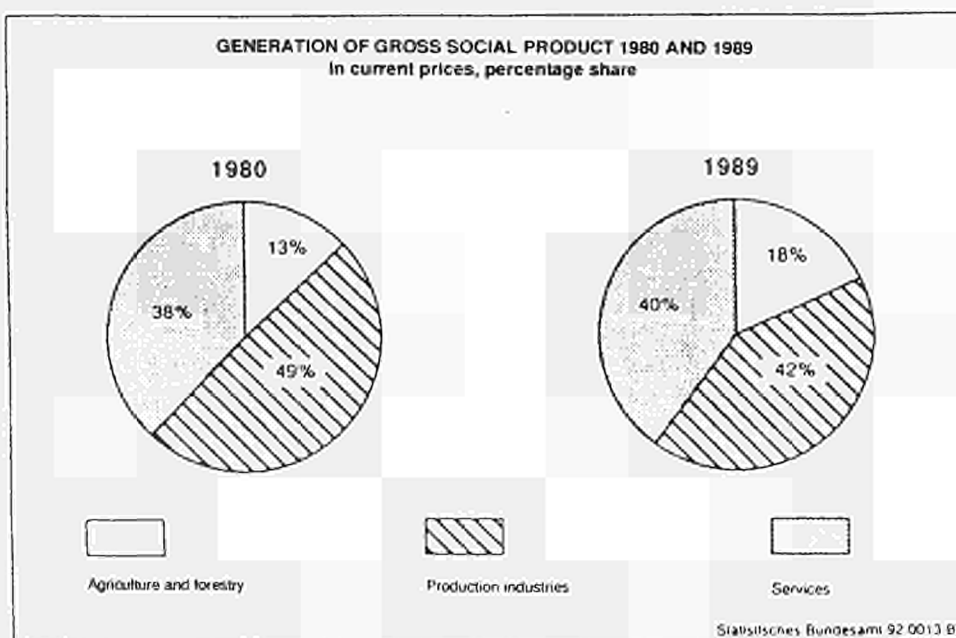
6.2 EMPLOYEES BY AREAS OF THE ECONOMY (1)  
(percentage)

Economic area	1970	1980	1985	1988	1989	1990
Total	100	100	100	100	100	100
Agriculture and forestry (2)	25	20	20	19	19	18
Manufacturing industry	38	39	38	39	39	39
Distributive trades, hotels and restaurants, materials/technical supplies and sales	7	8	8	8	8	8
Public administration, credit institutions and State insurance schemes	2	2	2	2	2	2
Transport and communications	8	9	9	8	7	8
Health and social services, physical education, education, culture, arts and sciences	16	17	18	19	19	19
Other (3)	4	5	5	5	6	6

(1) Excluding trainees.

(2) Including private smallholdings.

(3) Including housing and municipal services and services for the general public.





**6.3 EMPLOYEES BY LEGAL FORM OF ENTERPRISE/ESTABLISHMENT**  
(million)

Enterprise/establishment	1980	1985	1988	1989	1990
<b>Total</b>	132.1	137.0	138.5	139.3	138.5
Public sector of the economy	112.6	118.0	118.4	116.6	114.3
Cooperative sector of the economy	16.2	15.7	15.8	18.2	19.2
Kolkhozes	13.1	12.5	11.7	11.6	11.6
Consumer cooperatives	3.1	3.2	3.4	3.5	3.4
Cooperatives for the production of goods and services (excluding employees with second jobs)	x	x	0.7	3.1	4.2
Private sector of the economy	3.3	3.3	4.3	4.5	4.9
Farms	x	x	x	x	0.1
Private ancillary activities in agriculture	3.2	3.2	4.0	4.2	4.6
Other private activities	0.1	0.1	0.3	0.3	0.2

**6.4 MANUAL AND NON-MANUAL WORKERS BY AREA OF THE ECONOMY <sup>(1)</sup>**  
(1 000)

Economic area	1970	1980	1985	1988	1989	1990
<b>Total</b>	90 186	112 498	117 798	117 236	115 433	112 936
female	45 800	57 569	60 011	59 273	58 729	58 135
Agriculture	9 419	11 650	12 240	11 683	11 166	10 929
Forestry	433	458	456	423	393	391
Industry (2)	31 593	36 891	38 103	37 376	36 414	35 286
Construction	9 052	11 240	11 492	12 746 <sup>(3)</sup>	13 184	12 149
Building and installation work	6 994	8 174	8 312	9 513	9 953	9 104
Other branches of material production	998	1 436	1 622	1 742	1 804	1 748
Computer services	76	262	274	386	352	320
Distributive trades, hotels and restaurants, materials/technical supplies and sales	7 537	9 694	10 031	10 088	9 877	9 812
Credit institutions and State insurance schemes	388	649	679	676	689	699

For footnotes, please see end of table.

**6.4 MANUAL AND NON-MANUAL WORKERS BY AREA OF THE ECONOMY (1)**  
(1 000)

Economic area	1970	1980	1985	1988	1989	1990
Transport	7 985	10 324	10 878	9 517	8 684	8 629
Railway	2 331	2 616	2 639	2 372	2 363	2 401
Sea and inland waterway	370	433	451	424	419	419
Road (4)	5 284	7 275	7 788	6 721	5 902	5 809
Communications	1 330	1 634	1 671	1 549	1 539	1 526
Health and social services, physical education	5 080	6 223	6 784	7 285	7 497	7 594
Education	7 246	9 166	9 887	10 739	11 024	11 185
Culture	824	1 290	1 386	1 532	1 584	1 588
Arts	412	457	458	473	475	464
Sciences	2 999	4 377	4 554	4 196	4 105	4 031
Public administration, cooperative and social organizations	1 762	2 233	2 389	1 796	1 597	1 637
Housing and municipal services, services for the general public	3 052	4 512	4 894	5 029	5 049	4 948

(1) Annual average.

(2) From 1988 onwards, including manual and non-manual workers in planning offices, materials/technical supplies and transport.

(3) Only those employed in production.

(4) Including loading and unloading organizations and municipal transport operations.

**6.5 MANUAL WORKERS BY AREA OF THE ECONOMY (1)**  
(1 000)

Economic area	1970	1980	1985	1988	1989	1990
Total	64 844	78 830	81 702	80 407	78 688	76 316
Agriculture and forestry	8 866	10 713	11 119	10 561	10 060	9 832
Industry	26 631	30 479	31 302	30 632	29 742	28 805
Construction	7 174	8 460	8 709	9 809	10 180	9 527
Distributive trades and hotels and restaurants, materials/technical supplies and sales	5 793	7 681	7 967	7 488	7 349	7 293
Transport and communications	7 416	9 466	9 854	8 902	8 194	8 087
Housing and municipal services, services for the general public	2 524	3 696	3 921	3 930	3 945	3 855
Other (2)	6 440	8 335	8 830	9 085	9 218	8 917

(1) Annual average.

(2) Including health, education, culture, arts and sciences.

# 6.6 MANUAL AND NON-MANUAL WORKERS BY REPUBLIC

Republic	1970		1980		1990	
	Total	Of which: manual workers	Total	Of which: manual workers	Total	Of which: manual workers
	1 000	%	1 000	%	1 000	%
<b>Total</b>	<b>90 186</b>	<b>71.9</b>	<b>112 498</b>	<b>70.1</b>	<b>112 936</b>	<b>67.6</b>
Russian SFSR	54 376	72.0	65 612	69.8	63 878	67.3
Ukraine	16 200	72.3	20 042	70.7	19 886	68.3
Rep. of Belorussia	3 075	73.2	4 046	71.3	4 236	68.2
Rep. of Uzbekistan	2 642	69.3	4 169	68.7	5 158	65.9
Kazakh SSR	4 692	73.3	6 043	71.7	6 476	69.6
Rep. of Georgia	1 490	69.7	1 978	68.8	2 091	66.4
Republic of Azerbaijan	1 273	68.0	1 802	68.5	2 053	66.1
Lithuania	1 166	72.9	1 461	70.6	1 459	68.5
Rep. of Moldova	944	72.2	1 511	73.8	1 422	69.3
Latvia	1 033	72.0	1 202	70.5	1 094	68.1
Rep. of Kyrgyzstan	780	71.4	1 102	70.2	1 253	69.0
Rep. of Tadjikistan	586	68.3	927	69.6	1 159	68.1
Rep. of Armenia	838	70.8	1 192	70.6	1 283	66.2
Turkmen SSR	478	65.7	711	66.5	862	66.2
Estonia	613	71.6	700	69.4	626	67.1

**6.7 FEMALE MANUAL AND NON-MANUAL WORKERS BY REPUBLIC**  
(1 000)

Republic	1970	1980	1985	1987	1988	1989
<b>Total</b>	<b>45 800</b>	<b>57 569</b>	<b>60 011</b>	<b>60 054</b>	<b>59 273</b>	<b>58 729</b>
Russian SPSR	28 585	34 314	35 138	34 928	34 329	33 927
Ukraine	8 113	10 424	10 775	10 753	10 664	10 588
Rep. of Belorussia	1 611	2 139	2 265	2 275	2 271	2 277
Rep. of Uzbekistan	1 091	1 784	2 082	2 165	2 149	2 195
Kazakh SSR	2 200	2 942	3 167	3 213	3 187	3 187
Rep. of Georgia	634	902	1 003	1 024	1 022	1 005
Rep. of Azerbaijan	518	768	889	912	904	882
Lithuania	570	758	816	838	829	817
Rep. of Moldova	477	768	825	826	818	791
Latvia	550	652	674	677	660	643
Rep. of Kyrgyzstan	367	534	598	609	606	609
Rep. of Tadjikistan	223	361	419	441	450	450
Rep. of Armenia	346	552	636	657	649	625
Turkmen SSR	189	293	331	349	357	361
Estonia	326	378	393	387	378	372

**6.8 EMPLOYEES BY TYPE OF EDUCATION (1)**  
(1 000)

Type of education	1970	1980	1985	1987	1989	1990 (2)
<b>Total</b>	<b>16 841</b>	<b>28 612</b>	<b>33 592</b>	<b>35 693</b>	<b>36 484</b>	<b>37 000</b>
With technical college education	9 988	16 539	19 107	20 162	20 614	21 000
With higher education	6 853	12 073	14 485	15 531	15 870	16 000

(1) As at mid-November.

(2) Estimates.

6.9 EMPLOYEES WHO HAVE COMPLETED HIGHER OR TECHNICAL EDUCATION, BY REPUBLIC

Republic	1970	1980	1985	1989		
				Total	Of which:	
					with higher education	with technical college education
	1 000			Percentage		
Total	16 840.7	28 611.6	33 591.7	36 484.3	43.5	56.5
Russian SFSR	9 904.5	16 546.1	19 086.2	20 583.3	42.2	57.8
Ukraine	3 268.9	5 422.3	6 285.0	6 822.0	43.1	56.9
Rep. of Belorussia	577.2	1 056.4	1 275.6	1 436.1	44.5	55.5
Rep. of Uzbekistan	531.1	1 080.9	1 385.0	1 625.3	47.2	52.8
Kazakh SSR	744.3	1 307.5	1 625.7	1 839.1	41.7	58.3
Rep. of Georgia	324.9	491.3	582.1	593.7	59.0	41.0
Rep. of Azerbaijan	274.4	498.7	606.2	608.3	52.7	47.3
Lithuania	205.9	389.6	499.9	532.6	43.2	56.8
Rep. of Moldova	183.7	355.9	436.9	473.2	43.7	56.3
Latvia	184.3	289.6	343.6	357.7	45.5	54.5
Rep. of Kyrgyzstan	156.1	271.1	340.0	381.3	47.0	53.0
Rep. of Tadjikistan	119.8	238.5	297.7	341.3	51.3	48.7
Rep. of Armenia	149.1	285.4	363.5	386.3	55.7	44.3
Turkmen SSR	102.3	190.9	244.2	275.9	46.5	53.5
Estonia	114.2	187.4	220.1	228.2	44.3	55.7

6.10 FEMALE EMPLOYEES WHO HAVE COMPLETED HIGHER OR TECHNICAL EDUCATION, BY REPUBLIC

Republic	1970	1980	1985	1989		
				Total	Of which:	
					with higher education	with technical college education
	1 000			Percentage		
Total	9 899.9	16 955.4	20 165.8	22 190.6	39.3	60.7
Russian SFSR	6 037.2	10 139.4	11 849.3	12 856.6	38.2	61.8
Ukraine	1 873.6	3 157.6	3 740.5	4 168.2	38.6	61.4
Rep. of Belorussia	345.9	633.1	784.0	889.2	40.2	59.8
Rep. of Uzbekistan	251.2	521.5	686.8	829.0	43.2	56.8
Kazakh SSR	430.2	786.4	987.9	1 134.4	37.8	62.2
Rep. of Georgia	169.5	257.4	304.5	335.2	54.6	45.4
Rep. of Azerbaijan	122.1	232.9	278.4	280.4	50.3	49.7
Lithuania	126.3	238.9	307.1	322.4	39.5	60.5
Rep. of Moldova	107.0	211.0	264.9	292.4	39.3	60.7
Latvia	112.4	180.4	213.0	226.6	42.9	57.1
Rep. of Kyrgyzstan	86.3	156.7	198.1	225.7	44.2	55.8
Rep. of Tadjikistan	52.0	99.1	126.2	145.5	46.1	53.9
Rep. of Armenia	72.5	142.3	183.3	210.7	51.5	48.5
Turkmen SSR	45.0	86.6	109.2	136.2	40.7	59.3
Estonia	68.6	112.1	132.6	138.1	42.0	58.0

## 6.11 SELF-EMPLOYED PERSONS BY SELECTED BRANCH AND REPUBLIC

Republic	1987	1988	1989		1990	
	Total			Of which:		Total
				home industries and crafts	services	
	1 000	Percentage		1 000		
Total	427.2	734.2	672.6	60.4	28.4	673.8
Russian SFSR	194.1	346.5	328.4	60.1	27.1	342.7
Ukraine	79.1	133.3	125.1	61.8	27.5	118.6
Rep. of Belorussia	16.7	27.6	24.6	59.1	32.1	26.1
Rep. of Uzbekistan	20.7	32.2	29.5	66.3	23.0	28.6
Kazakh SSR	15.4	25.1	25.6	52.3	37.6	25.1
Rep. of Georgia	13.5	21.2	18.1	42.8	47.8	16.1
Rep. of Azerbaijan	8.1	11.0	10.1	33.3	56.2	8.4
Lithuania	28.4	49.4	40.4	77.5	16.0	33.4
Rep. of Moldova	12.6	15.5	15.0	51.3	42.0	15.3
Latvia	10.9	19.5	14.9	54.7	26.4	14.9
Rep. of Kyrgyzstan	3.9	6.9	7.0	54.0	40.8	8.5
Rep. of Tadjikistan	3.1	6.4	6.8	69.3	13.8	6.2
Rep. of Armenia	10.8	23.6	15.6	67.2	30.5	17.8
Turkmen SSR	3.6	4.8	5.0	50.8	46.6	5.6
Estonia	6.3	11.2	6.5	67.4	24.6	6.5

## 6.12 WORKING TIME AND PRODUCTION LOST AS A RESULT OF STRIKES, 1990, BY REPUBLIC

Republic	Enterprises and establishments hit by strikes	Losses	
		Working days	Production
		1 000	1 000
<b>Total</b>	1 771	10 343.5	940 847
Russian SFSR	260	207.8	13 173
Ukraine	260	126.1	14 800
Rep. of Belorussia	19	28.9	5 351
Rep. of Uzbekistan	2	3.4	383
Kazakh SSR	4	3.1	180
Rep. of Georgia	139	186.7	10 719
Rep. of Azerbaijan	201	8 823.5	799 500
Rep. of Kyrgyzstan	214	464.9	60 377
Rep. of Tadjikistan	664	486.2	35 020
Rep. of Armenia	1	0.1	16
Estonia	7	12.8	1 328

## 7 AGRICULTURE, FORESTRY AND FISHERIES

Agriculture is of major importance in the Soviet economy. Eighteen per cent of employees work in agriculture or forestry, with agriculture using approximately 13% of the fixed assets of the national economy and accounting for 18% of the gross social product.

A total of 557.3 million hectares (ha) of utilizable agricultural land is available for agricultural production, including 224.4 million ha of arable land. This works out at 0.78 ha per capita compared with an EC average of 0.21 ha. Large areas of the Soviet Union are, however, not good agricultural land, but vast stretches of tundra, mountains, marshes and desert. Some 70% of utilizable agricultural land lies in areas which have insufficient natural irrigation, little or irregular precipitation and periods of drought.

Even in 1990, the predominant forms of Soviet agriculture were the collective farm (kolkhoz) and State farm (sovkhoz). With the transition to a market economy, new economic forms such as leasing are beginning to emerge in existing kolkhozes and sovkhozes, together with individual farms. Whilst leasing has taken on considerable importance in a few republics, individual farms are still of minor importance, despite a considerable increase in their numbers over the last few months.

According to the State Committee on Statistics of the RSFSR, 63% of kolkhozes and sovkhozes were being run under the leasing system as at 1 January 1991, farming 52% of arable land and employing 25% of total kolkhoz and sovkhoz employees.

As at 1 March 1991, there were 47 107 individual farms in the Soviet Union, working 0.2% of the agricultural area. The average size of holding was 22 ha, ranging from 0.8 ha in Georgia to 444 ha in Kazakhstan. In Russia, there are 44 ha per farm.

An opinion poll conducted among the population of Russia in October 1990 on different economic systems showed that 61.2% of those questioned were in favour of individual farms.

Despite an enormous potential output of foodstuffs, the population is less well supplied with certain domestic products now than it used to be, with considerable quantities of foodstuffs and feedstuffs having to be imported.

Total agricultural output was lower in 1990 than in 1989, with sharp falls for potatoes (down 12%), vegetables (7%), fruit (6%) and some fodder crops. Livestock numbers also declined, mainly as a result of fodder shortages, and since the declining livestock population could not be offset by an increase in output per animal, less meat, milk and wool and fewer eggs were produced in 1990 than in the previous year.

Among the main reasons for this unsatisfactory trend is the fact that those working on kolkhozes and sovkhozes do not have sufficient economic motivation to try to improve output. For many years, also, agriculture has suffered from a lack of equipment. In 1990, for example, 5.8 million ha of cereals, 1 million ha of sunflowers, 230 000 ha of potatoes and over 170 000 ha of vegetables were left unharvested.

A further problem is that the figures for agricultural output do not match those for produce processed to the State-trading stage (including transport, storage, refrigeration and packing). There are therefore serious food losses and fewer supplies available. The average post-harvest losses were 30% for cereals and 40 to 45% for potatoes and vegetables.

In the case of meat processing, there is a capacity shortfall of over 3 million tonnes, or more than 25% of requirements. Sixteen per cent of the plant available in the foodstuffs industry is completely worn out, 26.5% of plant and machinery is 10 to 20 years old and 9.5% is over 20 years old.

7.1 LAND USE  
(million ha)

Type of use	1980	1985	1987	1988	1989	1990
Utilizable agricultural area (1)	553.6	558.4	556.7	557.5	557.9	557.3
Arable land	226.4	227.1	227.5	227.0	225.4	224.4
Meadows	35.0	34.0	33.4	32.5	30.5	29.5
Pasture land	286.8	292.1	290.7	292.7	296.5	297.8
Permanent crops	4.6	4.7	4.5	4.7	4.8	4.8
Fallow land	0.7	0.5	0.6	0.6	0.7	0.8
Irrigated area	17.5	20.0	20.5	20.8	21.1	21.2
Wooded area	929.6 <sup>(2)</sup>	938.0 <sup>(3)</sup>	941.5 <sup>(4)</sup>	941.5 <sup>(4)</sup>	941.5 <sup>(4)</sup>	941.5 <sup>(4)</sup>

(1) As at 1 November.

(2) 1978.

(3) 1983.

(4) 1.1.1988.

7.2 ARABLE LAND BY REPUBLIC (1)

Republic	1980	1985	1988	1989	1990	
	million hectares					%
Total	226.4	227.1	227.0	225.4	224.4	100.0
Russian SFSR	133.9	133.9	133.5	132.4	131.8	58.7
Ukraine	34.2	34.2	34.1	33.8	33.4	14.9
Rep. of Belorussia	6.2	6.2	6.1	6.1	6.1	2.7
Rep. of Uzbekistan	4.1	4.3	4.5	4.5	4.5	2.0
Kazakh SSR	35.4	35.7	35.7	35.7	35.5	15.8
Rep. of Georgia	0.8	0.8	0.8	0.8	0.8	0.4
Republic of Azerbaijan	1.3	1.4	1.5	1.6	1.6	0.7
Lithuania	2.5	2.4	2.3	2.3	2.3	1.0
Rep. of Moldova	1.8	1.8	1.8	1.7	1.7	0.8
Latvia	1.7	1.7	1.7	1.7	1.7	0.8
Rep. of Kyrgyzstan	1.3	1.4	1.4	1.4	1.4	0.6
Rep. of Tadjikistan	0.8	0.9	0.9	0.8	0.8	0.4
Rep. of Armenia	0.5	0.5	0.5	0.5	0.5	0.2
Turkmen SSR	0.9	1.0	1.2	1.2	1.2	0.5
Estonia	1.0	0.9	1.0	0.9	1.1	0.5

(1) As at 1 November.



**7.3 COOPERATIVE AND STATE FARMS, EMPLOYEES, CULTIVATED AREAS  
AND LIVESTOCK POPULATIONS**

Survey item	Unit	1980	1985	1987	1988	1989	1990
Holdings (1)	1 000	47.0	48.9	49.9	50.2	51.2	52.6
Employees (2)	Mio.	24.9	24.7	24.2	23.4	23.1	22.8
Cultivated area	Mio. ha	207.0	199.5	202.0	201.6	199.5	197.1
Cattle	Mio.	88.0	92.6	93.8	92.4	90.8	87.3
Pigs	Mio.	51.7	55.5	55.5	55.2	55.4	51.4
Sheep and goats	Mio.	114.5	111.6	112.0	110.6	106.7	99.9
Cooperative farms (kolkhozes) (1)	1 000	25.9	26.2	26.6	26.9	27.9	29.1
Members (2)	Mio.	13.3	12.7	12.2	11.8	11.8	11.8
Cultivated area	Mio. ha	95.2	91.3	91.9	91.9	91.6	90.9
Cattle	Mio.	47.9	50.6	50.7	50.0	49.5	48.1
Pigs	Mio.	28.1	29.1	28.3	28.2	28.5	26.5
Sheep and goats	Mio.	45.5	43.7	43.9	43.2	41.7	38.5
State farms (sovkhozes) (1)	1 000	21.1	22.7	23.3	23.3	23.3	23.5
Employees (2)	Mio.	11.6	12.0	12.0	11.6	11.3	11.0
Cultivated area	Mio. ha	111.8	108.2	110.1	109.7	107.9	106.2
Cattle	Mio.	40.1	42.0	43.1	42.4	41.3	39.2
Pigs	Mio.	23.6	26.4	27.2	27.0	26.9	24.9
Sheep and goats	Mio.	69.0	67.9	68.1	67.4	65.0	61.4

(1) As at the end of the year.

(2) Annual average.

**7.4 AGRICULTURAL MACHINERY (1)**  
(1 000)

Type of machine	1970	1980	1985	1988	1990
Tractors	1 977	2 562	2 775	2 692	2 666
Combine harvesters	623	722	828	751	683
Maize harvesters	34	51	32	33	35
Potato harvesters	36	70	63	58	55
Cotton pickers	39	55	63	58	53
Milking machines	169	361	401	365	334

(1) As at the end of the year.

**7.5 DELIVERIES OF MINERAL FERTILIZERS TO AGRICULTURE**  
(1 000 t pure nutrient content)

Type of fertilizer	1980	1985	1987	1988	1989	1990
<b>Total</b>	18 763	25 395	27 412	27 196	24 482	21 639
of which:						
Nitrogen (N)	8 262	10 950	11 787	11 587	9 918	8 738
Phosphate ( $P_2O_5$ )	5 590	7 615	8 564	8 556	8 175	7 815
Potash ( $K_2O$ )	4 904	6 822	7 052	7 044	6 381	5 081
<b>Kg per hectare arable land</b>						
<b>Total</b>	83.9	113.2	122.1	121.5	110.3	97.5
of which:						
Nitrogen (N)	36.9	48.8	52.5	51.8	44.7	39.4
Phosphate ( $P_2O_5$ )	25.0	34.0	38.2	38.2	36.8	35.2
Potash ( $K_2O$ )	21.9	30.4	31.4	31.5	28.8	22.9

**7.6 USE OF PESTICIDES**  
(1 000 t active ingredient)

Type of pesticide	1980	1985	1987	1988	1989	1990
<b>Total</b>	279	362	333	308	255	179
Herbicide	127	160	169	148	115	66
Other	152	202	164	160	140	113

**7.7 INDEX OF AGRICULTURAL PRODUCTION**  
(1979/81 D = 100)

Kind of index	1985	1986	1987	1988	1989	1990
<b>Total production</b>	111	117	117	117	120	116
per capita	106	111	110	109	111	106
Foodstuffs production	111	119	119	119	123	121
per capita	106	112	112	110	113	112

# 7.8 HARVEST VOLUMES FOR SELECTED CROPS

Product	Unit	1980	1985	1987	1988	1989	1990
Cereals and pulses (net yield)	Mio. t	176.2	178.4	193.8	180.2	196.7	218.1
of which:							
Wheat	Mio. t	92.5	73.2	77.4	78.8	87.2	101.9
Rice	Mio. t	2.6	2.4	2.4	2.6	2.3	2.2
Barley	Mio. t	40.1	43.1	53.4	40.6	44.9	52.5
Grain maize	Mio. t	9.5	14.4	14.8	16.0	15.3	9.9
Rye	Mio. t	8.9	14.3	16.1	16.9	18.3	22.2
Oats	Mio. t	13.9	18.3	15.9	13.3	15.0	15.6
Pulses	Mio. t	5.9	8.7	8.8	8.0	8.7	8.9
Potatoes	Mio. t	67.0	73.0	75.9	62.7	72.2	63.6
Oleaginous fruits	Mio. t	5.3	6.0	7.3	7.6	8.7	8.3
of which sunflower seeds	Mio. t	4.6	5.3	6.1	6.2	7.1	6.6
Raw cotton	Mio. t	9.1	8.8	8.1	8.7	8.6	8.3
Vegetables	Mio. t	27.3	28.1	29.2	29.3	28.7	26.6
Fruit <sup>(1)</sup>	Mio. t	7.9	10.5	8.2	8.9	9.7	9.1
Grapes	Mio. t	6.7	5.8	6.0	5.6	5.0	5.7
Sugar-beet <sup>(2)</sup>	Mio. t	81.0	82.4	90.7	88.0	97.4	81.7
Silage maize and fodder maize	Mio. t	266.1	331.3	372.9	347.4	366.9	361
Forage roots and tubers	Mio. t	41.6	59.0	66.1	62.9	70.2	58.6
Hay <sup>(3)</sup>	Mio. t	148.0	185.0	188.6	191.2	191.9	193.3
Tobacco	1 000 t	287	381	362	274	239	250

(1) Including berries.

(2) For industrial purposes.

(3) Hay and green fodder, calculated hay equivalent.

# 7.9 YIELDS FOR SELECTED CROPS (dt/ha)

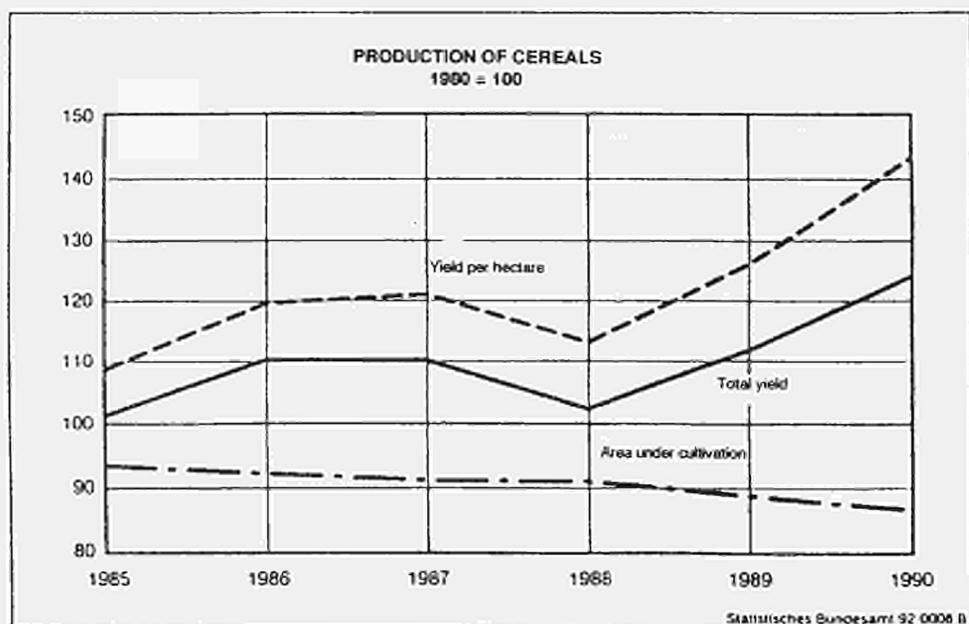
Product	1980	1985	1987	1988	1989	1990
Cereals and pulses (net yield)	13.9	15.1	16.8	15.7	17.5	19.9
of which:						
Winter wheat	21.1	20.5	28.5	28.3	31.9	34.1
Summer wheat	11.6	11.2	10.7	9.1	9.2	11.4
Rice	39.0	35.6	36.9	38.7	34.3	35.3
Winter barley	20.5	20.2	25.2	26.8	29.1	33.7
Summer barley	12.3	14.6	17.0	12.9	15.5	18.9
Grain maize	31.7	32.1	32.4	36.1	37.1	34.6
Winter rye	10.4	15.1	16.6	16.8	17.0	21.0
Oats	11.8	14.6	13.5	12.1	13.9	14.7
Pulses	12.5	13.2	13.7	12.3	14.6	16.2
Potatoes	96	113	121	103	120	109

7.9 YIELDS FOR SELECTED CROPS  
(dt/ha)

Product	1980	1985	1987	1988	1989	1990
Oleaginous fruits	9.1	11.0	12.4	12.4	13.8	12.9
of which sunflower seeds	10.6	12.9	14.7	14.3	15.8	14.0
Raw cotton	28.9	26.4	22.9	25.3	25.7	26.2
Vegetables	150	157	159	157	159	155
Fruit (1)	32.8	45.8	36.1	39.8	43.1	40.4
Grapes	71.8	60.0	67.0	61.7	55.0	63.9
Sugar-beet (2)	218	241	266	261	291	249
Tobacco	17.0	20.5	22.5	20.8	20.6	22.7
Silage maize and fodder maize	154	185	207	207	207	192
Forage roots and tubers	224	268	297	301	362	328

(1) Including berries.

(2) For industrial purposes.



**7.10 CEREAL PRODUCTION BY REPUBLIC (1)**  
(1 000 t)

Republic	1986	1987	1988	1989	1990
<b>Total</b>	<b>193 997</b>	<b>193 848</b>	<b>180 150</b>	<b>196 712</b>	<b>218 101</b>
Russian SFSR	107 467	98 588	93 729	104 845	116 751
Ukraine	41 506	47 978	45 369	51 212	51 009
Rep. of Belorussia	6 050	7 804	5 906	7 384	7 035
Rep. of Uzbekistan	1 186	1 738	2 083	1 555	1 899
Kazakh SSR	26 562	25 721	20 970	18 797	28 488
Rep. of Georgia	619	644	692	475	666
Republic of Azerbaijan	1 024	1 073	1 356	832	1 364
Lithuania	2 756	3 063	2 688	3 272	3 265
Rep. of Moldova	1 994	1 952	2 970	3 323	2 539
Latvia	1 508	1 630	1 142	1 597	1 622
Rep. of Kyrgyzstan	1 568	1 827	1 676	1 601	1 503
Rep. of Tadjikistan	238	345	365	293	303
Rep. of Armenia	311	255	349	180	254
Turkmen SSR	293	324	408	379	449
Estonia	915	906	447	967	954

(1) Cereals and pulses - net yield.

**7.11 CEREAL YIELDS BY REPUBLIC (1)**  
(dt/ha)

Republic	1986	1987	1988	1989	1990
<b>Total</b>	<b>16.6</b>	<b>16.8</b>	<b>15.7</b>	<b>17.5</b>	<b>19.9</b>
Russian SFSR	15.9	14.8	14.2	16.1	18.5
Ukraine	25.5	30.8	28.4	33.5	34.9
Rep. of Belorussia	21.7	28.5	22.0	27.4	26.6
Rep. of Uzbekistan	16.9	17.3	19.8	17.8	18.8
Kazakh SSR	10.8	10.5	8.6	7.9	12.2
Rep. of Georgia	23.2	23.8	25.4	21.4	24.7
Republic of Azerbaijan	24.9	23.2	25.2	21.1	23.4
Lithuania	23.1	27.3	24.0	29.1	30.1
Rep. of Moldova	28.1	29.9	36.9	40.5	34.0
Latvia	20.5	23.4	17.4	23.5	23.6
Rep. of Kyrgyzstan	29.3	33.2	30.4	30.4	28.0
Rep. of Tadjikistan	15.5	14.9	14.9	15.4	13.1
Rep. of Armenia	23.3	19.2	26.3	13.7	18.4
Turkmen SSR	17.8	17.1	20.6	21.2	23.6
Estonia	22.4	23.3	11.4	24.4	24.1

(1) Cereals and pulses - net yield.

7.12 POTATO, VEGETABLE AND FRUIT LOSSES IN WHOLESALING AND RETAILING

Product	Unit	1988	1989	1990
Potatoes	1 000 t	1 225	969	1 188
	%	12.7	9.1	14.0
Vegetables	1 000 t	1 453	1 346	1 147
	%	9.5	9.3	9.4
Fruit (including citrus fruits)	1 000 t	146	122	95
	%	3.7	3.5	3.1
Melons	1 000 t	162	113	133
	%	5.9	5.5	7.3

7.13 POTATO AND VEGETABLE LOSSES IN WHOLESALING AND RETAILING, 1990, BY REPUBLIC

Republic	Potatoes		Vegetables	
	1 000 t	as percentage of quantity delivered	1 000 t	as percentage of quantity delivered
<b>Total</b>	<b>1 187.8</b>	<b>14.0</b>	<b>1 147.2</b>	<b>9.4</b>
Russian SPSR	742.2	15.3	709.0	10.6
Ukraine	209.0	16.0	244.7	9.8
Rep. of Belorussia	72.5	13.3	63.6	12.9
Rep. of Uzbekistan	6.7	1.6	4.3	0.6
Kazakh SSR	75.0	13.5	55.8	8.4
Rep. of Georgia	6.5	11.7	4.7	6.4
Republic of Azerbaijan	8.1	12.0	6.3	8.2
Lithuania	25.1	13.4	15.6	12.8
Rep. of Moldova	8.8	22.0	14.2	6.6
Latvia	13.0	14.2	10.1	10.4
Rep. of Kyrgyzstan	6.9	7.2	3.0	2.5
Rep. of Tadzhikistan	2.1	1.7	1.7	1.0
Rep. of Armenia	3.9	5.2	2.8	2.0
Turkmen SSR	4.6	7.9	3.7	3.4
Estonia	3.4	9.0	7.7	17.0

7.14 LIVESTOCK POPULATION (1)

Kind of livestock	Unit	1981	1986	1988	1989	1990	1991
Horses	1 000	5 563	5 782	5 885	5 904	5 920	5 919
Cattle	Mio.	115.1	120.9	120.6	119.6	118.4	115.7
Dairy cows	Mio.	43.4	42.9	42.0	41.8	41.7	41.5
Pigs	Mio.	73.4	77.8	77.4	78.1	79.0	75.6
Sheep and goats	Mio.	147.5	147.3	147.3	147.5	145.4	140.6
Poultry	Mio.	1 032.4	1 165.5	1 175.1	1 199.5	1 213.9	1 200.4

(1) As at the beginning of the year.

## 7.15 PRODUCTION OF SELECTED ANIMAL PRODUCTS AND OUTPUT PER ANIMAL

Product	Unit	1980	1985	1987	1988	1989	1990
Meat (1)	Mio. t	15.1	17.1	18.9	19.7	20.1	20.0
of which:							
Beef, veal, buffalo	Mio. t	6.6	7.4	8.3	8.6	8.8	8.8
Pork	Mio. t	5.2	5.9	6.3	6.6	6.7	6.6
Mutton, lamb, goat	Mio. t	0.9	0.8	0.9	1.0	1.0	1.0
Poultry	Mio. t	2.1	2.8	3.1	3.2	3.4	3.3
Milk	Mio. t	90.9	98.6	103.8	106.8	108.5	108.4
Eggs	Mrd	67.9	77.3	82.7	85.2	84.9	81.7
Wool, raw (greasy) wool basis	1 000 t	443	447	461	478	479	475
Cattle hides, including							
buffalo, raw	1 000 t	764	754	794	800	823	836
Sheepskins, raw	1 000 t	125	125	129	130	131	131
Goatskins, raw	1 000 t	5.6	5.6	5.3	5.3	5.3	5.3
Milk per cow (2)	kg	2 215	2 434	2 665	2 780	2 853	2 853
Eggs per hen (2)	Number	203	216	227	233	232	227
Wool per sheep (2)(3)	kg	2.9	2.9	3.0	3.2	3.1	3.1

(1) Carcass weight.

(2) In kolkhozes, sovkhoses and shared establishments.

(3) Raw (greasy) wool basis.

## 7.16 PRODUCTION OF SELECTED CROPS AND ANIMAL PRODUCTS ON PRIVATE SMALLHOLDINGS

Product	Unit	1980	1985	1988	1988	1990	1990 % of total production
Potatoes	Mio. t	42,9	43,6	37,1	42,5	41,2	65
Vegetables	Mio. t	9,0	8,0	9,0	8,5	8,7	33
Fruit (excluding citrus fruits)	Mio. t	4,5	6,0	4,7	5,6	4,8	53
Meat (1)	Mio. t	4,7	5,5	5,6	6,0	6,1	30
Milk	Mio. t	27,1	28,1	28,8	29,4	30,0	28
Eggs	Mrd	21,8	21,7	21,8	22,4	22,2	27
Wool (2)	1 000 t	96	116	123	132	140	29

(1) Carcass weight.

(2) Raw (greasy) wool basis.

**7.17 STATE AFFORESTATION AND FOREST MAINTENANCE**  
(1 000 ha)

Survey item	1980	1985	1987	1988	1989	1990
<b>Total</b>	2 179	2 188	2 203	2 216	2 189	2 138
Timber planting and sowing	1 083	983	987	983	863	820
Forest maintenance	1 096	1 205	1 216	1 233	1 326	1 318

**7.18 TIMBER EXTRACTION BY SELECTED REPUBLIC**  
(Mio. m<sup>3</sup>)

Republic	1980	1985	1987	1988	1989	1990
<b>Timber extracted</b>						
<b>Total</b>	356.6	368.0	389.2	386.4	369.5	332.1
of which:						
Russian SFSR	328.3	337.3	357.1	354.3	338.4	303.8
Ukraine	10.0	10.8	11.1	10.9	10.6	10.4
Rep. of Belorussia	6.4	7.1	7.7	7.8	7.7	7.0
Kazakh SSR	2.2	2.3	2.4	2.4	2.5	2.3
Lithuania	2.5	2.7	2.8	2.9	2.7	2.6
Latvia	3.7	4.1	4.5	4.5	4.2	3.8
Estonia	2.5	2.7	2.8	2.7	2.6	1.7
<b>Of which utilizable timber</b>						
<b>Total</b>	277.7	281.1	302.9	305.3	295.0	264.6
of which:						
Russian SFSR	255.6	257.1	277.9	280.1	270.3	242.2
Ukraine	8.3	9.2	9.3	9.3	9.1	8.9
Rep. of Belorussia	5.6	6.3	6.7	7.0	6.8	6.2
Kazakh SSR	1.7	1.8	1.8	1.8	1.9	1.8
Lithuania	1.9	2.0	2.1	2.1	2.1	1.9
Latvia	2.1	2.4	2.5	2.5	2.4	2.2
Estonia	2.0	2.1	2.1	2.1	2.0	1.3



# 7.19 FISHING VESSELS, BY SIZE CLASS (1)

From .... to .... GRT	Unit	1970	1975	1980	1985	1990
Vessels	Number	2 683	3 679	3 963	3 091	3 022
100 - 499	Number	1 850	2 077	1 988	1 170	982
500 - 999	Number	364	829	971	783	830
1 000 - 1 999	Number	37	130	150	215	276
2 000 - 3 999	Number	428	638	823	878	821
4 000 and over	Number	4	5	31	45	113
Tonnage	1 000 GRT	1 959	2 997	3 689	3 618	4 033
100 - 499	1 000 GRT	411	442	409	209	189
500 - 999	1 000 GRT	249	526	623	514	560
1 000 - 1 999	1 000 GRT	45	207	240	339	453
2 000 - 3 999	1 000 GRT	1 224	1 791	2 256	2 347	2 218
4 000 and over	1 000 GRT	30	30	161	208	612

(1) As at the middle of the year.

# 7.20 CATCHES (1 000 t)

Kind of catch	1984	1985	1986	1987	1988	1989
<b>Total</b>	10 592.9	10 522.8	11 260.0	11 159.6	11 332.1	11 310.1
Fresh water fish	496.6	536.6	565.3	572.0	619.4	613.7
Carp	269.5	293.0	314.0	338.4	356.7	348.2
Brackish water fish	524.4	599.7	509.5	611.5	452.9	602.1
Sea fish	9 332.7	9 024.9	9 610.9	9 501.3	9 774.9	9 516.8
of which:						
Cod	268.4	334.4	373.7	420.2	349.3	290.0
Haddock	3 449.6	3 343.0	3 584.1	3 421.7	3 369.9	3 133.2
Bake	205.2	197.7	239.2	143.3	204.0	222.7
Norway haddock	167.5	158.4	143.0	129.3	107.3	69.0
Mackerel	1 395.1	1 438.1	1 654.9	1 816.0	1 950.0	2 105.9
Herring	256.6	356.5	310.8	353.8	335.0	238.1
Sardines	1 225.3	1 201.7	1 442.6	1 380.0	1 495.1	1 782.4
Anchovies	294.3	156.8	263.4	151.7	365.2	205.2
Crustaceans	149.4	217.0	428.8	342.2	343.4	358.5
Molluscs	89.8	144.7	145.4	132.6	141.6	218.9

## 8 INDUSTRIAL PRODUCTION

In 1990, industrial production was 1.1% down on the previous year's volume. In six republics output was somewhat higher, but in Azerbaijan, Georgia and Armenia it was 6 to 7% below the 1989 level. The republics were very much interdependent as regards the division of labour, and ethnic conflicts and struggles for independence in some of them had a detrimental effect on the economy as a whole. In addition there were mass strikes - in the coalfields of Russia, for example, in the Ukraine and in Kazakhstan. Obsolete and, in some cases, worn-out production plant and equipment - in industry as a whole plant is used for an average of over 26 years - were the main reasons for stoppages and losses in the production of crude oil.

In 1990, the volume of oil extracted fell to the 1978 level. Coal output declined further, too, and the decline could not be offset by an increase in the output of natural gas (although this had risen by an average of 4.8% per annum since 1985). Almost all the republics are dependent on energy carriers from Russia, and in many cases there is a shortage of transport capacity - for coal, for example. In 1990, 14% less electricity was produced in Armenia than in the previous year, 11% less in Kyrgyzstan and 10% less in Georgia. After the Chernobyl disaster, the construction of atomic power plants did not go ahead to the extent planned. In 1990, output of all major products in the manufacturing industries declined, and this has highlighted even further the shortcomings of relationships between the different branches and regions and the inefficient structure of the economy. The construction industry was not capable of producing the smaller items of agricultural machinery required for individual farms and leased agricultural holdings. There was a 5% drop in the output of plant and equipment for animal and feedingstuffs production. In the chemical and timber-processing industries, some enterprises, or parts of them, had to be shut down for ecological reasons. Some light industrial enterprises were able to increase output, with plant and spare parts, as well as certain goods, being produced by enterprises which had formerly been part of the defence industry.

None of the republics delivered all the goods to which it was committed by contract. In Armenia, only 89.2% of contracts were fulfilled, the shortfall in output being to the value of 766 million roubles. In the republics with the greatest industrial potential - Russia and the Ukraine - there was a shortfall of 10 100 million and 2 900 million roubles respectively, with 98% of contracts being fulfilled.

The situation in the construction industry deteriorated in 1990 as well. Of the 735 projects - including 241 from the previous year - which were due to be completed under government order, only 290 became operational. The average completion time for construction projects (government investment) was 16 years in metallurgy (including ore mining), 12 years in the energy and fuels industry and over 10 years in mechanical engineering and the chemical and timber-processing industries. This is two to three times the planned construction time, with delays being due mainly to lack of funding but also to the fact that, where they exist at all, economic arrangements are inadequate and the construction industry is no longer manageable in its present form. Specialists from the State construction industry, dissatisfied with the wages and lack of labour organization, are leaving the industry to go over to new forms of business (cooperatives, leasing arrangements). In the State and cooperative housing construction sector, 1 410 000 dwellings were built in 1990, 67 000 fewer than in 1985.

8.1 INDEX OF INDUSTRIAL PRODUCTION <sup>(1)</sup>  
(1980 = 100)

Type of index	1985	1986	1987	1988	1989	1990
Total	119	125	129	134	136	135
of which:						
Production of electricity and energy for heating	120	123	129	132	133	135
Fuels	106	110	112	114	112	108
Coal mining and processing	104	108	109	111	107	102
Crude oil extraction	98	101	102	102	99	93
Ferrous metals (including crude ore)	110	115	118	121	121	118
Non-ferrous metals (including crude ore)	111	115	117	121	122	118
Manufacturing industries	120	126	131	136	139	138
of which:						
Foodstuffs	114	116	121	125	131	129
Leather, fur and footwear	111	114	117	121	123	124
Textiles and knitted goods	105	108	109	113	116	114
Clothing	111	111	112	115	119	123
Timber manufacture	123	129	133	140	144	145
Graphics' trades	118	123	129	137	145	155
Paper processing	123	129	134	140	143	146
Chemicals	131	141	148	155	156	153
Glass and porcelain	122	126	131	140	145	148
Building materials	116	122	126	132	134	132
Mechanical engineering and metal - processing	135	145	153	161	165	166
Mechanical engineering <sup>(2)</sup>	136	147	155	164	169	170
Metal - processing	125	131	134	138	140	141

(1) Excluding construction.

(2) Including electronic and electrical engineering industries.

## 8.2 ENTERPRISES IN INDUSTRIAL PRODUCTION BY SELECTED BRANCH OF THE ECONOMY <sup>(1)</sup>

Branch of the economy	1980	1985	1987	1988	1989	1990
<b>Total</b>	<b>44 172</b>	<b>45 691</b>	<b>46 840</b>	<b>46 384</b>	<b>45 895</b>	<b>46 662</b>
of which:						
Energy	1 431	1 434	1 424	1 362	1 246	1 290
Fuels	1 135	1 186	1 179	1 139	1 110	1 113
Metallurgy (including ore extraction)	674	705	711	708	711	713
Mechanical engineering and metal - processing	8 906	9 346	9 238	9 154	9 078	9 209
Chemicals and petrochemicals	1 043	1 079	1 072	1 071	1 064	1 094
Timber manufacture						
Cellulose and paper	5 330	5 457	5 547	5 549	5 404	5 525
Building materials	3 905	3 940	4 336	4 200	4 086	4 125
Light industry	7 972	7 889	7 960	8 197	8 270	8 532
Foodstuffs	8 186	8 790	9 554	9 608	9 825	9 981

(1) Excluding construction.

## 8.3 EMPLOYEES IN INDUSTRIAL PRODUCTION BY SELECTED BRANCH OF THE ECONOMY <sup>(1)</sup> (1 000)

Branch of the economy	1980	1985	1987	1988	1989	1990
<b>Total</b>	<b>36 891</b>	<b>38 103</b>	<b>38 139</b>	<b>37 376</b>	<b>36 414</b>	<b>35 286</b>
of which:						
Energy and fuels	2 418	2 629	2 616	2 600	2 564	2 568
Metallurgy (including ore extraction)	2 183	2 240	2 207	2 146	2 094	2 061
Mechanical engineering and metal - processing	15 612	16 380	16 457	16 167	15 685	15 090
Chemicals, timber, cellulose	4 661	4 707	4 676	4 576	4 445	4 289
Light industry	5 218	5 109	5 052	4 838	4 771	4 660
Foodstuffs	2 978	3 038	3 010	2 993	2 965	2 961

(1) Excluding construction.

## 8.4 POWER STATION CAPACITY (Mio. kW)

Type of power station	1980	1985	1987	1988	1989	1990
<b>Total</b>	<b>166.2</b>	<b>266.8</b>	<b>314.9</b>	<b>338.9</b>	<b>341.4</b>	<b>344</b>
Thermal	133.8	202.0	225.1	239.7	239.6	241
Hydroelectric	31.4	52.3	61.7	63.8	64.4	65.0
Nuclear	1.0	12.5	28.1	35.4	37.4	37.9

**8.5 ELECTRICITY PRODUCTION**  
(Mrd kWh)

Type of power station	1970	1980	1985	1988	1989	1990
<b>Total</b>	741	1 294	1 544	1 706	1 722	1 726
<b>Thermal</b>	613	1 037	1 162	1 259	1 286	1 281
Hydroelectric	124	184	215	231	223	233
Nuclear	3.5	73	167	216	213	212

**8.6 FUEL AND ENERGY BALANCE (1)**  
(Mio. t)

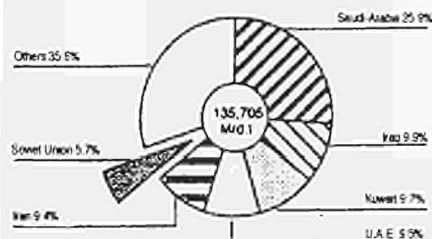
Survey item	1980	1985	1988	1989
<b>Production of primary energy, total</b>	<b>1 975.9</b>	<b>2 196.2</b>	<b>2 424.2</b>	<b>2 408.0</b>
Solid fuels	516.9	477.3	503.1	481.6
Liquid fuels	856.5	846.3	884.7	863.5
Gaseous fuels	514.2	742.9	889.4	919.1
Electricity	82.1	120.4	140.0	136.8
Hydroelectric plants	60.1	69.8	74.8	72.4
Nuclear plants	22.0	50.6	65.2	64.4
Geothermal plants	0.0	0.0	0.0	0.0
Thermal energy (steam and hot water)	x	0.5	0.8	1.1
Nuclear power stations	x	0.4	0.7	0.8
Geothermal sources	x	0.1	0.1	0.3
Other forms of energy	6.2	8.8	6.2	5.9
<b>Imports</b>	<b>17.8</b>	<b>30.8</b>	<b>42.7</b>	<b>30.7</b>
<b>Exports</b>	<b>327.8</b>	<b>352.2</b>	<b>446.5</b>	<b>426.8</b>
<b>Changes (increase) in stocks</b>	<b>+ 13.8</b>	<b>+ 14.2</b>	<b>+ 34.8</b>	<b>+ 36.7</b>
<b>Gross consumption of primary energy and equivalent, total</b>	<b>1 652.1</b>	<b>1 860.6</b>	<b>1 985.6</b>	<b>1 975.2</b>

(1) Converted to units fuel equivalent.

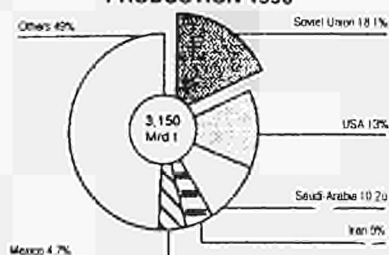
## OIL AND NATURAL GAS IN THE SOVIET UNION

### OIL

#### WORLD RESERVES 1990

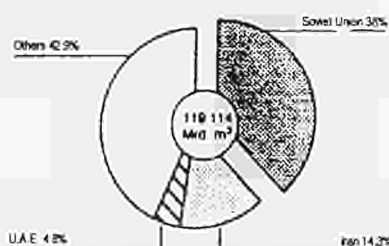


#### PRODUCTION 1990

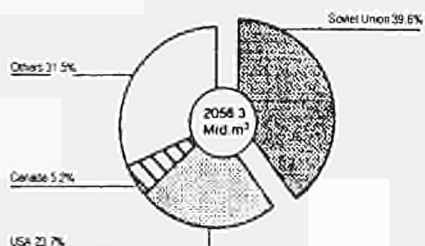


### NATURAL GAS

#### WORLD RESERVES 1990

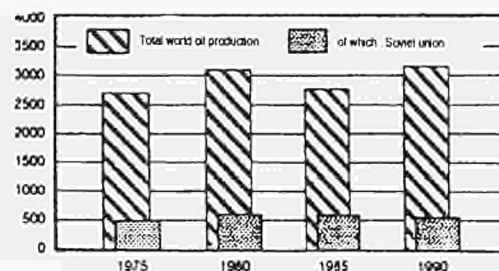


#### PRODUCTION 1990



### SOVIET UNION'S SHARE OF WORLD OIL PRODUCTION 1975-1990

In Mio. t



Statistisches Bundesamt 92 0009 B

**8.7 ELECTRICITY CONSUMPTION**  
(Mrd kWh)

Consumer group	1970	1980	1985	1988	1988	1990
Total	736	1 275	1 515	1 666	1 684	1 690
of which:						
Industry	488	773	894	981	979	968
Construction	15	26	29	31	31	29
Agriculture	39	111	146	173	173	189
Transport	54	103	120	136	137	134

**8.8 PRODUCTION OF SELECTED MINERAL PRODUCTS AND EXTRACTION OF  
NON-METALLIC MINERAL PRODUCTS**

Product	Unit	1985	1986	1987	1988	1989	1990
Hard coal (1)	Mio. t	494	513	519	523	503	474
Brown coal (2)	Mio. t	153	160	161	168	160	157
Iron ore (Fe-content)	Mio. t	136	137	138	138	135	134
Manganese ore (Mn-content)	1 000 t	2 928	2 831	x	x	2 740	2 561
Copper ore (Cu-content)	1 000 t	1 030	1 030	1 010	990	950	x
Lead ore (Pb-content)	1 000 t	580	520	510	520	500	x
Zinc ore (Zn-content)	1 000 t	1 000	970	950	960	940	x
Antimony ore (Sb-content)	1 000 t	6.5	6.0	6.0	6.0	5.8	x
Molybdenum ore (Mo-content)	1 000 t	11.0	11.4	11.5	11.5	11.5	x
Nickel ore (Ni-content)	1 000 t	190	185	195	205	210	x
Silver ore (Ag-content)	t	1 620	1 600	1 550	1 580	1 500	x
Gold ore (Au-content)	t	271.5	275	276	280	280	x
Platinum (Pt-content)	t	109	121	124	127	127	x
Tungsten (W <sub>2</sub> O <sub>3</sub> -content)	1 000 t	9.2	9.2	9.2	9.2	9.2	x
Asbestos	1 000 t	2 500	2 500	2 555	2 600	2 600	x
Bauxite	Mio. t	6.4	6.3	5.7	5.9	5.8	x
Natural phosphate	Mio. t	33.8	33.9	34.1	34.4	34.4	x
Salt	Mio. t	16.1	15.3	15.4	14.8	15.0	14.7
Crude oil	Mio. t	595.3	614.8	624.2	624.3	607.3	570.8
Natural gas	Mrd m <sup>3</sup>	599	639	678	718	742	759
Magnesite	1 000 t	1 975	1 925	1 875	1 825	1 825	x
Diamonds	Mio. carat	10.8	10.8	10.8	11.0	11.0	x
Peat (2)	Mio. t	16.0	19.5	11.4	17.5	16.8	11.2

(1) For sale.

(2) For heating purposes.

## 8.9 PRODUCTION OF SELECTED PRODUCTS FROM THE MANUFACTURING INDUSTRIES

Product	Unit	1985	1986	1987	1988	1989	1990
Cement	Mio. t	130.7	135.1	137.4	139.5	140.4	137.3
Bricks	Mrd	41.2	42.6	43.4	45.1	46.1	45.8
Pig iron	Mio. t	110.0	113.8	113.9	114.6	113.9	110.2
Crude steel	Mio. t	154.7	160.5	161.9	163.0	160.1	154.4
Rolled steel	Mio. t	108.3	112.0	114.1	116.0	115.5	111.8
Rails	Mio. t	3.6	3.6	3.7	3.7	3.6	3.5
Steel pipes	Mio. t	19.4	19.8	20.3	20.8	20.6	19.5
Aluminium	1 000 t	2 200	2 300	2 400	2 400	x	x
Refined copper	1 000 t	1 400	1 400	1 430	1 380	x	x
Refined lead	1 000 t	765	770	780	785	x	x
Zinc	1 000 t	990	985	1 000	963	x	x
Metal-cutting machine tools	1 000 t	218	202	188	178	168	157
Forging presses <sup>(1)</sup>	1 000	52.7	51.6	46.2	43.7	42.2	42.2
Industrial robots	1 000	13.2	15.4	14.7	9.6	4.4	1.9
Turbines	Number	523	514	491	462	380	428
	Mio. kW	21.6	20.9	22.2	21.1	16.4	18.3
Generators for turbines	Number	81	90	82	90	101	85
	Mio. kW	12.3	14.9	12.6	13.7	12.6	9.9
Power station transformers	1 000	213	227	224	213	212	199
	Mio. kVA	161	168	164	164	161	135
Electric motors with an output of 0.25 to 100 kW	Mio.	9.8	10.0	9.8	9.9	9.5	9.1
	Mio. kW	46.5	47.3	46.6	48.2	46.9	43.3
Electric motors with an output of over 100 kW	1 000	39.9	41.8	39.2	36.4	33.0	34.2
	Mio. kW	8.2	8.5	8.0	7.4	6.8	x
Looms	1 000	21.3	21.0	19.3	18.4	18.1	18.3
Sewing machines	1 000	1 654	1 646	1 607	1 680	1 694	1 895
Tractors	1 000	585	595	567	559	532	495
Machinery and equipment for tractors:							
Ploughs	1 000	207	220	208	191	185	181
Drilling machines	1 000	230	229	202	159	130	117
Cultivators	1 000	267	279	249	209	173	151
Mowers	1 000	79.1	82.5	76.5	82.4	71.1	49.8
Combine harvesters	1 000	112.0	112	96.2	71.3	62.2	65.7
Excavators	1 000	42.6	42.9	41.5	41.7	36.4	37.7
Bulldozers	1 000	41.3	43.5	44.9	44.2	41.8	37.1
Roller bearings	Mio.	1 089	1 089	1 083	1 094	1 091	1 089
Motor cars	1 000	1 332	1 326	1 332	1 262	1 217	1 259
Trolley buses	Number	2 467	2 554	2 561	2 545	2 445	2 393
Bicycles	Mio.	5.4	5.5	5.6	5.6	5.6	5.9
Household refrigerators	Mio.	5.9	5.9	6.0	6.2	6.5	6.5
Household washing machines	Mio.	5.1	5.4	5.8	6.1	6.7	7.8
Radio receivers	Mio.	8.8	8.9	8.1	8.0	8.6	9.2
Television receivers	Mio.	9.4	9.4	9.1	9.6	9.9	10.5
Radio recorders	Mio.	4.7	4.8	5.0	5.5	5.7	6.3
Cameras	Mio.	2.1	2.2	2.4	2.7	2.9	3.1
Revolving tower cranes (electric)	1 000	6.6	6.8	6.7	6.3	5.8	5.9

For footnote, please see end of table.



## 8.9 PRODUCTION OF SELECTED PRODUCTS FROM THE MANUFACTURING INDUSTRIES

Product	Unit	1985	1986	1987	1988	1989	1990
Clocks and watches	Mio.	67.2	69.9	70.6	73.5	74.7	77.4
Sulphuric acid	Mio. t	26.0	27.8	28.5	29.4	28.3	27.3
Sodium carbonate ( $\text{Na}_2\text{CO}_3$ )	Mio.	5.0	5.1	5.2	5.1	4.9	4.5
Sodium hydroxide ( $\text{NaOH}$ )	Mio. t	3.1	3.2	3.3	3.3	3.2	3.0t
Fertilizers (nutrients)	Mio. t	33.2	34.7	36.3	37.1	34.3	31.7
nitrogenous. calculated							
to N	Mio. t	14.2	15.2	15.7	15.8	14.4	13.2
phosphatic. calculated							
to $\text{P}_2\text{O}_5$	Mio. t	8.6	9.3	9.7	10.0	9.7	9.5
potassic. calculated							
to $\text{K}_2\text{O}$	Mio. t	10.4	10.2	10.9	11.3	10.2	9.0
Chemical plant protection							
products (active substance)	1 000 t	346	332	327	317	276	205
Synthetic resins							
and plastics	1 000 t	4 115	4 372	4 465	4 634	4 720	4 533
Synthetic fibres and							
threads	1 000 t	1 394	1 480	1 517	1 555	1 557	1 477
Window glass (2 mm thick)	Mio. m <sup>2</sup>	393.6	418.5	412.1	411.8	407.6	359.2
Sawn timber	Mio. m <sup>3</sup>	98	102	102	105	101	92
Cellulose	1 000 t	8 374	8 663	8 633	8 749	8 509	7 816
Paper	1 000 t	5 986	6 156	6 191	6 322	6 315	6 154
Cardboard	1 000 t	4 034	4 239	4 375	4 499	4 335	4 234
Tyres	Mio.	65.2	66.0	67.8	69.1	69.7	68.2
Leather footwear	Mio. P	788	801	809	819	827	843
Cotton fabric	Mio. m <sup>2</sup>	7 677	7 777	7 945	8 106	8 092	7 846
Wool fabric	Mio. m <sup>2</sup>	666	670	690	709	721	704
Linen fabric	Mio. m <sup>2</sup>	802	829	837	851	854	813
Silk fabric	Mio. m <sup>2</sup>	1 936	1 957	2 053	2 123	2 151	2 075
Stockings and socks	Mio. P	1 909	1 968	2 044	2 107	2 110	2 155
Sugar	Mio. t	11.8	12.7	13.7	12.1	13.3	12.5
Tinned fruit	1 000 t	2 048	2 594	2 680	2 877	2 781	2 788
Tinned vegetables	1 000 t	2 615	2 759	2 845	2 777	2 719	2 429
Sweets and pastries	1 000 t	4 285	4 447	4 631	4 859	5 101	5 244
Butter	1 000 t	1 517	1 612	1 672	1 724	1 734	1 739
Whole milk products	Mio. t	29.8	31.3	32.5	33.5	34.6	34.6
Margarine	1 000 t	1 411	1 455	1 535	1 494	1 503	1 403
Vegetable oils and fats	1 000 t	2 545	2 882	2 950	3 142	3 249	3 264
Meat	Mio. t	10.8	11.7	12.2	12.8	13.2	13.0
Delicatessen products	1 000 t	3 414	3 555	3 713	3 853	3 938	3 966
Fish and other seafoods	Mio. t	10.7	11.4	11.3	11.5	11.3	10.5
Tinned fish	1 000 t	1 093	1 032	1 031	1 046	1 095	1 131
Wine	Mio. hl	26.5	14.1	14.7	17.9	19.3	16.2
Beer	Mio. hl	65.7	48.9	50.7	55.8	60.2	62.5
Vodka, etc.	Mio. hl	23.8	14.7	12.3	14.2	18.2	21.2
Cigarettes	Mrd	381.3	383.9	378.5	358.2	343.3	313.1

(1) Including machinery driven by hand or foot.

8.10 PERCENTAGE OF TOTAL OUTPUT OF THE MOST IMPORTANT INDUSTRIAL PRODUCTS  
ACCOUNTED FOR BY THE DIFFERENT REPUBLICS, 1989

Product	Rus	Ukr	Belor	Uzb	Kaz	Geo	Azer	Lith	Mol	Lat	Kyrg	Tadj	Arm	Turk	Est.
Electricity	65.5	17.2	2.2	3.3	5.2	0.9	1.4	1.7	1.0	0.3	0.9	0.9	0.7	0.8	1.0
Petroleum (including gas condensate)	90.9	0.9	0.3	0.4	4.2	0.03	2.2	x	x	x	0.03	0.04	x	1.0	x
Natural gas	77.3	3.9	0.04	5.2	0.81	0.01	1.4	x	x	x	0.01	0.03	x	11.3	x
Coal	55.4	24.3	x	0.8	18.7	0.2	x	x	x	x	0.5	0.1	x	x	x
Pig iron	54.0	40.8	x	x	4.6	0.6	x	x	x	x	x	x	x	x	x
Steel	57.9	34.2	0.7	0.7	4.3	0.9	0.5	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0
Finished rolled pieces, ferrous metal	57.1	34.5	0.6	0.8	4.3	1.0	0.6	x	0.4	0.7	x	x	x	x	x
Steel tubes	60.7	33.5	0.4	x	0.1	2.5	2.8	x	x	x	x	x	x	x	x
Iron ore (commercial)	44.4	45.5	x	x	9.8	x	0.3	x	x	x	x	x	x	x	x
Alternating current electric motors	22.6	35.8	13.5	1.8	x	2.5	3.9	4.6	1.9	x	3.4	x	7.7	x	2.3
Metalcutting machine tools	46.6	22.6	10.4	0.0	1.6	1.4	0.6	6.6	x	0.0	0.9	3.8	5.5	x	x
Forging and pressing machines	66.0	25.3	1.8	2.1	2.8	x	x	0.0	x	0.1	0.8	x	1.1	x	x
Petroleum equipment	81.6	16.8	x	x	x	x	x	x	x	x	x	x	x	1.0	0.6
Chemical plants and spare parts for them	63.1	28.5	1.1	3.9	1.8	0.1	0.3	0.1	0.7	0.0	x	0.3	0.0	0.1	0.0
Agricultural machinery	57.1	27.9	1.7	4.1	6.2	0.1	0.4	0.2	1.2	0.2	0.0	0.3	0.2	0.0	0.4
Plant and machinery for livestock and feeding stuffs production	31.6	28.8	23.0	0.6	5.7	0.1	0.2	2.6	0.4	4.2	2.4	x	x	x	0.4
Excavators	62.3	29.2	0.4	2.2	1.4	x	x	x	x	x	x	x	x	x	4.5
Electric bridge cranes (including special cranes)	50.7	22.6	0.9	25.2	0.6	x	x	x	x	x	x	x	x	x	x
Soda ash (excluding potash)	73.7	26.3	x	x	x	x	x	x	x	x	x	x	x	x	x
Caustic soda	73.0	14.8	x	x	2.0	x	6.9	x	x	x	x	1.8	1.5	x	x
Mineral fertilizers (converted to 100% nutrient content)	51.1	15.0	18.3	5.6	5.0	0.5	0.8	1.8	x	0.5	x	0.3	x	0.5	0.6
Manmade fibres and threads	46.9	12.3	28.9	3.3	1.3	2.4	x	0.9	x	3.3	x	x	0.7	x	x
Car tyres, bus tyres, tyres for agricultural machinery, motor cycles and scooters	69.2	16.3	7.2	x	3.5	x	1.9	x	x	x	x	x	1.9	x	x

8.10 PERCENTAGE OF TOTAL OUTPUT OF THE MOST IMPORTANT INDUSTRIAL PRODUCTS  
ACCOUNTED FOR BY THE DIFFERENT REPUBLICS, 1989

Product	Rus	Ukr	Belor	Uzb	Kaz	Geo	Azer	Lith	Mol	Lat	Kyrg	Tadj	Arm	Turk	Est.
Transport of commercial timber	91.6	3.1	2.3	x	0.7	0.1	0.0	0.7	0.0	0.8	0.0	x	0.0	x	0.7
Sawn timber	82.0	8.2	3.3	0.6	2.0	0.5	0.2	0.9	0.3	0.8	0.2	0.2	0.1	0.1	0.6
Paper	84.6	5.6	3.2	0.4	0.0	0.4	x	1.9	x	2.2	x	x	0.2	x	1.5
Cement	60.2	16.7	1.6	4.4	6.2	1.1	0.7	2.4	1.6	0.5	1.0	0.8	1.2	0.8	0.8
Asbestos cement sheeting (slates)	55.7	16.2	4.9	4.8	7.7	0.4	0.9	1.3	1.8	1.0	1.9	1.0	0.8	0.8	0.8
Roofing and insulating materials	56.8	15.3	7.1	6.6	6.6	3.1	x	2.4	x	x	x	0.5	x	x	1.6
Bricks	53.8	22.6	5.0	4.7	5.4	0.6	0.3	2.4	0.5	1.0	1.3	0.7	x	1.1	0.6
Window glass	61.9	20.9	5.5	x	x	x	2.2	1.7	x	1.6	3.2	x	x	2.2	0.8
Staple Cotton	x	x	x	61.4	3.8	x	8.1	x	x	x	0.8	10.9	x	15.0	x
Cotton fabrics	71.9	7.0	1.7	5.8	1.9	0.6	1.5	1.2	1.9	0.7	1.3	1.6	0.3	0.3	2.3
Woollen fibres	65.3	10.3	6.7	0.1	4.7	1.3	2.0	3.1	0.03	2.17	1.6	0.3	0.9	0.4	1.1
Linen, hemp and jute fabrics	66.2	15.2	9.7	1.2	x	x	x	3.2	x	2.0	1.3	x	x	x	1.2
Silk fabrics	50.4	14.1	10.0	6.7	3.5	2.2	1.4	2.4	2.1	1.3	0.6	3.5	0.9	0.4	0.5
Stockings, etc.	40.2	20.3	8.3	5.4	3.9	1.5	2.0	5.0	2.0	3.7	1.6	2.1	2.3	0.9	0.8
Knitwear	39.2	18.3	8.0	5.7	6.4	2.9	2.2	3.2	3.5	2.2	1.1	0.8	4.7	0.6	1.2
Footwear (excluding rubber and felt footwear)	45.7	23.4	5.4	5.3	4.3	2.0	2.1	1.4	2.8	1.2	1.4	1.3	2.2	0.6	0.9
Radio sets	65.0	6.7	10.3	x	0.6	x	x	x	0.0	17.4	x	x	x	x	x
Television sets	44.9	35.9	11.1	x	x	0.7	x	6.2	1.2	x	x	x	x	x	x
of which colour sets	37.4	37.7	17.4	x	x	1.0	x	4.6	1.9	x	x	x	x	x	x

8.10 PERCENTAGE OF TOTAL OUTPUT OF THE MOST IMPORTANT INDUSTRIAL PRODUCTS  
ACCOUNTED FOR BY THE DIFFERENT REPUBLICS, 1989

Product	Rus	Ukr	Belor	Uzb	Kaz	Geo	Azer	Lith	Mol	Lat	Kyrg	Tadj	Arm	Turk	Est.
Tape recorders	51.9	31.7	2.0	x	2.8	x	x	3.3	2.2	1.7	2.7	x	1.7	x	x
Refrigerators and freezers	55.6	13.6	11.1	3.0	x	x	5.5	5.4	3.2	x	x	2.6	x	x	x
Electrical vacuum cleaners	78.6	17.8	x	x	x	x	x	3.6	x	x	x	x	x	x	x
Electrical irons	53.2	29.6	0.1	x	3.1	x	x	x	8.2	3.1	x	x	2.7	x	x
Washing machines	67.2	9.7	0.3	x	4.0	x	x	x	4.2	9.1	3.7	x	1.8	x	x
Cycles (excluding children's)	61.5	14.9	15.2	x	0.9	x	x	7.5	x	x	x	x		x	x
Children's cycles	60.2	19.9	5.8	x	7.5	x	2.6	x	x	4.0	x	x	0.0	x	x
Motor-cycles and scooters	68.4	10.1	21.5	x	x	x	x	x	x	x	x	x	x	x	x
Furniture	56.3	18.7	5.7	2.7	3.4	1.3	1.1	2.3	1.9	2.1	0.6	0.5	1.0	0.2	2.2
Castor sugar	31.6	52.6	2.7	x	2.8	0.2	x	1.8	3.3	1.9	3.1	x	x	x	x
Meat (including offal)	50.1	21.3	6.8	2.1	7.3	0.8	0.7	3.4	1.9	1.9	1.0	0.5	0.5	0.3	1.4
Fish and other seafood catches	74.0	10.1	0.2	0.2	0.8	1.3	0.5	3.7	0.08	4.9	0.02	0.03	0.07	0.5	3.6
Butter	47.3	25.4	9.1	0.9	4.8	0.07	0.3	4.5	1.7	2.7	0.8	0.4	0.04	0.2	1.8
Vegetable fat	34.7	33.2	0.8	15.8	2.8	0.3	1.5	0.0	3.6	0.4	0.5	2.9	0.2	3.3	x
Tinned foods	39.1	23.3	3.8	5.5	2.1	3.4	3.5	2.0	8.3	2.4	0.8	1.8	1.9	0.4	1.7

**8.11 INDEX OF INDUSTRIAL PRODUCTION, BY REPUBLIC**  
(1985 = 100)

Republic	1986	1987	1988	1989	1990	1990 as % of 1989
<b>Total</b>	<b>104</b>	<b>108</b>	<b>113</b>	<b>115</b>	<b>113</b>	<b>98.8</b>
Russian SFSR	104	108	112	114	114	99.9
Ukraine	104	108	113	116	116	99.9
Rep. of Belorussia	107	114	121	127	129	102.1
Rep. of Uzbekistan	106	108	112	116	118	101.8
Kazakh SSR	105	110	114	117	116	99.2
Rep. of Georgia	102	105	108	109	103	94.3
Republic of Azerbaijan	98	102	105	106	99	93.7
Lithuania	105	110	116	121	117	97.2
Rep. of Moldova	103	108	111	118	121	103.2
Latvia	104	108	112	115	115	99.8
Rep. of Kyrgyzstan	104	106	113	119	118	99.4
Rep. of Tadjikistan	102	107	113	115	116	101.2
Rep. of Armenia	104	109	108	99.2	92	92.5
Turkmen SSR	105	108	113	116	120	103.2
Estonia	104	107	110	111	111	100.1

**8.12 INDEX OF LABOUR PRODUCTIVITY IN THE CONSTRUCTION INDUSTRY, BY REPUBLIC (1)**  
(1985 = 100)

Republic	1988	1989	1990	1990 as % of 1989
<b>Total</b>	<b>119.4</b>	<b>122.0</b>	<b>119.1</b>	<b>97.6</b>
Russian SFSR	121.9	124.5	122.4	98.3
Ukraine	116.3	119.8	118.4	98.8
Rep. of Belorussia	122.4	129.4	131.3	101.5
Rep. of Uzbekistan	106.0	105.2	105.1	99.9
Kazakh SSR	114.8	118.6	118.4	99.8
Rep. of Georgia	112.1	108.1	101.1	93.5
Republic of Azerbaijan	107.9	106.9	100.9	94.4
Lithuania	117.9	117.5	110.8	94.3
Rep. of Moldova	115.9	121.2	122.9	101.4
Latvia	121.0	123.9	125.9	101.6
Rep. of Kyrgyzstan	112.5	113.9	113.8	99.9
Rep. of Tadjikistan	114.8	116.4	111.3	95.6
Rep. of Armenia	100.1	122.3	111.9	91.5
Turkmen SSR	109.8	101.6	104.3	102.7
Estonia	111.0	107.7	114.9	106.7

(1) Production per employee in the construction industry.

**8.13 COMPLETED RESIDENTIAL BUILDINGS <sup>(1)</sup>**  
(Mio. m<sup>2</sup> living area)

Survey item	1985	1986	1987	1988	1989	1990
<b>Total</b>						
<b>Total</b>	113.0	119.8	131.4	132.3	128.9	118.0 <sup>(2)</sup>
State and cooperative	88.6	94.4	104.2	102.3	98.2	86.0
Private <sup>(3)</sup>	16.3	17.4	19.3	22.7	24.3	25.3
In kolkhozes	8.1	8.0	7.9	7.3	6.4	5.4
<b>In urban areas</b>						
<b>Total</b>	77.1	82.0	90.3	91.7	88.6	79.3 <sup>(2)</sup>
State and cooperative	70.4	75.0	83.0	83.1	79.6	69.0
Private <sup>(3)</sup>	5.8	6.8	6.9	8.1	8.6	9.0
In kolkhozes	0.9	0.2	0.4	0.5	0.4	0.4
<b>In rural areas</b>						
<b>Total</b>	35.9	37.8	41.1	40.6	40.3	38.7 <sup>(2)</sup>
State and cooperative	18.2	19.4	21.2	19.2	18.6	17.0
Private <sup>(3)</sup>	10.5	10.6	12.4	14.6	15.7	16.3
In kolkhozes	7.2	7.8	7.5	6.8	6.0	5.0

<sup>(1)</sup> Ready for occupation.

<sup>(2)</sup> Of which constructed by enterprises under lease: 1.3 million m<sup>2</sup>, in urban areas 0.9 million m<sup>2</sup> and in rural areas 0.4 million m<sup>2</sup>.

<sup>(3)</sup> Financed by the general public and with State funds.

**8.14 COMPLETED DWELLINGS**

Survey item	Unit	1985	1986	1987	1988	1989	1990
<b>Total</b>	1 000	1 825	1 923	2 085	2 083	2 008	1 795 <sup>(1)</sup>
State and cooperative	1 000	1 477	1 569	1 717	1 688	1 612	1 410
Private <sup>(2)</sup>	1 000	226	239	258	296	311	313
In kolkhozes	1 000	122	115	110	99	85	72

<sup>(1)</sup> Of which constructed by enterprises under lease: 21 000.

<sup>(2)</sup> Financed by the general public and with State funds.

## 9 FOREIGN TRADE

In 1990, the further decline in industrial output, especially in the fuel and energy branches, led to a downturn in exports and lower foreign currency earnings. At the same time, imports rose considerably in the wake of difficulties on the consumer market, with the result that the foreign trade deficit increased to USD 16 000 million in 1990, three times as high as in 1989.

The main items imported are still machinery, plant and consumer goods. Imports of plant for the food, drink and tobacco, textile, leatherwear, footwear and fur industries and of medical equipment and instruments are also up.

The Soviet foreign trade figures are not helped by the high proportion of exports of raw materials and semi-manufactures, with only a low percentage of machinery, plant and transport equipment.

In the first half of 1991, Soviet imports and exports totalled 77 800 million roubles transferable, i.e. 38.4% less than in the same period of 1990. Exports declined by 26.8%, imports by 47.6%. The export surplus was thus 3 700 million roubles transferable.

The changeover to settlement of trade with the former Comecon countries in freely convertible foreign currencies led to a decline of almost 50% in the Soviet Union's trade with those countries. It exported less petroleum, fewer petroleum products and other raw materials and less machinery, plant and transport equipment, and there was a substantial drop in its imports of technical and consumer goods. Exports to and imports from the industrialized Western countries also fell during the first half of 1991 - by around 33.3% in total, with imports plummeting 47% and exports 15.3% down. The sharp decline in the Soviet Union's imports from the West is a reflection of its lack of freely convertible currency.

Compared with the corresponding period of the previous year, there were particularly steep falls in exports of crude oil (by 50%), petroleum products (52%), raw wood (42%), mineral fertilizers (35%) and ferrous metal products (67%).

The majority of export earnings are used to pay off foreign debts.

The decline in imports had the most serious effect on light industry, the chemicals industry and consumer goods.

The Soviet Union's foreign currency shortage is leading to a steady increase in barter dealings which, between January and May 1991, totalled 2 100 million roubles transferable (import and export volumes combined) or 4% of total foreign trade. Imports obtained by means of barter transactions consisted of consumer goods, whilst exports concerned the traditional raw materials.

To date, the Soviet Union's national accounts have derived little real benefit from joint ventures with foreign firms. The most important foreign partners are still smaller firms or individual legal persons. Major foreign firms have been reluctant to help establish joint ventures which depend on a high level of technology. At the present time, over 3 000 joint ventures are registered in the Soviet Union.

### 9.1 FOREIGN TRADE

Imports/exports	1981	1985	1987	1988	1989	1990
(Mio. USD)						
Imports	72 960	83 140	96 061	107 229	114 567	120 867
Exports	79 003	87 281	107 966	110 559	109 173	104 640
Import (-) or export (+) surplus	+ 6 043	+ 4 141	+ 11 905	+ 3 330	- 5 394	- 16 227
(Mio. roubles)						
Imports	52 631	69 429	60 741	65 040	72 137	70 728
Exports	57 108	72 664	68 142	67 115	68 742	60 757
Import (-) or export (+) surplus	+ 4 477	+ 3 235	+ 7 401	+ 2 075	- 3 395	- 9 971

### 9.2 FOREIGN TRADE INDICES <sup>(1)</sup> (1980 = 100)

Survey item	1981	1985	1987	1988	1989	1990
Imports	107	134	124	129	141	141
Exports	102	110	125	131	131	114

(1) Volume indices, calculated on the basis of national currency.

### 9.3 MAJOR IMPORT GOODS/COMMODITY GROUPS (Mio. USD)

Import goods/commodity groups	1981	1985	1987	1988	1989	1990 <sup>(1)</sup>
Meat and meat products	1 642.7	1 024.1	1 388.9	1 207.0	1 156.0	2 035.2
Wheat	3 454.7	2 986.1	1 548.9	2 399.7	2 255.4	2 480.9
Maize	2 385.4	2 323.6	742.2	1 265.1	2 257.2	1 684.4
Fresh fruit and vegetables	893.4	889.3	1 072.9	1 218.5	1 077.6	1 076.6
Unrefined sugar	3 214.5	4 025.2	4 838.3	4 535.7	4 467.0	5 064.5
Tobacco and tobacco products	863.1	844.7	932.5	914.7	842.6	1 018.2
Textiles and their semi-manufactures	1 267.1	1 407.3	1 442.4	1 684.3	1 811.8	1 416.4
Chemicals	1 910.5	2 068.2	2 447.3	2 729.8	3 288.5	2 466.9
Medicines	1 048.1	1 395.7	1 975.9	2 171.2	2 934.0	3 877.7
Rolled iron and steel products	1 772.5	2 145.5	2 138.0	2 279.3	2 121.9	1 655.5
Tubes	2 184.1	2 263.1	2 742.4	3 279.5	2 678.5	1 423.3

For footnote, please see end of table.



9.3 MAJOR IMPORT GOODS/COMMODITY GROUPS  
(Mio. USD)

Import goods/commodity groups	1981	1985	1987	1988	1989	1990 (1)
Machinery, plant and vehicles	22 046.9	30 876.2	39 783.4	43 827.6	44 061.2	54 024.0
Equipment for the chemical industry	1 181.8	1 248.3	1 109.3	1 430.6	2 054.6	2 356.3
Lifting/transport machinery	1 233.8	1 775.9	2 335.6	2 474.9	2 186.0	2 284.0
Equipment for the metallurgical industry	613.9	769.2	1 504.1	1 211.3	1 284.4	1 196.8
Equipment for the gas industry and gas pipelines	6.7	327.2	438.5	202.3	75.1	54.8
Equipment for the textile industry	601.8	852.5	1 070.9	1 096.1	1 302.0	1 852.7
Equipment for the foodstuffs industry	613.4	993.8	1 087.1	1 282.2	1 400.8	2 306.2
Agricultural machinery and equipment	1 140.9	1 590.1	1 941.4	1 940.6	1 626.3	1 459.9
Machinery and equipment for road construction	649.3	549.3	549.1	588.4	569.0	678.7
Heavy goods vehicles and equipment for garages	1 735.0	2 585.0	3 325.9	3 516.7	3 159.7	3 129.4
Rail cars and auxiliary equipment	922.5	1 442.7	2 158.3	2 182.1	2 121.1	1 967.7
Boats, etc. and equipment	1 711.4	3 178.1	2 371.3	2 882.4	2 672.4	2 882.4
Furniture	716.8	659.3	845.3	967.5	857.5	1 046.6
Clothing and underclothing	2 813.0	3 376.9	3 972.1	4 428.6	5 035.1	5 742.4
Footwear	1 523.3	1 901.9	1 975.1	1 942.8	2 185.4	2 652.5

(1) Provisional data.

9.4 MAIN EXPORT GOODS/COMMODITY GROUPS  
(Mio. USD)

Export goods/commodity groups	1981	1985	1987	1988	1989	1990 (1)
Wheat	352.9	189.4	145.4	166.1	178.2	128.8
Timber in the round and sawn	1 720.7	1 633.4	2 053.6	2 450.5	2 378.6	2 619.7
Raw cotton	1 464.6	1 009.2	1 376.5	1 438.5	1 462.3	1 017.6
Iron ore	652.9	624.1	827.8	753.3	637.3	642.3
Solid fuels	1 589.5	1 838.2	2 286.2	2 454.2	2 386.9	2 257.4
Petroleum and petroleum distillation products	29 886.8	33 875.4	36 135.6	32 465.4	29 595.1	26 786.0
Natural gas	7 534.6	9 243.2	10 102.6	9 615.4	9 731.4	11 128.4
Chemicals	1 199.1	1 580.2	1 666.9	2 008.9	1 993.8	2 085.7
Ammonia	394.7	394.2	299.2	428.6	364.9	387.8
Potash fertilizers	415.5	418.6	459.3	529.4	486.8	507.1
Nitrogen fertilizers	471.8	618.7	597.7	732.1	785.6	831.9
Urea, granulated	380.7	493.3	497.0	613.7	670.1	639.4

For footnote, please see end of table.

9.4 MAIN EXPORT GOODS/COMMODITY GROUPS  
(Mio. USD)

Export goods/commodity groups	1981	1985	1987	1988	1989	1990 <sup>(1)</sup>
Paper and board	378.6	435.3	617.1	590.6	543.7	471.0
Iron and steel rolled products	2 165.3	2 129.9	2 807.6	2 828.2	3 099.1	2 813.3
Machinery, equipment and vehicles	10 810.0	12 158.5	16 753.8	17 870.0	17 951.6	19 112.9
Mining equipment	340.0	338.9	519.6	580.2	454.1	315.0
Equipment for the metallurgical industry	818.2	682.8	644.7	625.3	518.1	468.8
Machinery and equipment for petroleum drilling	300.2	396.9	650.6	424.8	677.2	236.7
Agricultural machinery and equipment	318.6	327.7	454.7	654.9	463.6	556.5
Tractors, spare parts and accessories (including engines)	746.9	659.5	955.7	991.7	1 053.8	905.3
Motor cars and motor cycles	939.9	1 074.8	1 626.4	1 791.5	1 896.7	2 094.8
Heavy goods vehicles and equipment for garages	1 245.5	1 461.0	2 077.5	2 119.0	1 911.7	2 174.8
Rail cars and auxiliary materials	262.0	285.9	397.2	514.4	570.2	668.7
Aircraft	871.6	1 128.9	1 527.7	1 687.7	1 643.2	1 442.8

(1) Provisional data.

9.5 IMPORTS BY MAJOR COUNTRY OF ORIGIN  
(Mio. USD)

Country of origin	1981	1985	1987	1988	1989	1990 <sup>(1)</sup>
EC countries <sup>(2)</sup>	10 999.3	10 153.9	10 984.3	12 408.5	15 196.3	30 466.0
Former territory of the FR of Germany	3 747.1	3 897.1	4 232.2	5 416.5	6 638.0	21 380.2 <sup>(3)</sup>
Italy	1 389.0	1 590.7	2 667.0	2 214.3	2 551.1	3 049.1
France	2 308.0	1 920.8	1 724.1	1 961.7	1 935.1	1 896.2
Poland	4 464.8	6 706.0	10 009.7	11 720.8	11 768.2	13 553.2
Bulgaria	5 124.8	7 251.9	10 361.4	11 331.4	11 605.1	10 525.5
Territory of the former GDR	7 145.5	9 090.9	11 217.8	11 580.8	11 395.9	x
Czechoslovakia	5 690.2	7 941.8	10 923.9	11 239.4	10 497.6	10 651.6
Hungary	4 575.1	5 858.0	8 034.4	8 149.7	7 644.4	7 566.5
Romania	2 319.3	2 757.3	3 712.0	4 008.2	3 952.5	3 043.6
Yugoslavia	3 851.1	4 031.3	3 278.9	3 540.3	3 820.4	3 748.1
Finland	3 775.1	3 221.7	3 219.7	3 607.8	3 377.8	3 627.9
United States	2 303.9	2 846.4	1 454.2	2 922.4	4 550.5	3 674.1
Cuba	2 845.3	4 957.7	6 052.8	6 325.6	6 141.5	6 287.3
Japan	3 067.3	2 738.8	2 575.0	3 216.4	3 395.6	3 583.3
India	1 849.0	1 807.6	1 697.1	1 851.9	2 812.0	3 448.4
China <sup>(4)</sup>	130.6	999.3	1 187.1	1 393.0	1 720.8	2 832.2

(1) Provisional data. - (2) Including Spain and Portugal as from 1986. - (3) Territory of the Federal Republic as from 3 October 1990 - (4) Excluding Taiwan.

**9.6 EXPORTS BY MAJOR COUNTRY OF DESTINATION**  
(Mio. USD)

Country of origin	1981	1985	1987	1988	1989	1990 <sup>(1)</sup>
EC countries <sup>(2)</sup>	16 998.0	15 781.9	15 587.5	16 699.4	17 622.2	28 397.5
Former territory of the FR of Germany	5 028.9	5 105.9	3 944.9	4 179.3	4 204.2	11 882.0 <sup>(3)</sup>
United Kingdom	892.6	1 462.9	2 511.1	2 955.4	3 507.8	3 198.9
Italy	3 436.4	2 964.8	2 856.3	2 785.9	3 049.4	3 758.9
France	3 492.4	2 612.2	2 403.1	2 600.9	2 141.8	2 807.7
Netherlands	1 409.8	1 185.1	1 236.9	1 081.9	1 543.2	3 159.6
Territory of the former GDR	7 644.8	9 212.8	12 088.2	11 849.3	10 581.1	x
Czechoslovakia	6 062.5	8 203.8	10 728.0	10 517.3	9 934.6	8 699.6
Bulgaria	6 051.7	7 754.1	9 935.8	10 038.1	9 799.7	9 409.0
Poland	6 822.0	7 845.4	10 356.8	10 374.6	9 164.6	7 066.4
Hungary	4 574.5	5 497.3	7 282.1	7 386.9	6 650.7	6 189.5
Romania	2 461.2	2 350.1	4 019.7	3 861.4	4 258.3	4 227.3
Yugoslavia	3 081.4	3 270.4	3 009.4	2 790.2	3 059.4	3 134.6
Finland	3 168.1	2 761.8	2 702.0	2 518.2	2 793.3	2 816.7
Cuba	3 810.6	4 657.4	5 906.9	6 139.1	6 088.2	5 829.6
Vietnam	1 002.4	1 412.7	2 302.6	2 295.7	2 209.0	1 893.3
Japan	1 130.0	1 115.8	1 539.5	1 950.7	2 132.9	2 460.2
China <sup>(4)</sup>	114.3	937.4	1 146.6	1 655.9	2 109.9	2 362.3
India	1 472.1	1 891.7	1 749.9	1 859.3	1 821.9	2 033.2
Mongolia	1 089.2	1 381.7	1 804.5	1 862.8	1 596.4	1 697.8

(1) Provisional data.

(2) Including Spain and Portugal as from 1986.

(3) Territory of the Federal Republic as from 3 October 1990.

(4) Excluding Taiwan.

**9.7 FIGURES FOR TRADE BETWEEN THE SOVIET UNION AND GERMANY <sup>(1)</sup>**

Imports/exports	1985	1986	1987	1988	1989	1990	1990 <sup>(2)</sup>
(Mio. USD)							
Imports (Soviet Union as country of origin)	4 686	4 248	4 050	3 913	4 554	5 677	11 342
Exports (Soviet Union as country of destination)	3 603	4 319	4 379	5 367	6 147	6 378	17 430
Import (-)/export (+) surplus	- 1 083	+ 71	+ 329	+ 1 454	+ 1 593	+ 701	+ 6 088
(Mio. DM)							
Imports (Soviet Union as country of origin)	13 629	9 299	7 261	6 877	8 556	9 117	18 229
Exports (Soviet Union as country of destination)	10 527	9 374	7 846	9 424	11 526	10 361	28 118
Import (-)/export (+) surplus	- 3 101	+ 75	+ 585	+ 2 547	+ 2 970	+ 1 244	+ 9 889

(1) Former territory of the Federal Republic of Germany.

(2) Territory of the Federal Republic as from 3 October 1990.

9.8 MAJOR GOODS/COMMODITY GROUPS IMPORTED FROM THE SOVIET UNION BY SITC HEADING (1)

Import goods/ commodity groups	1988		1989		1990		1990 (2)	
	1 000 USD	1 000 DM	1 000 USD	1 000 DM	1 000 USD	1 000 DM	1 000 USD	1 000 DM
Cork and wood	110 533	197 693	121 260	228 137	152 899	243 473	293 058	489 462
Pulp and waste paper	39 036	69 086	43 507	81 869	30 384	49 069	46 557	78 680
Textile fibres and their wastes	51 070	88 513	54 153	101 747	53 579	87 431	134 219	234 642
Petroleum, petroleum products and related materials	1 294 405	2 278 771	1 555 739	2 924 904	1 953 379	3 133 770	3 839 942	6 361 030
Organic chemicals	36 247	63 693	75 814	141 954	64 039	103 100	71 889	117 398
Inorganic chemicals	166 972	300 373	126 366	239 266	146 366	225 278	287 989	475 874
Non-metallic mineral manufactures	52 201	91 513	30 473	57 026	31 746	50 782	40 991	67 440
Iron and steel	55 440	97 494	98 925	185 613	116 340	186 806	683 904	1 222 034
Non-ferrous metals	396 190	698 317	572 750	1 080 484	493 680	789 595	675 233	1 113 217
Road vehicles (including air- cushion vehicles)	43 278	75 536	51 161	96 591	140 910	221 356	325 366	557 554

(1) Former territory of the Federal Republic of Germany; SITC : standard international trade classification.

(2) Territory of the Federal Republic as from 3 October 1990.

9.9 MAJOR GOODS/COMMODITY GROUPS EXPORTED TO THE SOVIET UNION BY SITC HEADING (1)

Export goods/ commodity groups	1988		1989		1990		1990 (2)	
	1 000 USD	1 000 DM	1 000 USD	1 000 DM	1 000 USD	1 000 DM	1 000 USD	1 000 DM
Meat and meat preparations	19 986	34 783	27 493	50 001	310 565	502 151	422 808	683 723
Cereals and cereal preparations	133 182	227 567	173 968	331 234	86 237	143 326	95 809	158 826
Organic chemicals	151 446	262 991	185 880	349 054	128 126	208 597	145 397	235 670
Medical and pharma- ceutical products	7 734	13 554	70 090	126 345	92 383	147 579	306 100	505 591
Essential oils, etc. Cleaning prepara- tions, etc.	36 961	64 248	119 819	223 483	86 445	142 708	350 387	587 827
Plastics in primary forms	212 505	371 576	222 985	420 931	156 862	253 852	249 371	414 940

For footnotes, please see end of table.

9.9 MAJOR GOODS/COMMODITY GROUPS EXPORTED TO THE SOVIET UNION BY SITC HEADING (1)

Export goods/ commodity groups	1988		1989		1990		1990 (2)	
	1 000 USD	1 000 DM	1 000 USD	1 000 DM	1 000 USD	1 000 DM	1 000 USD	1 000 DM
Other chemical products and goods	156 501	269 854	154 888	292 425	150 767	246 092	257 964	428 288
Goods for complete factory plants								
Divisions 69, 70, 72, 73 and 76	33 305	57 756	53 334	96 621	108 534	177 881	108 534	177 881
Paper, paper board and articles of paper pulp	90 721	160 306	114 572	215 451	100 796	162 979	196 878	327 720
Textile yarn, fabrics, made-up articles	119 443	208 997	116 134	218 241	102 112	166 014	389 549	453 451
Iron and steel	1 336 862	2 354 365	1 061 730	1 993 248	508 654	834 907	676 927	1 111 888
Manufactures of metals	55 479	96 485	75 079	140 675	67 811	109 520	263 786	429 491
Goods for complete factory plant								
Divisions 84, 85 and 87	450 442	787 806	377 664	711 868	679 184	1 111 894	679 184	1 111 894
Power-generating machinery and equipment	65 249	117 943	101 799	190 489	97 165	158 163	311 924	517 781
Machinery for specific purposes	472 347	828 581	791 109	1 482 954	1 053 569	1 712 989	3 123 147	5 200 774
Metalworking machinery	509 582	898 578	528 875	988 363	386 800	628 504	1 149 799	1 888 661
Machinery, apparatus, etc. for various purposes	341 894	604 945	423 702	793 105	556 559	899 559	1 312 636	2 162 941
Office machines and automatic data-processing machines	48 974	85 462	99 884	186 925	113 888	184 083	713 500	1 188 666
Other electrical machinery, apparatus and appliances, etc.	155 850	274 723	179 144	336 707	218 347	351 527	705 997	1 151 474
Road vehicles (including air-cushion vehicles)	63 920	113 335	104 885	196 284	130 496	211 205	231 437	372 629
Ships, boats, etc. and floating structures	2 343	4 034	34 057	63 625	76 049	120 138	x	x
Footwear	64 347	113 049	138 517	255 149	131 465	213 310	276 113	441 355
Scientific and controlling instruments and apparatus, etc.	188 695	330 741	200 328	376 041	211 292	339 962	616 423	1 031 093

(1) Former territory of the Federal Republic of Germany.

(2) Territory of the Federal Republic as from 3 October 1990.

9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries (1)		1989	1990	January - June 1990 (2)	January- June 1990 (2)
Total	Exports	68 741.6	60 756.8	55 699.5	40 784.0
	Imports	72 137.0	70 727.6	70 681.9	37 044.5
	Balance	- 3 395.4	- 9 970.8	- 14 982.4	3 739.5
<b>Europe</b>					
Austria	Exports	429.6	549.9	696.7	828.8
	Imports	1 004.5	1 133.7	1 581.5	950.5
	Balance	- 574.9	- 583.8	- 884.8	- 121.7
Belgium	Exports	817.2	919.1	1 311.8	1 170.3
	Imports	509.5	393.9	557.5	435.8
	Balance	307.7	525.2	754.3	734.5
Bulgaria	Exports	6 170.5	5 487.4	4 390.0	1 306.0
	Imports	7 307.1	6 170.2	4 482.2	1 904.7
	Balance	- 1 136.6	- 682.8	- 92.2	- 598.7
Great Britain and Northern Ireland	Exports	2 208.7	1 865.6	2 338.4	1 842.5
	Imports	1 009.1	957.6	1 635.7	661.3
	Balance	1 199.6	908.0	702.7	1 181.2
Hungary	Exports	4 187.7	3 609.8	2 604.4	1 578.7
	Imports	4 813.3	4 435.6	2 652.6	1 187.0
	Balance	- 625.6	- 825.8	- 48.2	391.7
Greece	Exports	289.9	282.1	354.5	326.9
	Imports	125.6	148.5	130.0	42.8
	Balance	164.3	133.6	224.5	284.1
Denmark	Exports	175.0	182.0	196.3	320.7
	Imports	145.2	218.5	357.6	118.9
	Balance	29.8	- 36.5	- 161.3	201.8
Ireland	Exports	31.0	25.6	29.0	39.5
	Imports	56.3	83.5	185.0	42.1
	Balance	- 25.3	- 57.9	- 156.0	- 2.6
Iceland	Exports	36.5	45.6	67.0	38.1
	Imports	29.0	27.7	47.2	9.9
	Balance	7.5	17.9	19.8	28.2
Spain	Exports	598.1	637.2	855.0	315.4
	Imports	216.4	218.5	375.4	266.3
	Balance	381.7	418.7	479.6	49.1

For footnotes, please see end of table.

9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries <sup>(1)</sup>		1989	1990	January - June 1990 <sup>(2)</sup>	January - June 1990 <sup>(2)</sup>
Italy	Exports	1 920.1	2 192.2	2 609.2	2 823.9
	Imports	1 606.3	1 787.4	2 741.1	1 677.6
	Balance	313.8	404.8	- 131.9	1 146.3
Liechtenstein	Exports	0.8	1.1	x	x
	Imports	80.0	81.7	x	x
	Balance	- 79.2	- 80.6	x	x
Luxembourg	Exports	64.7	32.3	36.5	36.9
	Imports	12.3	5.8	10.7	5.2
	Balance	52.4	26.5	25.8	31.7
Malta	Exports	14.8	19.3	21.1	28.2
	Imports	21.3	24.2	53.7	2.6
	Balance	- 6.5	- 4.9	32.6	25.6
Netherlands	Exports	971.7	1 842.7	1 680.2	1 979.7
	Imports	438.5	338.7	486.0	550.2
	Balance	533.2	1 504.0	1 194.2	1 429.5
Norway	Exports	134.6	234.4	311.3	239.2
	Imports	112.2	137.7	137.9	111.7
	Balance	22.4	96.7	173.4	127.5
Poland	Exports	5 770.6	4 121.2	3 783.3	2 273.3
	Imports	7 409.8	7 945.1	6 291.6	2 101.5
	Balance	- 1639.2	- 3 823.9	- 2 508.3	171.8
Portugal	Exports	23.8	15.7	23.5	18.9
	Imports	51.1	62.2	110.6	7.8
	Balance	- 27.3	- 46.5	87.1	11.1
Romania	Exports	2 681.3	2 465.4	1 778.2	820.3
	Imports	2 488.7	1 784.2	941.2	680.5
	Balance	192.6	681.2	837.0	139.8
Federal Republic of Germany <sup>(3)</sup>	Exports	9 309.7	6 929.7	6 302.7	5 532.7
	Imports	11 355.0	12 533.4	10 089.2	5 662.7
	Balance	- 2 045.3	- 5 603.7	- 3 786.5	- 130.0
Finland	Exports	1 758.8	1 642.7	2 175.5	1 556.0
	Imports	2 126.8	2 126.7	2 622.0	600.6
	Balance	- 368.0	- 484.0	446.5	955.4
France	Exports	1 348.6	1 637.5	2 178.5	2 073.6
	Imports	1 218.4	1 111.6	2 068.2	1 442.7
	Balance	130.2	525.9	110.3	630.9

For footnotes, please see end of table.

9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries <sup>(1)</sup>		1989	1990	January - June 1990 <sup>(2)</sup>	January - June 1990 <sup>(2)</sup>
Czechoslovakia	Exports	6 255.4	5 073.7	4 700.2	2 732.0
	Imports	6 609.8	6 244.1	3 789.7	2 008.1
	Balance	- 354.4	- 1 170.4	910.5	723.9
Switzerland	Exports	416.1	228.8	226.7	534.1
	Imports	988.1	961.5	1 504.5	844.7
	Balance	- 572.0	- 732.7	- 1 277.8	- 310.6
Sweden	Exports	559.9	486.0	530.6	515.6
	Imports	434.8	464.9	643.3	335.6
	Balance	125.1	21.1	112.7	180.0
Yugoslavia	Exports	1 926.4	1 828.1	1 360.7	1 496.4
	Imports	2 405.5	2 197.2	1 350.3	922.8
	Balance	- 479.1	- 369.1	10.4	573.6
Asia					
Afghanistan	Exports	504.5	370.9	230.6	284.6
	Imports	79.3	89.6	55.4	29.7
	Balance	425.2	281.3	175.2	254.9
Bangladesh	Exports	51.3	25.5	36.1	42.5
	Imports	25.8	27.6	36.8	6.4
	Balance	25.5	- 2.1	- 0.7	36.1
Vietnam	Exports	1 390.9	1 104.2	847.6	263.3
	Imports	519.7	703.5	328.7	223.1
	Balance	871.2	400.7	518.9	40.2
India	Exports	1 147.2	1 185.8	573.4	467.0
	Imports	1 770.6	2 021.5	1 033.6	724.2
	Balance	- 623.4	- 835.7	- 460.2	- 257.2
Indonesia	Exports	26.3	17.0	18.6	30.0
	Imports	68.2	53.9	99.3	26.8
	Balance	- 41.9	- 36.9	- 80.7	3.2
Iraq	Exports	255.4	283.6	x	x
	Imports	975.9	542.6	x	x
	Balance	- 720.5	- 259.0	x	x
Iran	Exports	125.4	171.1	94.5	263.0
	Imports	61.2	113.8	41.2	100.7
	Balance	64.2	57.3	53.3	162.3
Yemen <sup>(4)</sup>	Exports	238.3	157.3	330.3	13.5
	Imports	6.0	3.6	3.4	0.2
	Balance	232.3	153.7	326.9	13.3

For footnotes, please see end of table.



9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries (1)		1989	1990	January - June 1990 (2)	January- June 1990 (2)
Cambodia	Exports	128.5	95.1	145.4	7.5
	Imports	12.3	14.3	16.6	6.4
	Balance	116.2	80.8	128.8	1.1
Cyprus	Exports	32.3	40.2	27.9	103.8
	Imports	20.3	23.9	30.3	25.6
	Balance	12.0	16.3	- 2.4	78.2
China	Exports	1 328.5	1 377.7	843.6	1 044.6
	Imports	1 083.5	1 660.3	1 370.3	1 032.2
	Balance	245.0	- 282.6	- 526.7	12.4
Korea, Democratic People's Republic	Exports	940.5	886.6	481.0	223.2
	Imports	561.5	612.4	297.9	228.7
	Balance	379.0	274.2	183.1	- 5.5
Laos	Exports	73.7	55.6	29.2	4.9
	Imports	15.6	16.4	5.3	3.8
	Balance	58.1	39.2	23.9	1.1
Lebanon	Exports	29.5	37.9	51.7	54.9
	Imports	24.2	37.9	68.2	26.2
	Balance	5.3	0.0	- 16.5	28.7
Malaysia	Exports	12.9	23.1	37.5	41.9
	Imports	152.7	93.4	135.4	42.1
	Balance	- 139.8	- 70.3	- 97.9	- 0.2
Mongolia	Exports	1 005.2	990.2	608.9	320.8
	Imports	397.3	433.9	398.5	209.9
	Balance	607.9	556.3	210.4	110.9
Pakistan	Exports	77.1	102.6	162.7	60.7
	Imports	73.1	89.8	131.7	48.3
	Balance	4.0	12.8	31.0	12.4
Saudi Arabia	Exports	10.5	14.6	18.2	170.4
	Imports	0	0.1	x	1.0
	Balance	10.5	14.5	18.2	169.4
Singapore	Exports	58.4	57.1	96.4	125.0
	Imports	100.2	208.1	179.3	181.1
	Balance	- 41.8	- 151.0	- 82.9	- 56.1
Syria	Exports	207.9	149.2	71.1	45.3
	Imports	704.6	787.0	459.0	108.6
	Balance	- 496.7	- 637.8	- 387.9	- 63.3

For footnotes, please see end of table.

9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries (1)		1989	1990	January - June 1990 (2)	January - June 1990 (2)
Thailand	Exports	35.9	57.9	49.9	126.4
	Imports	220.7	67.6	170.0	125.1
	Balance	- 184.8	- 9.7	- 120.1	1.3
Turkey	Exports	349.0	635.6	600.6	792.4
	Imports	495.6	401.8	492.3	426.0
	Balance	- 146.6	233.8	108.3	366.4
Philippines	Exports	5.5	12.1	14.8	11.0
	Imports	16.1	11.5	16.1	0.9
	Balance	- 10.6	0.6	1.3	10.1
Sri-Lanka	Exports	0.7	1.2	2.0	1.3
	Imports	12.9	31.5	60.4	16.5
	Balance	- 12.2	- 30.3	- 58.4	- 15.2
Japan	Exports	1 343.0	1 434.8	1 668.1	1 694.6
	Imports	2 138.0	2 100.6	2 927.8	1 897.5
	Balance	- 795.0	- 665.8	- 1 259.7	- 202.9
<b>Africa</b>					
Algeria	Exports	188.6	126.8	184.0	143.8
	Imports	98.9	123.1	127.8	234.9
	Balance	89.7	3.7	56.2	- 91.1
Angola	Exports	47.0	57.5	79.8	63.9
	Imports	3.3	2.1	3.0	1.2
	Balance	43.7	55.4	76.8	62.7
Ghana	Exports	1.0	0.6	1.1	0.5
	Imports	52.2	22.3	52.0	54.2
	Balance	- 51.2	- 21.7	- 50.9	- 53.7
Guinea	Exports	19.9	23.3	36.0	25.6
	Imports	119.1	100.1	178.4	139.4
	Balance	- 99.2	- 76.8	- 142.4	- 113.8
Egypt	Exports	306.0	334.0	143.9	238.7
	Imports	329.3	419.8	174.6	142.6
	Balance	- 23.3	- 85.8	- 30.7	96.1
Cameroon	Exports	6.7	6.1	11.5	4.7
	Imports	6.1	4.6	6.8	4.8
	Balance	0.6	1.5	4.7	- 0.1
Congo	Exports	6.1	3.3	4.4	2.6
	Imports	5.8	4.4	8.5	3.5
	Balance	0.3	- 1.1	- 4.1	- 0.9

For footnotes, please see end of table.

9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries (1)		1989	1990	January - June 1990 (2)	January - June 1990 (2)
Côte d'Ivoire (5)	Exports	8.1	8.4	14.0	10.7
	Imports	110.9	31.3	81.3	70.8
	Balance	- 102.8	- 22.9	- 67.3	- 60.1
Libya	Exports	33.6	35.0	x	x
	Imports	93.5	111.9	x	x
	Balance	- 59.9	- 76.9	x	x
Morocco	Exports	74.7	85.0	91.8	73.7
	Imports	6.0	5.3	10.3	0.6
	Balance	68.7	79.7	81.5	73.1
Mozambique	Exports	42.6	38.0	54.7	3.3
	Imports	4.6	7.2	5.5	9.5
	Balance	38.0	30.8	49.2	- 6.2
Nigeria	Exports	31.9	30.1	55.7	36.9
	Imports	0.8	3.5	8.7	11.1
	Balance	31.1	26.6	47.0	25.8
Tunisia	Exports	37.3	36.9	46.5	37.4
	Imports	12.8	28.8	35.8	35.1
	Balance	24.5	8.1	10.7	2.3
Ethiopia	Exports	122.3	98.1	118.5	3.2
	Imports	28.5	6.7	10.9	x
	Balance	93.8	91.4	107.6	3.2
America					
Argentina	Exports	69.3	83.1	104.5	46.2
	Imports	626.6	352.7	815.3	240.1
	Balance	- 557.3	- 269.6	- 710.8	- 193.9
Brazil	Exports	22.3	44.7	39.8	66.8
	Imports	245.9	152.1	284.9	162.6
	Balance	- 223.6	- 107.4	- 245.1	- 95.8
Canada	Exports	38.5	54.7	47.9	62.2
	Imports	412.9	663.4	1 478.4	1 353.5
	Balance	- 374.4	- 608.7	- 1 430.5	- 1 291.3
Colombia	Exports	6.9	7.0	11.9	9.4
	Imports	35.6	8.3	18.5	3.1
	Balance	- 28.7	- 1.3	6.6	6.3
Cuba	Exports	3 833.5	3 399.9	2 018.9	692.8
	Imports	3 867.0	3 685.7	6 455.4	2 372.5
	Balance	- 33.5	- 285.8	- 4 436.5	- 1 679.7

For footnotes, please see end of table.

9.10 FOREIGN TRADE BY COUNTRY  
(Mio. roubles)

Countries (1)		1989	1990	January - June 1990 (2)	January - June 1990 (2)
Mexico	Exports	4.5	8.0	12.1	4.5
	Imports	57.6	31.7	61.2	22.4
	Balance	- 53.1	- 23.7	49.1	- 17.9
Nicaragua	Exports	180.4	101.8	162.2	13.6
	Imports	7.6	7.8	20.8	0.2
	Balance	172.8	94.0	141.4	13.4
Panama	Exports	20.6	39.6	24.3	39.4
	Imports	0.5	4.6	6.6	0.6
	Balance	20.1	35.0	17.7	38.8
Peru	Exports	51.2	10.9	19.3	8.8
	Imports	65.5	58.9	100.7	24.2
	Balance	- 14.3	- 48.0	- 81.4	- 15.4
USA	Exports	529.9	556.0	591.7	575.6
	Imports	2 865.2	2 153.8	4 433.2	3 164.3
	Balance	- 2 335.3	- 1 597.8	- 3 841.5	- 2 588.7
Uruguay	Exports	2.2	24.1	19.1	2.8
	Imports	45.4	58.0	140.5	14.7
	Balance	- 43.2	- 33.9	- 121.4	- 11.9
Australia and Oceania					
Australia	Exports	17.7	17.6	27.2	7.7
	Imports	587.4	225.9	442.5	286.0
	Balance	- 569.7	- 208.3	- 415.3	- 278.3
New Zealand	Exports	15.9	12.6	20.9	1.6
	Imports	127.9	134.8	309.9	73.4
	Balance	- 112.0	- 122.2	- 289.0	- 71.8

(1) In Russian alphabetical order.

(2) Calculated on the basis of the commercial rate as at 1 November 1990.

(3) Territory of the Federal Republic as from 3 October 1990.

(4) Reunification of North and South Yemen on 22.5.1990 to form the Republic of Yemen.

(5) Former Ivory Coast.

9.11 IMPORTS AND EXPORTS OF GOODS BY REPUBLIC, 1989 <sup>(1)</sup>  
(Mrd Rbl)

Republic	Imports			Exports		
	Total	of which		Total	of which	
		From other republics	Imports		From other republics	Exports
Russian SFSR	144.27	70.67	73.60	109.61	75.07	34.54
Ukraine	54.54	39.97	14.57	48.06	40.46	7.60
Rep. of Belorussia	19.35	14.84	4.51	20.30	18.31	1.99
Rep. of Uzbekistan	14.16	12.05	2.11	10.17	8.54	1.63
Kazakh SSR	17.57	14.57	3.00	9.09	8.20	0.89
Rep. of Georgia	6.47	4.89	1.58	6.09	5.72	0.37
Rep. of Azerbaijan	5.19	3.79	1.40	7.12	6.67	0.45
Lithuania	7.35	5.79	1.56	6.33	5.85	0.48
Rep. of Moldova	6.61	5.19	1.42	5.46	5.19	0.27
Latvia	6.03	4.52	1.51	5.41	5.04	0.37
Rep. of Kyrgyzstan	4.29	3.36	0.93	2.60	2.55	0.05
Rep. of Tadjikistan	3.93	3.25	0.68	2.53	2.18	0.35
Rep. of Armenia	4.90	3.84	1.06	3.69	3.60	0.09
Turkmen SSR	3.33	2.74	0.59	2.66	2.42	0.24
Estonia	3.82	3.23	0.59	3.12	2.90	0.22

(1) In actual domestic prices.

## 10 TRANSPORT AND COMMUNICATIONS

As a result of the general decline in output and the disintegration of the old economic ties between enterprises, branches and regions, some 5% fewer goods were transported in the public sector in 1990 than in 1989. Deficiencies in the organization of labour in the country's economy, the large number of obsolete vehicles, the poor state of the roads and the increasing number of cases of damage also contributed to these lower figures. The density of the transport network in the Soviet Union shows a marked decline from west to east and from south to north.

The lack of supervision of the transport system is increasingly becoming a barrier to economic development. A survey of consignees showed that in 1990 goods to the value of over 46 million roubles were lost in transit by rail and 4.3 million roubles' worth while being transported by road. Half of the goods lost on the railways were stolen.

In the last ten years, the railway network in the Soviet Union has been extended by 5 700 km to a total of 147 500 km, and over the same period the percentage of electrified track has risen from 31 to 37% (54 300 km). Virtually all the track extensions have been in the Russian SFSR, and most of them in the eastern areas of the republic.

In 1990 the railways transported 145 million tonnes less goods than in 1989. At the end of 1990, there were 38.8 million tonnes of goods lying at factory and station loading points ready for shipment but undespached.

In 1990, the general road network was 1.8 million km long, i.e. approximately 500 000 km longer than in 1980. Three-quarters of this length had a hard surface, and over half was public road.

In 1990, 6 344 million tonnes of freight were transported by road, i.e. 432 million tonnes (6.4%) fewer than in the previous year.

In 1990, there was a total of 123 500 km of inland waterways, 16% of them man-made. The single deep-water system for the European part of the Soviet Union was completed in 1985. In 1990, 669 million tonnes of goods were transported by inland waterway, and 229 million tonnes by the deep-sea fleet. These figures were 3.6 and 6.5% respectively down on the figures for the previous year.

Few goods are transported by air. Air freight is significant only in those regions of the far north which have not yet been properly opened up. Freight transported by air is almost exclusively mail and high-value/low-weight goods.

The system of long-distance pipelines for petroleum and natural gas was extended considerably in the 1980s in view of its importance for the export of such products to many European countries. In 1990, there were 218 700 km of natural gas pipelines, 67.1% more than in 1980. Over the same period, quantities transported increased by 90.1%.

For petroleum and petroleum products, there were 86 000 km of long-distance pipelines in 1990 as opposed to 69 700 km in 1980.

In 1990, 332 000 road accidents involving injury to persons were reported, 12 000 or 4% more than in 1989. Of all fatal accidents, 18% are caused by driving under the influence of alcohol.

There were 136 accidents in the public railway system, in which 41 people were killed, in deep sea fishing there were 74 accidents with five fatalities and in 195 air accidents 196 people were killed.

In view of the enormous size of the Soviet Union, an extensive communications network is necessary for the transmission of information both within the country and outside it. In 1990, there were 75% more telephone connections than in 1980, most of them in the cities. In rural areas, there are still too few connections to the public telephone network.

Some 98% of the population can receive at least one television channel, but only 49% can watch three or more channels.

10.1 LENGTH OF RAILWAY NETWORK (PUBLIC) BY REPUBLIC <sup>(1)</sup>  
(1 000 km)

Republic	1970	1980	1985	1988	1989	1990
<b>Total</b>	135.2	141.8	144.9	146.7	147.4	147.5
of which electrified	33.9	43.7	48.4	52.9	53.9	54.3
Russian SFSR	77.5	82.6	84.9	86.3	87.1	87.2
Ukraine	22.1	22.6	22.7	22.8	22.7	22.8
Rep. of Belorussia	5.4	5.5	5.5	5.6	5.6	5.5
Rep. of Uzbekistan	2.9	3.4	3.5	3.5	3.5	3.5
Kazakh SSR	13.8	14.2	14.5	14.5	14.5	14.5
Rep. of Georgia	1.4	1.4	1.5	1.6	1.6	1.6
Rep. of Azerbaijan	1.8	1.9	2.1	2.1	2.1	2.1
Lithuania	2.0	2.0	2.0	2.0	2.0	2.0
Rep. of Moldova	1.1	1.1	1.1	1.1	1.1	1.1
Latvia	2.6	2.4	2.4	2.4	2.4	2.4
Rep. of Kyrgyzstan	0.4	0.4	0.4	0.4	0.4	0.4
Rep. of Tadjikistan	0.3	0.5	0.5	0.5	0.5	0.5
Rep. of Armenia	0.6	0.7	0.7	0.8	0.8	0.8
Turkmen SSR	2.1	2.1	2.1	2.1	2.1	2.1
Estonia	1.2	1.0	1.0	1.0	1.0	1.0

(1) As at the end of the year.

### 10.2 AMOUNT OF TRAFFIC CARRIED ON THE RAILWAYS (PUBLIC)

Type of traffic	Unit	1980	1985	1987	1988	1989	1990
Passengers	Mio.	4 072	4 166	4 360	4 396	4 323	4 273
Freight	Mio. t	3 728	3 951	4 067	4 116	4 017	3 872
Passenger-kilometres	Mrd	342	374	402	414	411	417
Tonne-kilometres	Mrd	3 440	3 718	3 825	3 925	3 852	3 717

### 10.3 LENGTH OF ROAD NETWORK (1) (1 000 km)

Survey item	1980	1985	1987	1988	1989	1990
Total	1 341	1 543	1 610	1 737	1 802	1 838
of which hard surface	921	1 131	1 196	1 299	1 324	1 376

(1) As at the end of the year; public and non-public roads.

### 10.4 NUMBER OF MOTOR VEHICLES AND CAR OWNERSHIP (1)

Type vehicle/car ownership	Unit	1980	1985	1987	1988	1989	1990
Private motor cars	1 000	8 218	12 444	14 194	15 084	16 000	16 408
Cars per 1 000 inhabitants	Number	x	44.7	50.0	52.6	55.6	56.8
Buses	1 000	277	310	319	318	316	310

(1) As at the end of the year.

### 10.5 AMOUNT OF TRAFFIC CARRIED ON THE PUBLIC ROAD NETWORK

Type of traffic	Unit	1980	1985	1987	1988	1989	1990
Bus transport							
Passengers	Mio.	42 176	47 006	49 983	50 723	50 496	50 259
Passenger-kilometres	Mrd	390	447	471	480	480	481
Road haulage							
Freight	Mio. t	6 456	6 320	6 853	6 921	6 776	6 344
Tonne-kilometres	Mrd	132	142	141	143	143	136



# 10.6 PUBLIC MUNICIPAL TRANSPORT

Type of traffic	Unit	1970	1980	1985	1988	1989	1990
Route length (1)							
Trams	1 000 km	4.1	4.6	4.8	5.0	5.0	5.0
Trolley buses	1 000 km	4.1	7.0	8.1	8.8	8.9	9.1
Underground	km	214	342	445	484	495	509
Number of vehicles (1)							
Trams	Number	22 051	20 559	21 847	22 448	22 411	22 101
Trolley buses	Number	15 767	23 868	26 771	28 432	28 764	28 505
Underground coaches	Number	2 544	4 567	5 699	6 408	6 589	6 758
Passengers carried							
Trams	Mio.	7 962	8 255	8 512	9 144	9 071	8 517
Trolley buses	Mio.	6 122	9 035	9 974	11 580	11 727	11 449
Underground	Mio.	2 294	3 823	4 434	4 792	5 024	5 844

(1) As at the end of the year.

# 10.7 ROAD ACCIDENTS (1 000)

Survey item	1980	1985	1986	1987	1988	1989	1990
Accidents involving injury to persons	x	242	241	247	273	320	332
Injuries	x	258	260	268	298	347	360
Fatalities	48.9	41.5	39.0	39.8	47.2	58.7	63.4

# 10.8 NAVIGABLE INLAND WATERWAYS (1) (1 000 km)

Type of waterway	1980	1985	1987	1988	1989	1990
Inland waterways	142.0	126.6	122.5	122.5	123.7	123.5
of which canals	20.5	21.3	x	21.2	20.2	19.7

(1) As at the end of the year.

### 10.9 INLAND WATERWAY TRANSPORT

Survey item	Unit	1980	1985	1987	1988	1989	1990
Passengers	Mio.	138	132	128	131	127	120
Freight	Mio. t	568	633	673	691	694	669
Passenger-kilometres	Mrd	6.1	5.9	5.7	5.4	5.4	5.6
Tonne-kilometres	Mrd	245	262	253	251	240	233

### 10.10 NUMBER OF MERCHANT SHIPS AND TONNAGE (1)

Survey item	Unit	1980	1985	1987	1988	1989	1990
Vessels	Number	5 924	8 279	7 154	6 741	6 555	7 383
Tankers	Number	418	503	426	422	402	474
Vessels	1 000 GRT	14 832	23 444	24 745	25 784	25 854	26 737
Tankers	1 000 GRT	3 460	4 728	4 591	4 368	4 128	4 167

(1) Vessels 100 GRT and above; as at the middle of the year.

### 10.11 SEA TRAFFIC

Survey item	Unit	1980	1985	1987	1988	1989	1990
Passengers	Mio.	39	52	50	49	45	45
Freight	Mio. t	162	228	240	257	245	229
Passenger-kilometres	Mrd	1.6	2.5	2.6	2.0	2.0	1.9
Tonne-kilometres	Mrd	656	848	905	1 011	991	945

### 10.12 AIR TRAFFIC, NATIONAL AIRLINE (1)

Survey item	Unit	1980	1985	1988	1989	1990
Air passengers	Mio.	103.8	112.6	125.0	132.1	137.7
Foreign traffic	Mio.	2.6	3.6	4.2	4.8	5.0
Freight	1 000 t	2 989	3 183	3 291	3 246	2 937
Foreign traffic	1 000 t	75.4	88.5	101.1	101.9	105.3
Passenger-kilometres	Mrd	160.6	188.4	214.8	229.0	243.8
Foreign traffic	Mrd	9.3	13.2	16.0	17.8	19.5
Tonne-kilometres	Mio.	x	20 308	22 709	23 924	25 161

(1) Aeroflot scheduled services.

### 10.13 LONG-DISTANCE PIPELINES

Survey item	Unit	1980	1985	1987	1988	1989	1990
Length (1)	1 000 km	200.6	255.5	283.4	293.7	298.6	304.7
Petroleum	1 000 km	57.5	63.6	67.9	67.3	66.3	66.2
Petroleum products	1 000 km	12.2	17.4	18.5	18.8	19.4	19.8
Natural gas	1 000 km	130.9	174.5	197.0	207.6	212.9	218.7
Products transported	Mio. t	950	1 113	1 212	1 241	1 249	1 225
Petroleum	Mio. t	574	564	591	590	574	539
Petroleum products	Mio. t	53	67	73	73	76	72
Natural gas	Mio. t	323	482	548	578	599	614
Throughput							
Petroleum and petroleum products	Mrd tkm	1 216	1 313	1 450	1 466	1 422	1 307

(1) As at the end of the year.

### 10.14 COMMUNICATIONS (1) (million)

Survey item	1970	1980	1985	1988	1989	1990 (2)
Telephones, public and private	11.0	23.7	31.1	37.5	40.1	41.4
in cities	9.4	19.9	26.2	31.5	33.7	34.8
Radio sets	48.6	67.9	82.1	83.7	84.8	85.2
Television sets	34.8	66.8	82.4	89.9	92.4	93.1

(1) As at the end of the year.

(2) Excluding data for Lithuania.

## 11 TOURISM

For the tourist, the country offers a wide variety of natural, cultural and historical assets and a broad spectrum of ethnic diversity. From the national accounts point of view, tourism has so far been of minor importance, since the infrastructure is not generally up to international standards.

Although the number of foreign travellers rose from 4.3 million in the mid-1980s to 7.8 million in 1989, 0.5 million fewer visited the country in 1990, presumably because of its increasing political and economic instability, the ethnic conflicts in major tourist areas such as the Caucasus or Central Asia, and the opportunities now enjoyed by the citizens of the former socialist countries for travelling further afield.

There were more journeys abroad by Soviet citizens than there were visits to the country by foreigners. During the last few years, the regulations on foreign travel by Soviet citizens have eased somewhat.

Soviet tourists are particularly fond of visiting the former socialist countries. In 1990, by far the favourite destinations were Poland (2.2 million people) and Yugoslavia (1.0 million).

### 11.1 NUMBERS OF FOREIGN VISITORS IN 1990 BY SELECTED COUNTRY OF ORIGIN AND PURPOSE OF VISIT <sup>(1)</sup>

Country of origin	Total		Business	Tourism	Private	Other <sup>(2)</sup>
	1 000	%	1 000			
Total	7 204	100	1 808	2 286	1 426	1 684
of which:						
Poland	2 429	33.7	336	738	733	622
Finland	703	9.8	126	479	32	66
Romania	557	7.7	48	127	82	300
Federal Republic of						
Germany	487	6.8	171	232	20	64
Bulgaria	469	6.5	150	27	214	78
Hungary	353	4.9	75	30	198	50
Czechoslovakia	230	3.2	87	55	28	60
United States	214	3.0	73	128	5	8
Mongolia	182	2.5	114	3	21	44
China	137	1.9	54	22	14	47
Italy	126	1.7	45	65	1	15
Yugoslavia	112	1.6	50	22	11	29
Sweden	108	1.5	49	50	3	6
Great Britain and						
Northern Ireland	104	1.4	35	52	2	15

<sup>(1)</sup> Including day trippers.

<sup>(2)</sup> Including staff escorting and operating vehicles and transit.

11.2 NUMBERS OF FOREIGN VISITORS BY SELECTED COUNTRY OF ORIGIN <sup>(1)</sup>

Country of origin	Unit	1986	1987	1988	1989	1990
Total	1 000	4 309	5 246	6 007	7 752	7 204
of which:						
Finland	%	16.9	17.0	11.4	8.8	9.8
Federal Republic of Germany <sup>(2)</sup>	%	3.9	3.9	4.0	3.0	6.8
United States	%	2.0	2.4	2.5	2.3	3.0
Sweden and Norway	%	1.9	1.7	1.6	1.8	1.9
Italy	%	1.4	2.1	1.9	1.3	1.7
Great Britain and Northern Ireland	%	1.5	1.5	1.5	1.2	1.4
France	%	1.7	1.5	1.4	1.1	1.2
Japan	%	1.0	0.9	1.0	0.7	0.9

<sup>(1)</sup> Including day trippers.

<sup>(2)</sup> 1986 to 1989: territory of the Federal Republic prior to 3 October 1990.

11.3 JOURNEYS BY SOVIET CITIZENS ABROAD IN 1990, BY SELECTED COUNTRY OF DESTINATION AND PURPOSE OF JOURNEY <sup>(1)</sup>

Country of origin	Total		Business	Tourism	Private	Other <sup>(2)</sup>
	1 000	%				
Total	9 086	100	1 824	2 150	3 632	1 480
of which:						
Poland	2 169	23.9	417	584	1 058	110
Yugoslavia	1 039	11.4	26	115	871	27
Federal Republic of Germany	843	9.3	174	94	416	159
Hungary	692	7.6	62	157	399	74
Czechoslovakia	639	7.0	72	300	190	77
Bulgaria	610	6.7	114	302	99	95
Romania	413	4.5	32	231	104	46
Mongolia	393	4.3	295	7	40	51
Finland	343	3.8	66	119	59	99
Turkey	156	1.7	10	30	77	39
China	131	1.4	36	19	25	51

<sup>(1)</sup> Including day trippers.

<sup>(2)</sup> Including staff escorting and operating vehicles and transit.

11.4 JOURNEYS BY SOVIET CITIZENS ABROAD IN 1989 AND 1990, BY SELECTED COUNTRY  
OF DESTINATION AND PURPOSE OF JOURNEY (1)

Country of destination	Unit	1989			1990		
		Total	Business	Private	Total	Business	Private
<b>Total</b>	<b>1 000</b>	<b>8 009</b>	<b>1 114</b>	<b>3 640</b>	<b>9 086</b>	<b>1 824</b>	<b>3 632</b>
of which:	%						
Poland	%	16.1	18.6	17.0	23.9	22.9	29.1
Yugoslavia	%	5.2	1.6	7.3	11.4	1.4	24.0
Federal Republic of Germany	%	2.9	4.2	3.6	9.3	9.6	11.4
Hungary	%	26.7	4.7	51.0	7.6	3.4	11.0
Czechoslovakia	%	9.1	7.9	6.3	7.0	4.0	5.2
Bulgaria	%	6.8	8.5	2.1	6.7	6.3	2.7
Romania	%	2.2	1.1	1.4	4.5	1.8	2.9
For information only:							
former GDR and East Berlin	%	6.2	8.4	3.2	x	x	x

(1) A day trippers.

## 12 MONEY AND CREDIT

In the Soviet Union, the whole of the financial system, all monetary and credit institutions and the insurance system used to be concentrated in the hands of the State and highly centralized. For about the past two years, however, banks or parts of them have begun to be privatized or to pass into cooperative ownership.

Exchange rates used to be fixed by the State Bank, with no economic reasoning behind them. The rouble was an internal currency, and thus no purchasing power parities against other countries were ascertainable. The official exchange rate was used for statistical purposes and to record foreign trade credits granted in roubles. The market, or tourist, rate was used for purchases of freely convertible currencies from foreigners and for sales of foreign currency to the inhabitants of the Union for private journeys abroad. Until the end of 1991, there were restrictions on the exchange of money by Soviet citizens and foreigners.

According to the monetary balance now published by the State Bank for the first time, the stock of notes and coins in circulation increased by 82% over the last five years, private bank deposits by 57% and deposits by enterprises and institutions by a factor of 2.2. In the first half of 1991 this trend intensified. Between 1986 and 1990, there was a more than fourfold increase in loans granted to the Union budget and the republics' budgets. In 1990, only just under 80% of the 1986 credit volume, or 352 800 million roubles, was granted to the economy.

For many years now, the major borrowers have been industry, agriculture and the distributive trades, with under 1% of loans going to the transport and communications industries in recent times.

In the last five years, average savings deposits per head of the population have risen by around 500 to 1 319 roubles. The average deposit per savings account in 1990 was 1 681 roubles in the urban areas and 1 914 in the rural areas. In Georgia, Lithuania and Armenia, there were deposits of 2 450 to 2 800 roubles per account, as opposed to under 1 500 roubles in Kyrgyzstan, Tadjikistan and Kazakhstan.

Up to the present, insurance has been a State monopoly. The ratio of insurance receipts to claims paid is 1:0.8. The majority of insurance contracts taken out by the Soviet population - 2.5 per household, on average - probably relate to property.

### 12.1 OFFICIAL EXCHANGE RATES (1)

Type of rate	Unit	1985	1987	1988	1989	1990	1991 (2)
Official rate							
of buying and selling	Rbl per USD 100	76.42	58.43	60.67	60.88	56.40	60.44
of buying and selling	Rbl per DM 100	30.24	36.59	34.17	35.73	36.71	33.86
Commercial rate							
of buying and selling	Rbl per USD 100x	x	x	x	169.20	181.32	
of buying and selling	Rbl per DM 100	x	x	x	x	110.13	101.58
Special rate							
of buying and selling	Rbl per USD 100	x	x	x	608.80	564.00	x(3)
of buying and selling	Rbl per DM 100	x	x	x	357.30	367.10	x

(1) As at the end of the year.

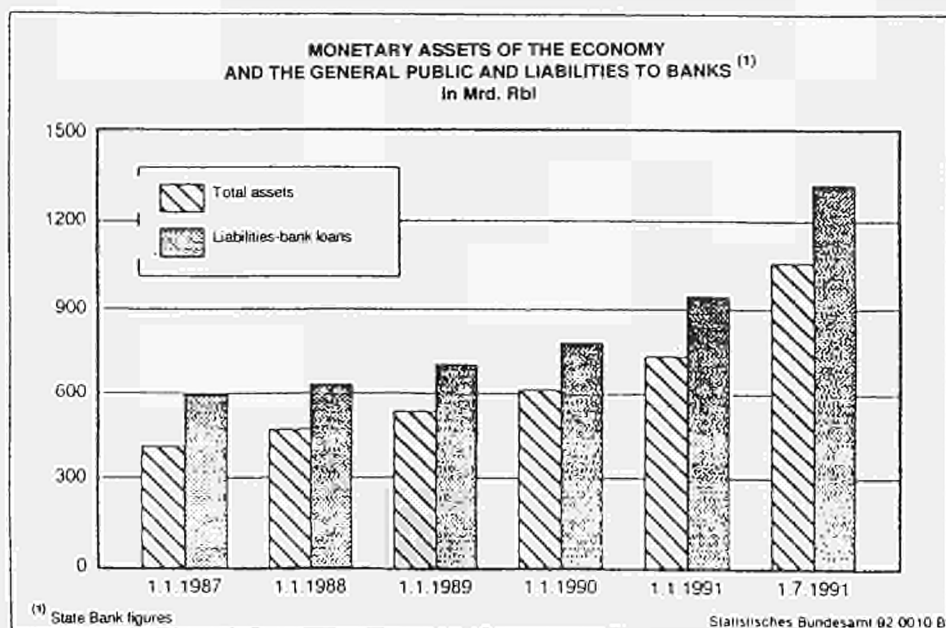
(2) As at the end of June.

(3) From 2 April, the "market rate" (USD 1 = 27.60 Rbl); from 24 July, the "tourist rate" (USD 1 = 32.00 Rbl).

**12.2 MONETARY ASSETS OF THE ECONOMY AND THE GENERAL PUBLIC  
AND LIABILITIES TO BANKS <sup>(1)</sup>**  
(Mrd Rbl)

Survey item	1.1.1987	1.1.1988	1.1.1989	1.1.1990	1.1.1991	1.7.1991
<b>Total assets</b>	<b>410.9</b>	<b>471.9</b>	<b>535.5</b>	<b>613.7</b>	<b>733.1</b>	<b>1 050.5</b>
Notes and coins in circulation	74.8	80.6	91.6	109.5	136.1	157.6
Sight deposits	222.2	263.0	304.8	343.6	395.6	537.1
Private households	146.5	159.2	176.2	201.6	230.3	282.5
Enterprises	75.7	103.8	128.6	142.0	165.3	254.6
Term deposits	113.9	128.3	119.1	160.6	201.4	363.8
Private households	96.3	107.7	121.6	138.9	156.5	289.5
Enterprises	17.6	20.6	17.5	21.7	44.9	74.3
Offset accounts, other assets	182.3	159.7	167.1	167.5	211.5	267.1
<b>Total liabilities - bank loans</b>	<b>593.2</b>	<b>631.6</b>	<b>702.6</b>	<b>781.2</b>	<b>944.6</b>	<b>1 325.6</b>
Budget (Union and Republics)	140.6	200.7	298.0	390.1	580.2	827.3
Normal loans	125.7	180.2	267.7	350.5	518.6	755.3
Agricultural support prices	14.9	20.5	30.3	39.6	61.6	72.0
Economy and private households	452.6	430.9	404.6	391.1	364.4	498.3
Short-term loans	356.6	333.5	302.3	287.1	272.5	415.0
Long-term loans	96.0	97.4	102.3	104.0	91.9	83.3
Private households	2.4	3.1	5.8	7.4	11.6	12.7
Enterprises	93.6	94.3	96.5	96.6	80.3	70.6

<sup>(1)</sup> Data: State Bank.





**12.3 BANK LOANS TO THE ECONOMY AND THE GENERAL PUBLIC <sup>(1)</sup>**  
(Mrd Rbl)

Borrowers	1985	1986	1987	1988	1989	1990
Total	521.3	452.6	432.1	404.6	391.1	364.4
Short-term loans	426.4	356.6	334.7	302.3	287.1	272.5
Industry	105.0	108.7	94.5	81.5	72.7	72.5
Agriculture	82.3	84.5	87.0	81.6	75.6	28.5
Kolkhozes	36.5	38.3	39.4	35.1	31.1	11.1
Construction industry	110.9	43.4	39.6	26.7	22.2	23.4
Transport and communications	4.6	4.7	4.1	2.3	1.9	2.7
Supplies and sales	22.2	23.6	23.8	23.6	23.1	23.4
Procurement	11.1	11.5	12.5	11.5	10.7	20.7
Distributive trades	87.5	77.3	70.4	70.7	68.4	58.0
Other branches	2.8	2.9	2.8	4.4	12.5 <sup>(2)</sup>	43.3 <sup>(3)</sup>
Long-term credits	94.9	96.0	97.4	102.3	104.0	91.9
Government and cooperative enterprises and organizations	92.9	93.6	94.3	96.5	96.6	80.3
of which:						
Sovkhozes and other State agricultural enterprises	9.7	11.0	11.6	15.2	12.2	10.2
Kolkhozes	47.4	49.2	49.4	47.5	43.4	19.9
Housing construction coops	4.5	5.1	5.7	6.3	6.7	6.6
Interplant enterprises and organizations	6.4	2.0	1.9	1.7	1.5	1.0
Private households	2.0	2.4	3.1	5.8	7.4	11.6

(1) As at the end of the year.

(2) Of which commercial banks: 6 000 million roubles.

(3) Of which commercial banks: 24 500 million roubles.

**12.4 LIABILITIES OF ENTERPRISES AND INSTITUTIONS IN ARREARS <sup>(1)</sup>**  
(Mrd Rbl)

Survey item	1985	1988	1989	1990
Total liabilities	30.7	21.9	21.9	42.0
Loans	18.0	6.3	4.4	9.2
Settlements between economic organizations	12.7	15.6	17.5	32.8

(1) As at the end of the year.

## 12.5 SAVINGS BANKS (1)

Survey item	Unit	1985	1986	1987	1988	1989	1990
Savings banks	1 000	78.5	77.9	76.9	75.8	75.3	75.0
in cities	1 000	24.1	23.9	23.6	23.2	23.1	23.0
in rural areas	1 000	54.4	54.0	53.3	52.6	52.2	52.0
Savings accounts	Mio.	170.8	178.4	187.5	196.0	208.0	220.0
in cities	Mio.	130.4	136.5	143.7	150.8	161.0	170.1
in rural areas	Mio.	40.4	41.9	43.8	45.2	47.0	49.9
Savings deposits	Mrd Rbl	220.8	242.8	266.9	296.7	337.8	381.4
in cities	Mrd Rbl	164.1	181.1	199.6	224.0	256.9	285.9
in rural areas	Mrd Rbl	56.7	61.7	67.3	72.7	80.9	95.5
Average savings deposits per account	Rbl	1 293	1 361	1 424	1 514	1 624	1 734
in cities	Rbl	1 259	1 327	1 390	1 485	1 596	1 681
in rural areas	Rbl	1 404	1 473	1 535	1 609	1 722	1 914
Average savings deposits per head of population		793	863	939	1 038	1 174	1 319
in cities	Rbl	903	980	1 063	1 193	1 356	1 500
in rural areas	Rbl	587	639	699	742	825	970

(1) As at the end of the year.

## 12.6 SELECTED DATA ON STATE INSURANCE (1)

Survey item	Unit	1985	1986	1987	1988	1989	1990 <sup>(2)</sup>
Insurance institutions	Number	6 097	6 117	5 985	5 900	5 765	5 636
Total contributions	Mrd Rbl	11.7	15.8	17.2	18.0	18.1	20.0
Economy	Mrd Rbl	4.1	6.1	6.5	6.8	6.4	7.4
Private households	Mrd Rbl	7.6	9.7	10.7	11.2	11.7	12.6
Claims paid	Mrd Rbl	8.9	10.5	12.6	14.4	15.7	16.0
Economy	Mrd Rbl	3.9	3.5	5.1	6.4	6.4	6.6
Private households	Mrd Rbl	5.0	7.0	7.5	8.0	9.3	9.4
Insurance contracts of private households	Mio.	156.8	183.8	206.1	204.0	203.9	201.8
Household average							
Disbursements	Rbl	65.4	86.7	91.2	96.0	105.1	111.1
Contracts	Number	2.1	2.4	2.6	2.5	2.5	2.5

(1) As at the end of the year.

(2) Excluding Lithuania.

### 13 PUBLIC FINANCE

The State budget of the Soviet Union derived most of its revenue from the taxes paid by enterprises and institutions (89% of total receipts in 1990), mainly in the State sector. Amounts paid over from enterprise profits to the State budget began to fall in 1988, stabilizing somewhat in 1989 and 1990. Over the same period, there was a substantial increase in receipts from turnover taxes. Taxes paid by individuals rose 16% per annum in the last two years shown in table 13.1, in line with income trends. In 1990, there was a considerable increase in amounts from government social insurance funds. Income from foreign trade and payments (not shown separately in the table) has been around 68 000 million roubles per annum over the last few years.

The main expenditure item in the State budget is the economy which, up to and including 1988, included some defence expenditure. The apparent rise in defence expenditure in 1989 and the fall in expenditure on the national economy was due to the fact that in that year a total of 57 100 million roubles (for purchases of military technology, expenditure on military research and development, pensions etc.) was for the first time allocated correctly to the individual budgetary headings. The largest amount of expenditure so far on health and welfare services, education, culture and science was the 1990 figure of 170 000 million roubles. Price subsidies on various products amounted to around 22% of State budget expenditure.

The 1990 budget deficit (41 400 million roubles) was running at about half of the previous year's level, whilst there was a 42% increase in domestic debt, mainly because of the high volume of credit extended by banks (money from the State credit fund) which was used to cover the budget deficit, and the clearance of the bank debts of agricultural enterprises.

Over the past five years taken together, investments in the national economy totalled 1 076 million roubles. In 1990, as in the previous year, almost 230 000 million roubles were invested, an increasing proportion from the enterprises' own funds, once this became possible after the economic reforms of the mid-1980s gave them more individual responsibility. More than one-third of investments were in industry; further branches with a relatively high volume were agriculture and housing construction. Investments are expenditure required to replace or increase fixed assets (capital stock). Since 1985, the value of such investments in the productive industries has risen by an average of 4.8% per annum, and by 5.1% in other industries.

Different sources give very different figures for the size of foreign debts. There has been a massive increase in such debts only since 1988/89 - even in 1988, the Soviet Union was in 21st place in a list of 112 debtor countries. The main creditors to date have been the Federal Republic of Germany, Italy and Japan. Gold reserves can no longer be used to redeem debts and pay interest on loans, since the 1 600 million roubles yielded by the sale of 234 tonnes of gold on the world market in 1990 all had to be used for the purchase of foodstuffs. The same applies to earnings from sales of crude oil.

13.1 STATE BUDGET <sup>(1)</sup>  
(Mrd Rbl)

Survey item	1985	1986	1987	1988	1989	1990
Income	372.6	371.6	378.4	378.9	401.9	471.8
Expenditure	386.5	417.1	430.9	459.5	482.6	513.2
Deficit	13.9	45.5	52.5	80.6	80.7	41.4

(1) Budgetary year: calendar year.

**13.2 STATE BUDGET REVENUE AND EXPENDITURE <sup>(1)</sup>**  
(Mrd Rbl)

Budgetary items	1985	1986	1987	1988	1989	1990
Total	372.6	371.6	378.4	378.9	401.9	471.8
of which:						
Turnover tax	97.7	91.5	94.4	101.0	111.1	121.2
Transfers of profits from State enterprises and organizations	119.5	129.8	127.4	119.6	115.5	116.5
Income taxes paid by cooperatives	2.5	2.6	2.8	2.8	4.2	6.4
State loans	1.4	1.9	1.9	2.0	2.1	7.5
Taxes paid by individuals	30.0	31.2	32.5	35.9	41.7	48.4
Social insurance funds	25.4	26.5	28.1	30.1	33.1	43.2

(1) Budgetary year: calendar year.

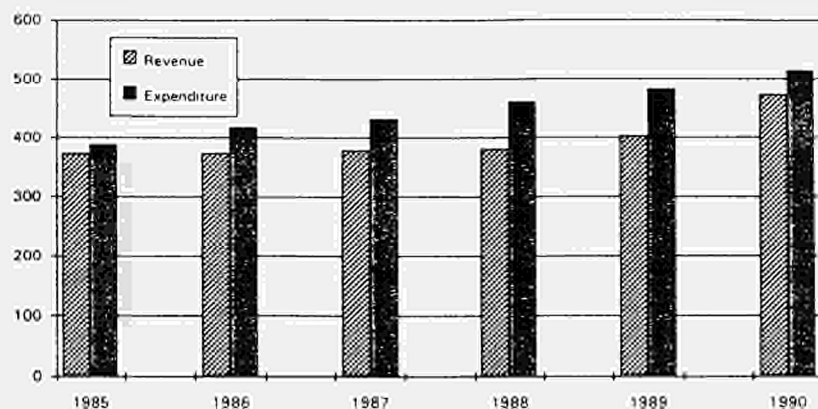
**13.3 STATE BUDGET EXPENDITURE <sup>(1)</sup>**  
(Mrd Rbl)

Budgetary items	1985	1986	1987	1988	1989	1990
Total	386.5	417.1	430.9	459.5	482.6	513.2
of which:						
National economy <sup>(2)</sup>	209.1	226.3	226.9	242.8	201.5	197.5
Social and cultural expenditure, science	125.6	133.7	140.0	151.3	149.3	170.0
of which:						
Education and science	49.6	52.5	54.8	59.6	54.5	59.9
Health and sport	17.6	18.0	19.4	21.9	24.6	28.5
Welfare	31.9	35.0	37.3	39.5	40.2	51.5
Social insurance	22.8	23.6	24.0	25.5	25.2	29.3
Government support for large families and single mothers	0.6	0.6	0.7	0.7	0.7	0.8
Defence <sup>(2)</sup>	19.1	19.1	20.2	20.2	75.2	69.1
Administration	3.0	3.0	2.9	3.0	2.9	5.1

(1) Budgetary year: calendar year.

(2) Until 1988 inclusive, some expenditure on defence was included in expenditure on the national economy.

# STATE BUDGET REVENUE AND EXPENDITURE (Mrd Rbl)



Statistisches Bundesamt 92 00 11 B

## 13.4 STATE BUDGET PRICE SUBSIDIES BY SELECTED PRODUCTS (Mrd Rbl)

Survey item	1980	1985	1988	1989	1990
Total	29.9	66.4	86.3	100.0	112.7
of which:					
Meat and meat products	14.0	21.8	21.7	22.6	28.2
Milk and dairy products	7.5	14.8	15.8	17.2	18.1
Cereals	0.6	3.6	5.2	6.1	6.9
Differentiated payments at producer prices	x	9.8	21.9	31.6	33.1

## 13.5 STATE INDEBTEDNESS, DOMESTIC (1)

Survey item	Unit	1985	1987	1988	1989	1990
Total	Mrd Rbl	141.6	219.6	311.8	398.6	566.1
Proportion of gross social product	%	18.2	26.6	35.6	43.1	56.6
Bank loans	Mrd Rbl	106.7	180.2	267.7	350.3	518.6

(1) As at the end of the year.

## 13.6 INVESTMENTS BY BRANCH OF THE ECONOMY (1)

Branch	1966/1970	1971/1975	1976/1980	1981/1985	1986/1990
Mrd Rbl					
Total	398.4	562.8	717.7	843.2	1 076.3
Industry	139.7	196.0	251.4	300.7	390.0
Production of means of production	118.8	169.2	220.7	264.4	340.2
Production of consumer goods	20.9	26.8	30.7	36.3	49.8
Agriculture	66.7	111.2	143.2	156.2	183.8
Construction	13.0	20.6	28.1	30.4	42.5
Transport and communications	38.0	60.2	85.0	104.3	117.7
Railway transport	11.0	15.0	20.1	24.1	27.1
Housing construction (including private sector)	70.4	89.1	101.9	127.7	176.8
Science, culture and education	23.9	29.2	36.3	39.6	55.7
Distributive trades, hotels and restaurants and other production and services branches	46.7	56.5	71.8	84.3	109.8
Percentage					
Industry	35.1	34.8	35.0	35.7	36.2
Production of means of production	29.9	30.1	30.7	31.4	31.6
Production of consumer goods	5.2	4.7	4.3	4.3	4.6
Agriculture	16.7	19.8	20.0	18.5	17.1
Construction	3.3	3.7	3.9	3.6	3.9
Transport and communications	9.5	10.7	11.8	12.4	10.9
Railway transport	2.8	2.7	2.8	2.9	2.5
Housing construction (including private sector)	17.7	15.8	14.2	15.1	16.4
Science, culture and education	6.0	5.2	5.1	4.7	5.2
Distributive trades, hotels and restaurants and other production and services branches	11.7	10.0	10.0	10.0	10.2

(1) In comparable prices.

**13.7 CAPITAL STOCK BY BRANCH OF THE ECONOMY <sup>(1)</sup>**  
(Mrd Rbl)

Branch	1985	1986	1987	1988	1989	1990
Production branch	1 569	1 651	1 731	1 809	1 902	1 980
Industry	765	807	842	883	926	965
Agriculture	316	330	344	355	374	386
Transport and communications	323	340	360	379	398	415
Construction	78	82	87	94	99	104
Hotels and restaurants and other production branches	87	92	98	98	105	110
Branches other than production	764	806	847	891	938	978
Municipal industries and services	430	453	475	499	521	539
Health and education	101	106	115	123	131	138
Science, culture and other non-production branches	138	146	153	160	173	182
	95	101	104	109	113	119

(1) As at the end of the year; in comparable prices.

**13.8 FOREIGN DEBTS <sup>(1)</sup>**  
(Mrd USD)

Survey item	1985	1987	1988	1989	1990 <sup>(2)</sup>
Total (gross)	28.9	39.2	43.0	54.0	52.2
Long-term debts	16.7	20.9	18.1	19.9	22.7
Bank loans	9.9	12.1	10.9	13.3	14.4
Trade credits	6.2	7.9	6.4	5.8	7.5
Official credits	0.6	0.9	0.8	0.8	0.8
Medium-term debts	5.3	9.7	13.4	15.1	17.8
Short-term debts	6.9	8.6	11.2	17.7	10.0
Bonds	x	x	0.3	1.4	1.7

(1) As at the end of the year.

(2) Projected to the middle of the year.

#### 14 WAGES, SALARIES AND PRICES

In 1990, the earnings of the population of the Soviet Union totalled 653 000 million roubles, i.e. 95 000 million more than in the previous year. Some 60% of this increase was attributable to rises in the wages and salaries of manual and non-manual workers and to increases in the remuneration of members of kolkhozes and the salaries of those working in cooperatives. As well as direct incomes from wages and salaries, other payments for work done, pensions, grants, and payments to large families etc., incomes include payments and other benefits from social consumption funds. These cover free health, education and social services for the population, as well as State subsidies for housing and transport.

In 1990, the average monthly wages of manual and non-manual workers were 275 roubles, or 35 roubles more than in the previous year. There were still considerable differences between the various areas of the economy. Manual and non-manual workers in construction and transport, as well as non-manual workers in industry and in the sovkhozes earned over 300 roubles. In those areas with a high percentage of female employees, such as health and welfare, wages and salaries were under 200 roubles a month. In line with the differences in economic structure, there are also differences in the average wages and salaries in the different republics.

The average monthly remuneration of kolkhoz members from work in the kolkhozes was considerably below the average for manual and non-manual workers in 1990, at 241 roubles. However, this type of compensation accounts for only about half of the household incomes of kolkhoz members, 25.6% of their income being earned by private economic activities, and the remainder from wages, grants, pensions, and other payments from social consumption funds, etc.

According to the results of family budget surveys, the average monthly income per family member was between 133 roubles in the households of pensioners who were previously employees, and 197 roubles in the households of industrial workers. The distribution of income among the population shows that 18% have a per capita income of under 100 roubles, and 15% of over 250 roubles. The less well-off families are usually large families and pensioner households.

Estimates of profits from the "shadow economy" have only recently been published. In 1990, illegally earned incomes totalled 99 800 million roubles (59 000 million in 1989) and probably affected only a relatively small number of households. 35 000 million roubles were received for the production and sale of home-distilled alcohol, 24 000 million from fraudulent sales of goods and 23 000 million roubles from the sale of motor cars, construction materials and other deficit goods.

In 1990, wages and salaries rose to 114% of the previous year's level compared with a cost-of-living index of 106.8%. In the past, over 90% of commercial activity had been carried out via State-run retail trading, with its fixed prices. However, since the needs of the population could no longer be met - for 1990, a shortfall in goods to the value of 50 000 million roubles has been estimated - the kolkhoz markets have been used more frequently for purchases of foodstuffs and the black market for industrial goods, despite their higher prices. On these markets, prices for motor cycles, television sets and sewing machines were two to three times higher than State-trading prices, for motor cars three to five times higher, and for medicines around 19th times higher. The price rises in the State-trading sector for certain basic foodstuffs such as potatoes and vegetables hit families with lower household incomes particularly hard as early as 1990. In April 1991, the first price reforms were introduced in the State-trading sector.



**14.1 EARNINGS AND EXPENDITURE OF THE GENERAL PUBLIC**  
(Mrd Rbl)

Survey item	1985	1988	1989	1990 <sup>(1)</sup>
Total earnings	420.1	493.5	558.0	652.5
of which wages and salaries and remuneration of kolkhoz members	312.8	361.8	406.8	464.3
Expenditure, savings deposits	415.8	484.3	541.4	624.5
Expenditure	395.7	451.6	496.2	572.0
Purchases of goods and payments for services	347.3	394.4	431.7	497.2
Taxes and voluntary contributions	48.4	57.2	64.5	74.8
Savings deposits, acquisition of government bonds	20.1	32.7	45.2	52.5
Excess money supply with the general public	4.3	9.2	16.6	28.0

**14.2 AVERAGE MONTHLY INCOMES OF MANUAL AND NON-MANUAL WORKERS AND KOLKHOZ MEMBERS**  
(roubles)

Survey item	1980	1985	1987	1988	1989	1990
<b>Manual and non-manual workers</b>						
Average incomes <sup>(1)</sup>	233	269	289	314	342	387
Average wages and salaries	169	190	203	220	240	275
<b>Members of kolkhozes</b>						
Average incomes <sup>(1)</sup>	x	222	249	268	294	343
Remuneration	119	153	170	182	201	241

<sup>(1)</sup> Including payments and benefits from social consumption funds.

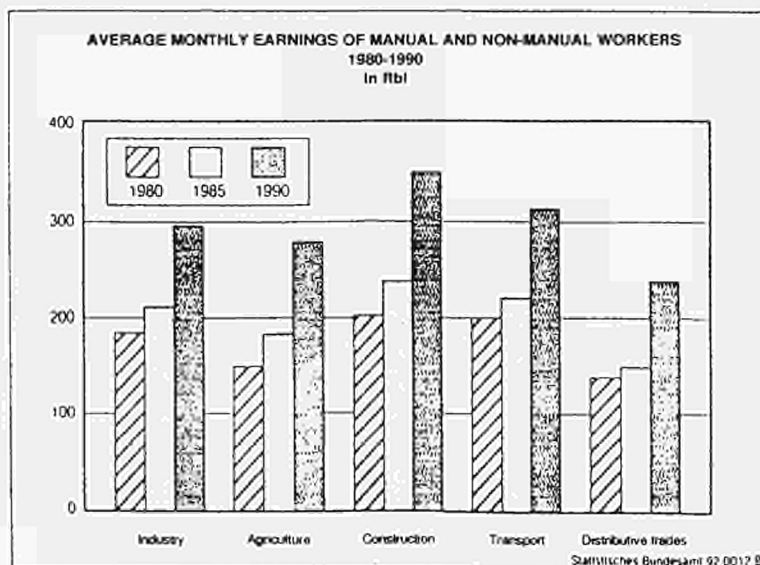
**14.3 AVERAGE MONTHLY EARNINGS OF MANUAL AND NON-MANUAL WORKERS BY AREA OF THE ECONOMY**  
(roubles)

Area	1980	1985	1987	1988	1989	1990
Industry	185.4	210.6	221.9	240.8	263.7	296.2
Manual workers	182.5	208.5	219.2	235.0	255.4	285.6
Non-manual workers	199.2	220.6	234.0	267.3	301.0	343.5
Agriculture	149.2	182.1	198.3	210.6	233.5	276.2
Sovkhoz. shared installations and other agricultural production enterprises	149.2	183.2	200.1	211.5	234.5	278.9
Manual workers	147.9	178.9	193.4	206.0	229.9	272.6
Non-manual workers	162.8	222.2	258.0	258.8	277.5	332.2

14.3 AVERAGE MONTHLY EARNINGS OF MANUAL AND NON-MANUAL WORKERS BY AREA OF THE ECONOMY  
(roubles)

Area	1980	1985	1987	1988	1989	1990
Construction	202.3	236.6	257.2	288.9	316.9	351.4
Building and installation	204.5	239.3	259.0	286.6	312.3	349.7
Manual workers	205.9	242.8	260.2	282.0	305.0	339.7
Non-manual workers	199.0	225.0	254.1	306.8	344.1	392.3
Transport	199.9	220.3	239.4	260.1	278.7	314.2
Railways	187.4	211.7	236.9	257.8	270.1	312.3
Shipping	232.0	262.9	284.4	320.0	343.5	365.7
Road transport (1)	202.5	220.8	237.6	257.0	276.6	311.2
Communications	145.8	159.5	175.1	196.4	213.3	239.8
Distributive trades, hotels and restaurants, supplies of materials and technical equipment, sales and stock-keeping	138.2	149.2	155.7	165.1	187.1	237.5
Provision of information and computer services	128.5	143.3	165.6	183.8	222.2	262.2
Housing and local authority and other services	113.2	146.6	154.4	168.0	180.6	209.5
Health and welfare, sports	126.8	132.8	143.3	152.5	163.3	185.4
Culture	111.3	117.3	121.6	128.2	136.2	165.9
Education	135.9	150.0	165.6	171.4	175.5	190.7
Arts	134.8	145.3	151.0	155.1	165.9	198.6
Science and scientific services	179.5	202.4	217.4	248.4	303.1	338.4
Administration of the State and the economy, social and cooperative organizations	159.6	168.8	187.8	203.9	235.4	338.1
Banking and insurance	162.2	180.9	198.6	206.4	235.4	386.8

(1) Including loading and unloading organizations and local authority transport operations.



14.4 MONTHLY EARNINGS OF MANUAL AND NON-MANUAL WORKERS BY SELECTED OCCUPATION (1)  
(roubles)

Area of the economy/occupation	1990
Tractor drivers	279
Mining engineers (coalmining)	257
Miners (coalmining)	622
Miners (ore mining)	513
Petroleum and natural gas engineers	391
Petroleum and natural gas transport engineers	335
Drillers (petroleum extraction)	437
Dairy engineers	251
Bakers	320
Textile spinners	338
Weavers	346
Sewing machinists	253
Chemical engineers	261
Chemical workers (mixers)	275
Skilled steelworkers	527
Welders	400
Electrical fitters	266
Steel erectors	368
Painters	331
Bricklayers	306
Carpenters	384
Plasterers	356
University lecturers (2)	228
Primary school teachers (2)	214
General practitioners	275
Nursing staff	200

(1) Results of a survey in September 1990.

(2) 1986.

14.5 MONTHLY EARNED INCOMES OF MANUAL AND NON-MANUAL WORKERS AND KOLKHOZ MEMBERS, BY REPUBLIC  
(roubles)

Republic	1980	1985	1989	1980	1985	1989
	Wages and salaries of manual and non-manual workers			Kolkhoz members' remuneration		
<b>Total</b>	168.9	190.1	240.4	118.5	153.4	200.8
Russian SFSR	177.7	201.4	258.6	124.3	166.0	221.3
Ukraine	155.1	173.9	217.7	103.6	135.6	184.3
Rep. of Belorussia	150.0	173.7	227.8	101.9	154.9	211.7
Rep. of Uzbekistan	155.5	164.2	193.8	130.0	130.1	165.0
Kazakh SSR	167.1	186.5	233.6	139.4	166.6	210.3
Rep. of Georgia	145.2	167.6	197.7	110.6	145.6	169.9

**14.5 MONTHLY EARNED INCOMES OF MANUAL AND NON-MANUAL WORKERS AND KOLKHOZ MEMBERS, BY REPUBLIC**  
(roubles)

Republic	1980	1985	1989	1980	1985	1989
	Wages and salaries of manual and non-manual workers			Kolkhoz members' remuneration		
Rep. of Azerbaijan	148.4	162.6	179.0	165.1	207.7	182.3
Lithuania	166.1	190.0	244.1	134.0	183.3	257.3
Rep. of Moldova	138.3	157.7	200.6	101.7	142.4	196.5
Latvia	171.4	195.9	249.9	151.9	212.7	264.2
Rep. of Kyrgyzstan	147.9	162.6	197.5	117.6	160.1	198.0
Rep. of Tadjikistan	145.5	157.8	188.3	129.8	140.6	166.3
Rep. of Armenia	163.1	180.3	219.9	138.0	177.1	204.9
Turkmen SSR	176.2	191.1	221.3	152.3	161.9	203.9
Estonia	188.7	215.1	270.1	206.6	272.7	317.6

**14.6 GENERATION OF HOUSEHOLD INCOMES**  
(percentage)

Type of income	1980	1985	1987	1988	1989	1990
<b>Manual and non-manual workers</b>						
Total incomes	100.0	100.0	100.0	100.0	100.0	100.0
Earnings of household members	80.4	79.2	79.1	79.1	80.7	80.2
Pensions, grants, support and other payments from social consumption funds	9.1	9.6	9.3	8.9	7.7	7.4
Income from private economic activities	3.5	3.3	3.3	3.3	2.8	3.1
Other incomes	7.0	7.9	8.3	8.7	8.8	9.3
<b>Kolkhoz members</b>						
Total incomes	100.0	100.0	100.0	100.0	100.0	100.0
Remuneration from the kolkhoz	47.9	50.2	51.8	52.0	51.9	51.3
Pensions, grants, support Other payments from social consumption funds	10.5	10.0	9.8	9.8	9.9	9.7
Income from private economic activities	9.7	9.7	10.0	9.4	8.9	9.0
Other incomes	27.5	26.2	24.4	24.5	24.9	25.6
	4.4	3.9	4.0	4.3	4.4	4.4

**14.7 USE OF HOUSEHOLD INCOMES**  
(percentage)

Use	1980	1985	1987	1988	1989	1990
<b>Manual and non-manual workers</b>						
Use of total income	100.0	100.0	100.0	100.0	100.0	100.0
Food	35.9	33.7	33.3	32.2	30.6	29.9
Alcoholic drinks	3.6	3.0	2.6	2.8	2.8	3.3
Industrial goods	30.3	31.0	31.0	31.3	32.1	34.5
of which:						
Textiles, clothing, footwear	18.5	18.1	17.1	17.1	17.7	19.7
Furniture and household goods	6.5	7.1	7.4	7.7	7.5	7.9
Motor cars, motor cycles and bicycles	1.7	1.6	2.1	1.9	1.9	1.7
Cultural and private services	10.3	10.0	10.1	10.1	9.9	9.1
Rents and municipal services and maintenance of own homes	3.0	3.0	3.0	2.9	2.8	2.5
Contributions, taxes and other duties	9.1	9.4	9.5	9.7	9.9	9.7
Family savings	5.6	7.8	8.4	8.8	9.8	8.8
Other expenditure	5.2	5.1	5.1	5.1	4.9	4.7
<b>Kolkhoz members</b>						
Use of total income	100.0	100.0	100.0	100.0	100.0	100.0
Food	39.1	36.3	36.1	35.4	34.0	32.4
Alcoholic drinks	4.9	4.2	3.3	3.5	3.9	3.9
Industrial goods	31.1	31.0	30.7	29.9	29.1	29.2
of which:						
Textiles, clothing, footwear	18.0	17.2	16.3	15.6	15.6	16.1
Furniture and household goods	4.6	5.0	5.2	5.2	5.0	4.7
Motor cars, motor cycles and bicycles	2.7	2.7	2.8	2.6	2.3	2.1
Cultural and private services	4.9	5.0	5.4	5.5	5.5	4.7
Rents and municipal services and maintenance of own homes	2.0	2.1	2.1	2.2	2.2	1.7
Contributions, taxes and other duties	1.6	1.8	1.8	1.8	1.8	1.7
Family savings	8.0	11.2	12.4	14.3	16.7	19.3
Other expenditure	10.4	10.5	10.3	9.6	9.0	8.8

**14.8 AVERAGE MONTHLY PER CAPITA INCOME <sup>(1)</sup>**  
(roubles)

Survey item	1980	1985	1987	1988	1989	1990
Average monthly per capita income in the households of:						
Manual and non-manual workers of which:	121	135	143	153	159	179
Industrial workers	135	150	156	166	177	197
Sovkhoz workers	94	109	116	121	126	144
Kolkhoz members	91	110	115	121	127	147
Pensioners, previously						
Manual and non-manual workers	77	91	99	102	110	133
Kolkhoz members	81	96	101	112	128	150

(1) Data from the family budget survey. The net household income of the family equals the sum of all financial incomes and incomes in kind from State and cooperative enterprises and organizations, from kolkhozes, from private economic activities, and all payments and allowances from social consumption funds which are taken into account when the family budget is worked out.

**14.9 POPULATION BY AVERAGE PER CAPITA INCOME <sup>(1)</sup>**

Survey item	1980	1985	1990	1980	1985	1990
	Mean population					
	million persons			percentage		
<b>Total</b>	<b>265.5</b>	<b>277.2</b>	<b>288.4</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
of which with an average per capita monthly income of...roubles:						
up to 50.0	19.3	11.8	5.2	7.3	4.3	1.8
50.1 - 75.0	49.3	37.8	17.1	18.5	13.6	5.9
75.1 - 100.0	61.6	54.8	30.6	23.2	19.8	10.6
100.1 - 125.0	51.8	53.6	39.5	19.5	19.3	13.7
125.1 - 150.0	35.0	41.7	41.4	13.2	15.0	14.4
150.1 - 175.0	21.7	28.9	37.9	8.2	10.4	13.1
175.1 - 200.0	12.5	18.6	31.1	4.7	6.7	10.8
200.1 - 250.0	10.9	19.0	43.1	4.1	6.9	14.9
over 250	3.4	11.0	42.5	1.3	4.0	14.8

(1) Family budget survey.

**14.10 CONSUMPTION OF SELECTED FOODSTUFFS, 1989 (1)**  
(roubles)

Consumption of foodstuffs	Unit	Per family member with a monthly per capita income			
		75,0 or under	75,1 - 100,0	100,1 - 150,0	150,1 and above
Meat and meat products	kg	27	47	63	86
Milk and dairy products	kg	216	316	363	433
Eggs	each	109	185	223	262
Fish and fish products	kg	5	9	13	17
Oils and fats	kg	9	8	7	8
Potatoes	kg	43	77	89	100
Vegetables	kg	72	85	91	108
Bread and confectionery	kg	140	124	110	109
Fruit	kg	22	32	39	51

(1) Family budget survey.

**14.11 PRICE INDICES FOR INDIVIDUAL GROUPS OF GOODS, 1990**  
(1989 = 100)

Group of goods	State retail trading prices	Prices in trading cooperatives	State and cooperative trading (1)	Prices on kolkhoz markets
Foodstuffs and industrial goods	104	115	105	121
Foodstuffs	103	115	104	123
of which:				
Meat products	101	111	102	131
Fish products	102	118	102	153
Butter	100.2	111	100.4	118
Milk and cheese	100.4	106	100.6	118
Eggs	100.9	125	101	136
Sugar	100	x	100	x
Bread and similar products	100.8	x	100.9	x
Potatoes	137	107	135	116
Vegetables	127	133	129	118
Industrial goods	106	x	106	108
of which:				
Clothing and underwear	105	x	106	x
Knitwear	104	x	106	x
Leather footwear	105	x	107	x
Stockings	107	x	108	x

(1) Including trading cooperatives and sales of home-made goods.

14.12 PRICES FIXED BY THE STATE FOR SELECTED GOODS <sup>(1)</sup>  
(roubles)

Goods	Quantity/ unit	1988	1989	1991
Beef, on the bone	1 kg	2,00	2,00	7,00
boned	1 kg	3,50	3,50	12,50
Pork cutlets	1 kg	2,64	2,64	12,25
Lamb	1 kg	2,57	2,57	6,00
Ham, cooked	1 kg	3,70	3,70	12,08
Chickens, oven-ready	1 kg	3,00	3,00	5,60
live	1 kg	5,33	5,57	x
Fresh fish, cod	1 kg	0,77	0,56	1,68
Sardines in oil, tinned	110 g	0,34	0,40	6,13
Hens' eggs	dozen	1,56	1,56	3,12
Cows' milk, pasteurized	1 l	0,32	0,32	0,65
non-pasteurized	1 l	0,38	0,40	0,50
Butter	1 kg	3,60	3,60	10,00
Cheddar cheese	1 kg	3,00	3,00	6,00
Margarine	1 kg	1,52	1,52	2,90
Pork dripping	1 kg	2,00	2,00	6,00
Clarified butter "Ghee"	1 kg	x	3,70	11,00
Edible oil (sunflower)	1 l	1,57	1,52	3,00
Olive oil	1 l	2,24	2,24	5,00
White bread, baguette	1 kg	0,68	0,68	1,04
Wheat flour, white	1 kg	0,46	0,46	1,40
Rice, long-grain	1 kg	0,88	0,88	2,20
Spaghetti	1 kg	0,68	0,68	1,60
Peas ("Gram Dal"), dried	1 kg	0,18	0,18	0,90
Beans, white, dried	1 kg	0,52	0,52	2,80
Potatoes	1 kg	0,10	0,20 (2)	2,00
Cabbage	1 kg	0,08 (2)	0,10 (2)	1,06
Onions	1 kg	0,50 (2)	0,50 (2)	3,30
Carrots	1 kg	0,20 (2)	0,22 (2)	0,55
Tomatoes	1 kg	1,00 (2)	1,22 (2)	3,00
Aubergines	1 kg	0,50 (2)	0,60 (2)	2,60
Peppers, green	1 kg	0,50 (2)	0,74 (2)	4,00
Chillies, dried	1 kg	2,70	2,70	12,00
Apples	1 kg	1,10 (2)	1,07 (2)	2,50
Grapes	1 kg	0,80 (2)	1,24 (2)	5,00
Oranges	1 kg	2,00	2,00	3,00
Lemons	1 kg	3,50	3,50	7,00
Sugar, white	1 kg	0,94	0,94	2,40
Salt	1 kg	0,12	0,12	0,24
Coffee, roasted	1 kg	21,50	21,50	21,50
soluble	1 kg	60,00	60,00	60,00
Tea	1 kg	9,60	9,60	24,00

(1) October.

(2) In Moscow.



## 15 ENVIRONMENT

According to a 1990 survey, only 8% of the 100 000 or so persons questioned were satisfied with the environment of the place in which they lived, and 54% thought that it was unacceptable.

In 1990, 55.7 million tonnes of pollutants were emitted into the atmosphere from industrial installations, 3 million tonnes fewer than in the previous year, owing mainly to the decline in - or, in some cases, the cessation of - production. In some industrial centres there were further increases in such emissions. Measurements by the State Committee for Hydrology and Meteorology showed that in almost 130 cities concentrations of at least one atmospheric pollutant exceeded the prescribed limit values on some days by a factor of 10 or more.

At 3 600 monitoring points, high concentrations of water pollutants were recorded in over 500 bodies of water. With water utilization running at approximately 284 000 million m<sup>3</sup>, some 34 000 million m<sup>3</sup> of untreated waste water were released. In this amount, some 46 000 tonnes of petroleum products, 73 000 tonnes of phosphorus and 194 000 tonnes of nitrogen, among other things, were discharged into bodies of water.

Every year, some 300 million tonnes of industrial waste containing toxic components are produced, and around 36 million tonnes are utilized and decontaminated; 250 million tonnes are piled up on spoil and waste tips, and a not inconsiderable quantity of toxic waste finishes up on household waste tips.

Substantially more money was spent on environmental protection at the end of the 1980s than in the first half of the decade, but fewer environmental protection projects actually came into operation. Including those overdue from the previous year, only 79 of the planned 292 plants came on stream in 1990.

### 15.1 BASIC DATA

Survey item	Unit	1981/1985 (1)	1986/1990 (1)	1990
Emission of pollutants into the atmosphere	Mio. t	110.2	98.3	90.7
fixed plant	Mio. t	70.2	62.4	55.7
road traffic	Mio. t	40.0	35.9	35.0
Industrial water resources	Mrd m <sup>3</sup>	328.8	330.3	329.1
Waste water discharged (excluding drainage water)	Mrd m <sup>3</sup>	17.6	26.1	33.6
Black Sea	Mrd m <sup>3</sup>	4.0	6.2	7.7
Baltic Sea	Mrd m <sup>3</sup>	2.7	3.3	3.6
Caspian Sea	Mrd m <sup>3</sup>	3.8	10.7	12.5
Lake Baikal	Mrd m <sup>3</sup>	0.12	0.17	0.19
Industrial felling of timber	1 000 ha	2 138	2 138	1 957
Afforestation and forestry maintenance	1 000 ha	2 153	2 187	2 138
Forest fires	1 000 ha	325	1 014	1 384
Environmental protection investments				
by the State	Mio. Rbl	2 224	2 963	3 158
Water	Mio. Rbl	1 617	2 003	2 056
Air	Mio. Rbl	180	333	409
Ground	Mio. Rbl	235	365	457
More efficient use of mineral resources	Mio. Rbl	106	169	128

(1) Annual average.

15.2 EMISSION OF POLLUTANTS FROM FIXED INSTALLATIONS INTO THE ATMOSPHERE BY SELECTED CITIES, 1989  
(1 000 t)

Cities	Total	Pollutants		Of which		
		Solid	Liquid and gaseous	sulphur dioxide	nitrogen oxides	carbon monoxide
Baku	667	255	412	17	15	48
Grozny	268	5	263	23	15	18
Dneprodzerzhinsk	287	47	240	45	21	165
Zaporozhye	253	63	190	25	14	141
Kommunarsk	235	65	170	20	13	128
Krasnoyarsk	246	70	176	38	12	112
Magnitogorsk	821	156	665	72	34	547
Moscow	294	28	266	52	99	32
Novokuznetsk	791	124	667	88	36	531
Ufa	285	8	277	60	25	36
Chelyabinsk	392	102	290	45	28	209
Volgograd	225	39	186	34	18	64
Alma-Ata	43	9	34	15	4	11
Archangelsk	80	19	61	41	6	12
Dushanbe	25	8	17	5	4	7
Yerevan	46	5	41	10	10	10
Irkutsk	82	31	51	27	7	16
Kiev	63	9	53	18	20	5
Komsomolsk-na-Amure	68	18	50	14	9	10
Odessa	85	16	69	13	5	31
Bishkek (Frunze)	71	19	52	34	8	7

15.3 CAPTURE OF ATMOSPHERIC POLLUTANTS FROM FIXED INSTALLATIONS, BY REPUBLIC

Republic	1985	1989	1990	1985	1989	1990
	Total (Mio. t)			Percentage of pollutants captured		
Total	209.3	209.2	199.4	76	78	78
Russian SFSR	123.6	122.0	117.0	76	77	77
Ukraine	34.8	33.6	30.8	74	76	76
Rep. of Belorussia	3.2	3.9	4.0	68	75	77
Rep. of Uzbekistan	2.9	3.2	2.9	65	70	69
Kazakh SSR	27.9	30.9	29.2	82	86	86
Rep. of Georgia	0.6	0.4	0.4	55	50	54
Rep. of Azerbaijan	1.0	0.8	0.8	29	27	28
Lithuania	1.5	1.7	1.9	77	80	83
Rep. of Moldova	2.2	2.5	2.4	82	85	86
Latvia	0.5	0.5	0.4	71	76	68
Rep. of Kyrgyzstan	1.1	1.1	1.0	83	84	84
Rep. of Tadzhikistan	0.5	0.5	0.5	80	79	82
Rep. of Armenia	0.7	0.6	0.6	74	80	81
Turkmen SSR	0.3	0.3	0.4	30	37	44
Estonia	8.5	7.2	7.1	93	93	93

#### 15.4 USE OF FRESH WATER

Survey item	1985	1989	1990	1985	1989	1990
	Mrd m <sup>3</sup>			percentage		
Total	289	280	284	100	100	100
Irrigation and agricultural consumption	155	144	147	53	52	52
Remaining production of which is drinking water quality	109	110	110	38	39	39
Consumption by the general public	8.1	9.8	9.7	3	4	3

#### 15.5 WATER RECYCLING AND MULTI-PURPOSE USE, BY REPUBLIC <sup>(1)</sup>

Republic	1985	1989	1990	1985	1989	1990
	Total (Mrd m <sup>3</sup> )			Percentage of production industry's water requirements		
Total	242.0	276.2	279.5	69	72	72
Russian SFSR	145.7	168.5	170.6	70	74	74
Ukraine	59.5	66.0	67.7	78	79	80
Rep. of Belorussia	7.0	9.4	9.5	81	84	85
Rep. of Uzbekistan	6.5	7.5	7.0	49	53	52
Kazakh SSR	11.5	12.6	12.1	60	63	63
Rep. of Georgia	1.0	1.0	2.2	37	47	62
Rep. of Azerbaijan	1.8	1.6	1.6	38	34	32
Lithuania	2.9	3.1	2.8	57	44	42
Rep. of Moldova	0.8	0.9	1.0	24	26	28
Latvia	0.5	0.5	0.5	56	59	59
Rep. of Kyrgyzstan	0.4	0.8	0.8	39	52	56
Rep. of Tadjikistan	0.6	0.8	0.8	53	56	59
Rep. of Armenia	2.3	1.8	1.3	82	78	73
Turkmen SSR	0.6	0.7	0.6	21	24	21
Estonia	0.9	1.0	1.0	26	26	26

(1) Including the use of waste water and treated drainage water.

15.6 TREATED WASTE WATER DISCHARGED INTO NATURAL BODIES OF WATER,  
BY REPUBLIC

Republic	1985	1989	1990	1985	1989	1990
	Total (Mrd m <sup>3</sup> )			Percentage of waste water to be treated		
Total	22 374	10 932	10 015	58	25	23
Russian SFSR	13 986	3 487	3 231	54	11	10
Ukraine	4 536	3 806	3 318	78	57	51
Rep. of Belorussia	728	929	919	89	93	90
Rep. of Uzbekistan	892	497	541	68	65	65
Kazakh SSR	327	252	256	54	43	43
Rep. of Georgia	279	309	138	45	49	38
Rep. of Azerbaijan	173	306	312	28	51	51
Lithuania	88	114	98	21	25	22
Rep. of Moldova	223	207	216	84	69	70
Latvia	118	110	113	32	30	31
Rep. of Kyrgyzstan	183	140	131	93	78	75
Rep. of Tadjikistan	187	176	192	76	62	66
Rep. of Armenia	359	309	269	67	55	56
Turkmen SSR	21	19	10	95	100	91
Estonia	274	271	271	58	52	52

15.7 PROTECTION OF FORESTS FROM PESTS AND DISEASES, BY REPUBLIC <sup>(1)</sup>  
(1 000 ha)

Republic	1980	1985	1987	1988	1989	1990
Total	748.5	1 000.0	1 359.6	1 029.8	1 128.8	1 003.0
Russian SFSR	387.4	471.6	855.2	502.7	528.1	480.2
Ukraine	199.2	239.6	237.4	248.4	314.2	278.0
Rep. of Belorussia	10.9	50.3	27.1	17.8	13.1	14.1
Rep. of Uzbekistan	0.9	31.8	38.9	30.4	30.3	30.8
Kazakh SSR	89.1	80.4	73.7	71.9	53.3	53.1
Rep. of Georgia	10.2	28.1	25.4	23.8	35.5	26.3
Rep. of Azerbaijan	x	4.6	6.3	4.5	6.0	5.1
Lithuania	9.1	8.9	9.1	9.0	11.7	12.1
Rep. of Moldova	16.4	16.4	16.7	40.9	55.4	25.8
Latvia	10.5	10.8	10.5	9.7	8.7	12.2
Rep. of Kyrgyzstan	0.5	31.7	32.1	44.0	44.3	37.6
Rep. of Tadjikistan	3.1	4.6	5.3	5.1	5.1	5.4
Rep. of Armenia	6.5	16.0	16.3	16.2	17.6	15.6
Turkmen SSR	x	0.1	0.2	0.2	0.2	1.6
Estonia	4.7	5.1	5.4	5.2	5.3	5.1

(1) Use of biological methods; since 1987, including forests belonging to kolkhozes and sovkhoses.

## 15.8 PRODUCTION AND USE OF TOXIC INDUSTRIAL WASTE, 1990 (1)

Area of industry	Total waste	of which utilized and decontaminated	
		Quantity	Percentage
	Mio. t		
Total	302.6	35.8	11.8
of which:			
Energy sector	5.3	1.8	33.5
Coal industry	0.3	0.1	30.0
Chemical and petrochemical industries	5.9	1.9	32.3
Fertilizer industry	7.2	0.7	9.5
Metallurgy	218.5	23.1	10.6
Heavy engineering	2.0	0.4	20.0
Electrical engineering and manufacturing of equip	0.4	0.01	3.8
Machine tool and instrument manufacturing	1.6	0.1	7.3
Manufacture of motor cars and agricultural machinery	3.8	0.6	17.2
Construction materials industry	11.1	0.5	4.5
Medical industry	0.4	0.1	25.0

(1) Sample survey.

## 16 NATIONAL ACCOUNTS

Internationally, the generation, utilization, distribution and redistribution of production in a national economy are described on the basis of the concepts of national product accounts, in line with the System of National Accounts (SNA), whereas in the Soviet Union, developments in the economy as a whole have been described on the basis of the material production concept (System of Material Product Balances - MPS). This system is based on the theory that value added arises only in the sphere of the material production of goods and the circulatory sphere needed for that production. This meant that only the material production spheres were included in the calculations used to compile the national income. Since 1988, data on national accounts have been published by the State Committee of the USSR on Statistics, using the social product method. In 1990, gross social product was 2.3% lower than in 1989, thus bringing to an end the upward trend in gross social product figures which had persisted for many years. The national income was 4.0% less than in the previous year. The producing industries accounted for 42% of the gross social product, services 40% and agriculture 18%.

With roughly 50% of the gross social product being used for private consumption, the Soviet Union comes bottom in the table of leading industrial nations (Japan > 55%, France and the United Kingdom > 60%, and the United States 65%). The share accounted for by investment - approximately 30% - is the same as in Japan, although the Soviet Union lags behind Japan in the efficiency of its investment policies. Government consumption, at approximately 20%, is roughly level with the figures for France, the United Kingdom and the United States. One-third goes on social benefits paid by the State.

### 16.1 PRODUCED NATIONAL INCOME

Year	Produced national income		
	in current prices	in constant prices	
		total	per capita
	Mrd Rbl	1980 = 100	
1980	462.2	100	100
1985	578.5	117	112
1986	587.4	120	113
1987	599.6	122	114
1988	630.8	127	118
1989	673.7	130	120
1990	700.6	125	115
Percentage change over the previous year/annual average growth rate			
1987	+ 2.1	+ 1.6	+ 0.7
1988	+ 5.2	+ 1.4	+ 3.5
1989	+ 6.8	+ 2.5	+ 1.7
1990	+ 4.0	- 4.0	- 4.6
1980/1985 D	+ 4.6	+ 3.2	+ 2.3
1985/1990 D	+ 3.9	+ 1.3	+ 0.5

## 16.2 GENERATION OF NATIONAL INCOME

Year	Produced national income	Agriculture	Industry <sup>(1)</sup>	Construction	Distributive trades, hotels and restaurants <sup>(2)</sup>	Transport and communications
In current prices Mrd Rbl						
1980	462.2	68.9	238.1	47.6	80.6	27.0
1985	578.5	112.8	263.1	62.3	105.3	35.0
1986	587.4	121.2	258.0	70.3	101.4	36.5
1987	599.6	122.6	268.6	74.7	97.1	36.6
1988	630.8	143.3	269.5	80.6	98.7	38.7
1989	673.7	157.7	282.0	86.4	109.7	37.9
1990	700.6	174.1	283.1	84.4	113.4	45.6
In constant prices Percentage change over the previous year/annual average growth rate						
1987	+ 1.6	- 1.4	+ 3.6	+ 5.5	- 2.6	+ 0.3
1988	+ 4.4	+ 2.5	+ 6.1	+ 7.6	+ 1.9	+ 5.8
1989	+ 2.5	- 0.1	+ 2.8	+ 2.2	+ 5.9	- 0.1
1990	- 4.0	- 3.3	- 2.1	- 8.9	- 3.0	- 12.8
1980/1985 D	+ 3.2	+ 1.0	+ 2.9	+ 3.1	+ 6.2	+ 2.9
1985/1990 D	+ 1.3	+ 0.9	+ 2.1	+ 3.5	- 0.9	- 0.7

(1) Energy and water industries, mining, and manufacturing industries. - 2) Including other branches of material production.

## 16.3 USE OF NATIONAL INCOME

Year	Produced national income	Private	State	Accumulation	Of which		Balance of the export and import of goods and productive services <sup>(1)</sup>
					Net fixed capital formation	Changes in stocks	
		Consumption					
In current prices Mrd Rbl							
1980	462.2	297.7	47.8	108.6	69.4	39.2	+ 8.1
1985	578.5	356.9	61.5	150.3	80.2	70.1	+ 9.8
1986	587.4	363.6	64.0	148.4	87.0	61.4	+ 11.4
1987	599.6	373.5	68.4	143.9	94.1	49.8	+ 13.8
1988	630.8	393.0	72.7	153.4	89.5	63.9	+ 11.7
1989	673.7	426.4	77.8	161.8	89.8	72.0	+ 7.7
1990	700.6	475.2	83.4	145.7	76.5	69.2	- 3.7

### 16.3 USE OF NATIONAL INCOME

Year	Produced national income	Private	State	Accumulation	Of which		Balance of the export and import of goods and productive services <sup>(1)</sup>
					Net fixed capital formation	Changes in stocks	
		Consumption					
In constant prices Percentage change over the previous year/annual average growth rate							
1987	+ 1.6	+ 1.4	+ 7.7	- 4.2	+ 5.7	x	x
1988	+ 4.4	+ 3.9	+ 5.9	+ 5.6	- 7.4	x	x
1989	+ 2.5	+ 5.1	+ 5.3	- 1.6	- 6.7	x	x
1990	- 4.0	+ 4.5	+ 4.8	- 21.5	- 25.4	x	x
1980/ 1985 D	+ 3.2	+ 2.5	+ 4.9	+ 2.9	- 0.7	x	x
1985/ 1990 D	+ 1.3	+ 3.1	+ 5.7	- 4.3	- 6.5	x	x

(1) Including "losses", meaning those parts of the national income which are used to offset losses not connected with current production, such as losses in fixed assets caused by natural disasters. The figures for that portion of national income used for accumulation and consumption were therefore 454 100 million roubles in 1980 and 704 300 million roubles in 1990.

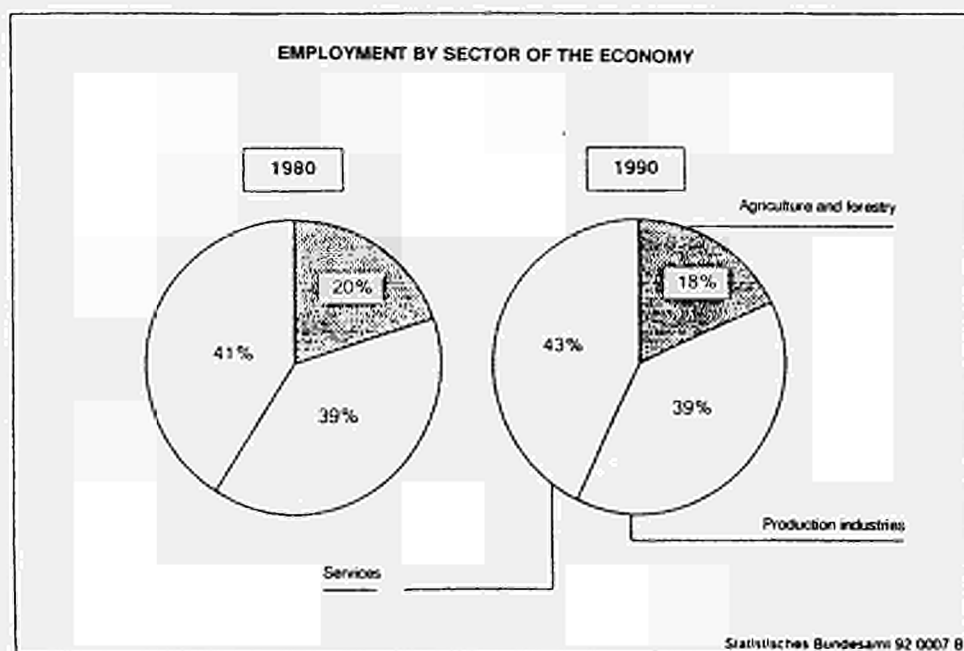
### 16.4 GROSS SOCIAL PRODUCT

Year	In current prices	In constant prices	
	Mrd Rbl	1980 = 100	Previous year = 100
1980	619	100	x
1985	777	120	102.3
1986	799	124	103.3
1987	825	127	102.9
1988	875	134	105.5
1989	943	138	103.0
1990	1 000	135	97.7
percentage change over the previous year/annual average growth rate			
1987	+ 3.3	+ 2.9	x
1988	+ 6.1	+ 5.5	x
1989	+ 7.7	+ 3.0	x
1990	+ 6.0	- 2.3	x
1980/1985 D	+ 4.6	+ 3.7	x
1985/1990 D	+ 5.2	+ 2.4	x



16.5 GENERATION OF GROSS SOCIAL PRODUCT  
in current prices  
(percentage)

Survey item	1980	1985	1988	1989
Gross social product	100	100	100	100
Agriculture and forestry	13	17	18	18
Production industries	49	44	43	42
of which:				
Energy and water supply, mining, manufacturing industries	41	36	33	32
Construction	8	8	10	10
Services	38	39	39	40
of which:				
Transport and communications	6	6	6	6
Distributive trades	13	14	12	12
Other services	19	19	21	22



16.6 USE OF GROSS SOCIAL PRODUCT  
in current prices  
(Mrd Rbl)

Year	Gross social product	Private consumption	State consumption (1)	Gross investment
1985	777.0	373.8	154.8	248.4
1986	798.5	381.5	161.5	255.5
1987	825.0	392.8	172.8	259.4
1988	875.4	415.7	176.1	283.6
1989	943.0	450.6	187.4	305.0
1990	1 000.0	502.0	197.1	300.9
Percentage change over the previous year/annual average growth rate				
1986	+ 2.8	+ 2.1	+ 4.3	+ 2.9
1987	+ 3.3	+ 3.0	+ 7.0	+ 1.5
1988	+ 6.1	+ 5.8	+ 1.9	+ 9.3
1989	+ 7.7	+ 8.4	+ 6.4	+ 7.5
1990	+ 6.0	+ 11.4	+ 5.2	- 1.3
1985/1990 D	+ 5.2	+ 6.1	+ 5.0	+ 3.9

(1) Including the balance of exports and imports of goods and services and net factor incomes from abroad.

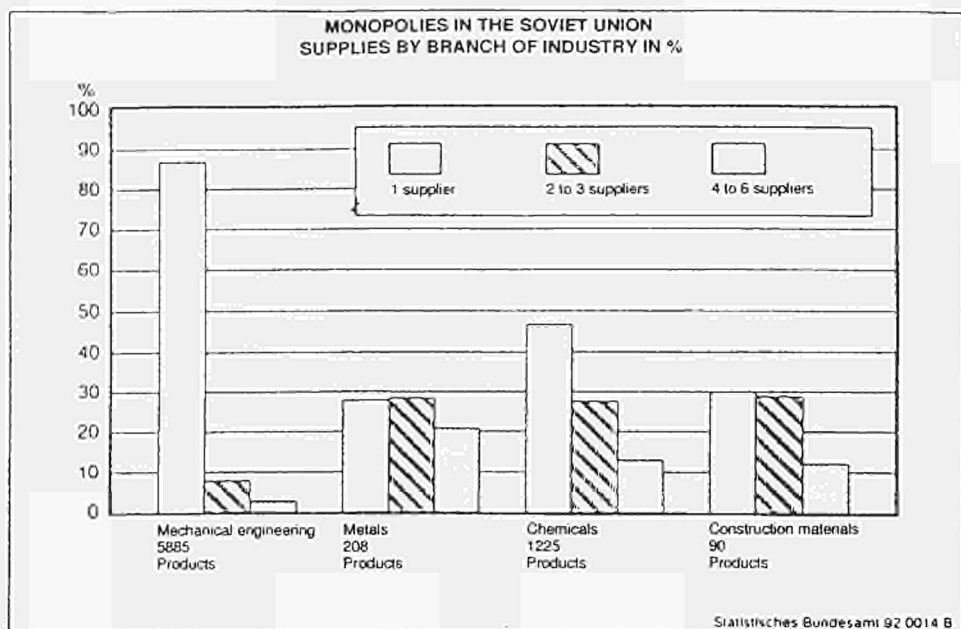
Seven decades of centralized economic problems were unable to produce a practical solution to the pressing problems of economic and social development. In the 1970s, steeply rising oil prices had masked the many weaknesses of the Soviet economy. Following slower growth rates in the second half of the 1980s, the decline in production and economic performance, in absolute terms, became apparent in 1990 and in 1991 this decline began to accelerate.

There are four main factors influencing the disintegration of the Soviet economy, all of them interrelated:

1. An entire political system is collapsing, amid such radical and rapid changes as to make the process unique. A new political order is coming into being with the attempt to build up market-economy structures.
2. A powerful, centrally planned economic complex is being decentralized. The different republics have always been very much interdependent and highly monopolistic, with sharp differences between them.
3. Decentralization and the new order are one facet of the republics' achievement of independent status, together with a multitude of nationality problems. To some extent, major economic decisions are taking second place to nationalistic aspirations.
4. The political will of the governments and parliaments of the republics involved is of crucial importance for all measures to be introduced. One key problem is that there are as yet no parties represented in the parliaments to express the political will of major interest groups. At present, therefore, possible solutions are to a large extent influenced by national political decisions. Even after the formation of the Commonwealth of Independent States (CIS) by 11 former Soviet republics, the political situation at the end of 1991 raised doubts as to the possibility of a harmonious solution ever being found to the basic problems confronting the different States.

The following are the main economic problems behind the disintegration of the Soviet Union:

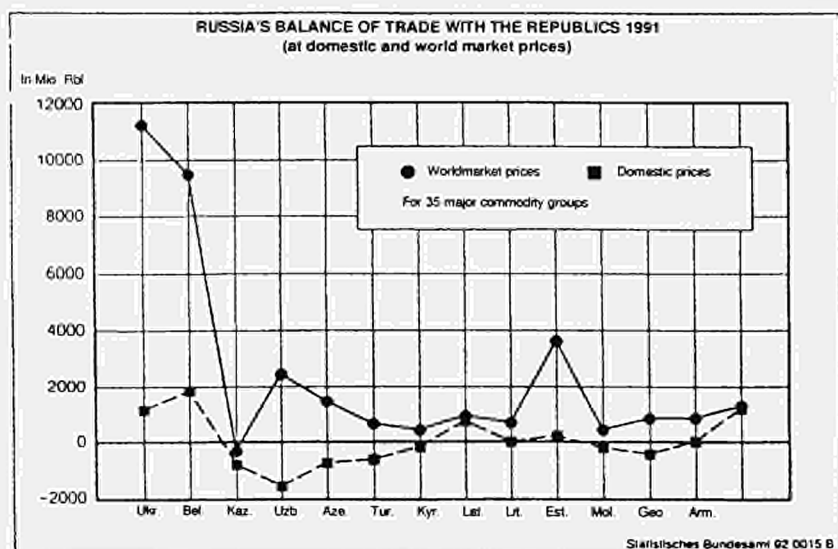
1. The economies of the different republics are so intertwined that they are very much interdependent. As regards the division of labour, they are on a par with the small, open national economies of the EC, but the division is frequently based on arbitrary, centralized pronouncements which have not always led to efficient solutions to problems in the past. The divisions of labour between the former republics have been disturbed. The abolition of the old instruments of the command economy, but with no proper replacement, and the shortages plaguing the economy were a bar to continuing cooperation, as were the export bans imposed by the republics to protect their own supplies. The collapse of the rouble led to barter dealing with the highest bidders, and contract prices which have now come into force for a wide variety of goods are having a similar effect.
2. Alongside the close-knit division of labour between the republics there is - by West European standards - an extremely high degree of monopolization. Very high degrees of dependency can be hidden behind even the small percentages of total industrial production accounted for by some of the republics. According to Soviet investigations, 87% of the almost 6 000 mechanical engineering products were produced by one single manufacturer. Azerbaijan, for instance, produces 75% of the equipment used for oil extraction. The disappearance of a single manufacturer, or political, economic and military disturbances in crisis areas, frequently have far-reaching consequences for customers in other republics.



3. Almost all the republics are dependent on energy carriers from Russia, since most of them have no indigenous raw materials to speak of. Russia has all the energy carriers and the most important raw materials, and Kazakhstan and the Ukraine are also rich in raw materials. Natural conditions and centralized decision-making in the former Soviet Union have led to a one-sided production and trading structure. Falling output and insufficient processing capacities in Russia have led, for example, to shortages of energy and declining output in the Ukraine and other republics. The industrial production of the republics is totally geared to the internal market.
4. The availability of raw materials, one-sided production structures and lack of international competitiveness of former Soviet products mean that, in principle, convertible currency could - and still can - only be obtained by the export of raw materials, mainly crude oil and natural gas. With extremely one-sided export structures and a wide variety of import requirements, the lack of any foreign exchange market led to the centralized allocation of foreign currency. The external trade figures as at 30.9.1991 illustrate the extent of the foreign currency problem. Only Russia had a positive trade balance, whilst in all the other republics imports exceeded exports. This problem will not be solved overnight and will lead to enormous difficulties in most of the republics, which are faced with imminent repayment of their share of outstanding debts and the need to find the money for vital imports.
5. In the Soviet economy, prices used to be fixed centrally in line with other key parameters such as investments, income and budget redistribution. In general, prices were set too low (compared with those of other countries) for raw and other materials and too high for finished products. This tendency did not disappear with the price changes in 1991. Because of raw materials deliveries, the price differences in internal Soviet trade made the Russian Republic the principal loser. Internationally comparable prices would lead to enormous problems for almost all the republics.

Variants calculated by the Price Committee of the Ministry of Economic Affairs and Finance in Russia for the pricing of trade between the republics show that, if world market prices were to be used, and an exchange rate of only 1.80 roubles per USD (commercial rate), Russia's trade balance would improve by some 33 000 million roubles with respect to the 35 most important groups of goods covered by government contracts for 1991. The other republics would have substantial trade deficits.

Russia's trade balance with the republics, 1991 (calculated at domestic and world market prices)



The main problem with the price liberalization, which, on the initiative of the Russian Federation, it was decided should apply as from 2 January 1992 in six CIS States (the Russian Federation, Azerbaijan, Armenia, Belorussia, Moldova and the Ukraine), together with the new pricing pattern for trade between those States, lies, however, in the fact that these price changes will now make new structures of production essential. Depending on the conditions attached, this will lead to the rapid cessation of production in many cases and the collapse of long-standing production agreements. In the economically underdeveloped areas of Central Asia and the Transcaucasus, especially, changes in cooperation relationships will lead to increases in economic and social tension. A drastic rise in unemployment is likely even in the industrially developed areas.

The price changes decided upon by six States will force the other CIS States (Kazakhstan, Kyrgyzstan, Tadjikistan, Turkmenistan and Uzbekistan) also to change their price levels, to change to a new incomes policy, to introduce currency-policy measures or to interrupt the free flow of goods between the States.

6. Investment and regional policies in the former Soviet Union were fixed on a centralized basis, which led to extremely disparate levels of industrialization. The different levels of production, efficiency and employment also determined incomes. Up to 1989, the general tendency was for remuneration to follow changes in productivity. The Baltic republics, Belorussia and Russia were at the head of the income tables. As cooperation between the States disintegrates, the economically weak Asian and Caucasian republics are being particularly badly hit.

7. The political disintegration of the Union was accompanied by disputes between the republics and the central government over currency, monetary and credit policies, taxation and the budget, prices and incomes. Alongside export bans, rising prices and incomes in the republics became instruments for the protection of national markets. Furthermore, the price changes planned or already implemented in various regions of Russia are leading to a fresh explosion in the money supply and totally different levels of domestic purchasing power for the rouble.

It would no longer seem to be possible to maintain a rouble currency area unless there are drastic monetary reforms. The disintegration of the single rouble area would lead to further problems with the economic ties between the States.

The Alma-Ata agreement on the use of the rouble in the CIS is already null and void. In the Ukraine, the first reusable coupons have been issued as a substitute.

8. A positive solution to the problems created by the disintegration of the Union requires the republics to be politically long-sighted and to relinquish some of their national sovereignty. The actions of those who wield political power in Russia are particularly important.

#### Selected results of economic reforms

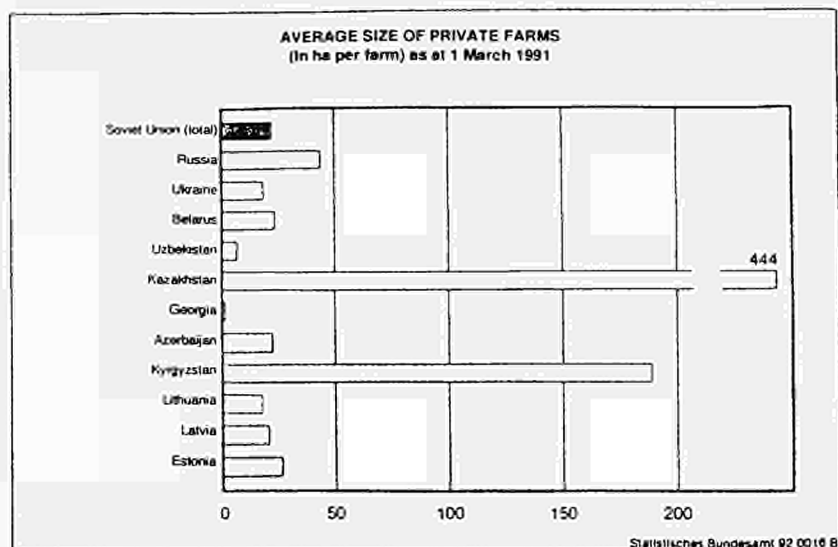
Initially, perestroika aimed to speed up economic development, using new methods to overcome a lack of efficiency. With the introduction of the business law, a new phase began, which made it apparent that attitudes towards property would have to change. But attitudes instilled into people over a period of 70 years, together with the structures built up over the same time span, can change only slowly. In the matter of property, one of the crucial problems of the changeover to market-economy structures, changes in economic practice must inevitably be slow to take effect.

Essentially, the laws decided upon in the majority of the republics are very similar. They are based on Western models as regards the introduction of market-economy structures, but they vary somewhat in detail. In some republics, the indigenous population will be allowed to purchase land and own it privately. Recently, the representatives of some republics have announced that foreigners will be allowed to purchase land. Businesses may also be sold to foreign investors.

Wide-ranging price liberalization has begun only in the Baltic States.

On the basis of the banking law, former branches of State banks have been converted into commercial banks, in the form of limited companies. The many such banks already established are authorized to conduct deposit and credit business. Some of them have been granted licences for external trade and currency transactions.

The necessary legal framework has also been established for land reforms, and a referendum is to be carried out on the ownership of land. By presidential decree, all agriculture in the Russian Federation is to be privatized as from 1992, and enterprises (sovkhozes and kolkhozes) are to be handed over free of charge to private farmers. By 1 March 1992, the enterprises must decide to whom their former property is to be transferred. The future form of ownership must conform to the law on businesses and free entrepreneurial activity. The restructuring of unprofitable kolkhozes and sovkhozes to turn them into private farms, and the formation of single-farm businesses, is proving to be a long, slow process, mainly because of a lack of interest on the part of agricultural workers and kolkhoz members, together with an almost total lack of all material resources. At the same time, there is resistance from the old Party and State apparatchiks.



Denationalization and privatization, in various forms, have begun in all republics, in most cases starting with the leasing or sale of small businesses, hotels and restaurants and service establishments. Most large State enterprises which have been privatized have been turned into limited companies or leased to their employees. In most cases, too, the shares have been sold to employees, whether on preferential terms or not. Compared with the same period of the previous year, the number of employees in enterprises under lease, limited companies and business associations has tripled, to almost 11 million people by 30 September 1991 - approximately 8% of all employees. In industry, construction, the distributive trades, hotels and catering, household services and road transport, there are some 20 000 enterprises under lease, with roughly 7.5 million employees. As yet, only a few large-scale enterprises have been turned into limited companies, and in these cases denationalization has been a matter of form rather than substance since government organizations and banks have shareholdings.

In 1992, the Russian Federation intends to release for privatization assets worth over 90 000 million roubles (20 to 25% of State property). Private persons can buy service establishments without any restriction whatsoever, whereas other businesses can only be disposed of with government approval.

The time is now past when the State allocated the labour force and other resources to producers, and products to customers, manufacturing or trading enterprises, on the basis of government-produced planning figures which had to be adhered to. The planning authorities have now been dissolved or reorganized. In 1991, there were still government orders for some 50% of production, but they have lost their administrative character and were negotiated with the suppliers and enshrined in contracts. With resources no longer being allocated by the State, and the Supply Committee (Gossnab) being turned into a trading establishment, commodity exchanges are springing up as an alternative form. Their business is booming.

Even after the price reform of April 1991, the use of contract prices was one of the main causes of price rises. In particular, the use of such prices in the basic industries (non-ferrous metals, aluminium production) had a knock-on effect on the production of manufactured goods. For some 50% of products, contract prices are now negotiated between suppliers and customers. They are still based on the old production and price structures, though, and have so far not been used as an instrument for allocating resources. Food prices vary according to the form of trade and from one region or city within the former Soviet Union to another. In September, prices for potatoes and vegetables varied by up to a factor of 17.

#### Estimated economic results for 1991

In 1991, the Soviet Union and its republics continued to fall apart - even more quickly than before. Economic ties between the republics and regions, and between the various branches, were dissolving with increasing rapidity. The volume of orders secured by contracts became smaller and smaller, and it therefore became more and more difficult systematically to plan production and produce the goods. Another factor leading to falling output was the increasing lack of discipline in the fulfilment of contracts concluded.

In 1991, also, the vain attempts to redress the catastrophic situation in the monetary and financial system led to further deterioration. All constructive attempts to overcome the economic crisis now seemed to be doomed to failure.

In the first half of 1991, gross social product was 10% down on the previous year's figures. Subsequently, an even more rapid decline set in. The estimate for January to September suggests a 12% fall. Since the problems have become more acute in the last quarter of the year, a total fall in the Soviet Union's gross social product of around 14% is expected.

#### Estimate of the main economic indicators, 1991

(Percentage change over the previous year, in comparable prices)

Gross social product	- 14
Total productivity	- 14
Industrial output	- 8
Agricultural output	- 10
New plant coming on stream	- 16
Consumption of goods and services by the general public	- 20
Exports	- 33
Imports	- 41

There was a serious deterioration in the financial, pricing and monetary system in 1991. The Union's State budget deficit doubled in one year, and is likely to reach 120 000 million roubles by the end of the year. During the period January to September, receipts totalled only 40% of the amount budgeted for that period. The corresponding proportion of expenditure was almost 70%. In addition, there are large deficits in the republics' budgets.

Internal public debt, which stood at 560 000 million roubles at the beginning of 1991, will cross the 1 billion (10<sup>12</sup>) rouble threshold by the end of the year (including offsetting for the general public's savings deposits).



In the first nine months of 1991, the enterprises' net earnings rose by just under 30%. In real terms, however, this was 6% down on the previous year's figures, since over the same period prices for finished products and materials doubled. This increase in net earnings is expected to slow down by the end of the year, especially since a wages explosion is also expected. Prices for raw materials and finished products are also rising. The result is a decline in the enterprises' real net earnings of up to 10 percentage points since 1990. They are unable to carry out urgently needed general repairs owing to a lack of funds - and there is an even greater lack of money for capital expenditure on expansion.

During the first half of 1991, there was a 43.1% increase in the monetary incomes of the general public, and a 69% rise during the first three-quarters of the year (in the third quarter alone, there was a 2.2-fold increase). It has been estimated that, for the year as a whole, the monetary incomes of the general public will more than double. Since there has been a sharp decline in the supply of goods available, retail trade turnover - at comparable prices - is likely to be more than 20% down on the 1990 figure. At the same time, there has been a much slower increase in the general public's monetary expenditure, with a consequent sharp rise in savings deposits.

In September 1991, the retail price index stood at 203% of the corresponding figure for September 1990. Depending on the speed with which prices are set free, in line with decisions already announced, this index is expected to be between 250 and 400 by December.

The situation on the consumer goods market became even more acute in 1991. Up to September, there was an 8.3% fall in food production, with a forecast decline of over 10% by the end of the year. The production and supply of non-food goods have also slumped.

#### Examples of the decline in retail trade turnover, January to September 1991

(Percentage changes over the previous year, in comparable prices)

Meat and meat products	- 12
Fish and fish products	- 22
Cheese	- 16
Sugar	- 15
Materials	- 45
Textiles	- 25
Knitwear	- 29
Leather footwear	- 34
Furniture	- 33
Motor cars	- 9

The 1991 cereals harvest in the Soviet Union is expected to be 160 million tonnes, over 25% down on the previous year's figure. There has been a sharp decline in sales of cereals to State funds. Up to 7 October 1991, 35.9 million tonnes had been bought up by the State, 14% less than in the previous year.

At the beginning of October, a large percentage of the agricultural area had not been harvested - 18% of the potatoes grown, 47% of vegetables and 52% of sugar-beet. Here, too, losses will be worse than in 1990, and in addition there will be losses in the transport and storage of foodstuffs.

Trade between the republics and regions is becoming increasingly difficult, especially in the case of meat, milk, eggs, sugar and vegetable fats, and this disruption led to increasing problems with food supplies in 1991. In the vast majority of the republics, there was not enough sugar available even with vouchers. Butter and margarine disappeared completely from the shops in September, and there were difficulties with bread supplies.

The decline in industrial output which began in the Soviet Union in 1990 continued at an even faster rate in 1991. In the first half of the year, there was a fall of 5 percentage points, and the total fall for 1991 will be more than 8 percentage points. The national economy was particularly badly affected by the drop in fuel output.

#### Examples of the fall in output from the fuelstuffs industry, January to September 1991

(Percentage change over the same period in the previous year)

Electricity	- 2
Crude oil	- 10
Coal	- 11
of which: coking coal	- 20

Natural gas is still being produced at the same level, but this cannot offset the decline in the production of crude oil and coal.

During the winter period, some enterprises are expected to close because of power cuts and in many areas of the country, homes are likely to be unheated for some of the time.

The situation in the metal industries is critical. On 1 October 1991, they had only two days' supplies of coking coal. Blast furnaces in some large-scale integrated steel plants had already been shut down because of the shortage of coke. In almost all steelworks, a constant rate of output is impossible because of scrap shortages.

In 1991, the production of building materials deteriorated even further (8 to 15%) as did the output of the woodworking industry (10 to 15%).

In 1991, also, there was a serious deterioration in the performance of the mechanical engineering industry, owing to increasing difficulties with the supply of materials and the disintegration of traditional economic ties and cooperation. The total fall was more than 10 percentage points. The decline in deliveries from the engineering industry to other branches of the economy has had particularly serious effects. During the first nine months of 1991, there was a 25% fall in the delivery of locomotives, excavators and bulldozers, and an 18% fall in machine tools; 12% fewer tractors were produced, 11% fewer combine harvesters and 13% fewer heavy goods vehicles. These shortfalls in supply have had serious consequences for agriculture, transport and communications and all branches of the manufacturing industries.

Output from the chemical industry has slumped even further over the past year - by around 10 to 15% in total. During the period up to September, there was an 8% fall in the production of mineral fertilizers, 10% in sulphuric acid, 23% in polypropylene, 16% in man-made fibres and 11% in tyres for lorries. An additional reason for this deterioration is the drop in imports of major chemical components and spare parts.

There was a catastrophic downturn in Soviet foreign trade in 1991. The main reasons for the 33% drop in Soviet exports since 1990 are the effects of the economic crisis on the fuelstuffs and raw materials industries and the abrupt abolition of the favourable conditions under which the Soviet Union had previously traded with the former Comecon countries. Exports of crude oil - the main Soviet export item - are expected to decline to 45 million tonnes in 1991, as opposed to 127 million tonnes in 1989, with the export ratio falling from 21 to 8%.

With the decline in exports and dwindling creditworthiness, there was a drastic contraction in imports. In 1991, despite further imports of foodstuffs on the basis of additional special credits, they fell by over 40%. The main areas affected were important materials and components for the manufacturing industries, especially light industry and chemicals. Further disruptions of output in the branches affected are inevitable.

Following the negative figures of 1989 and 1990, there is likely to be an external trade surplus again in 1991, but since the balance will be only just above DM 5 000 million, and DM 25 to 30 000 million are required simply to service the Soviet Union's debts, its external indebtedness will increase apace. Its foreign debts rose from USD 60 000 million at the end of 1990 to USD 70 000 million at the end of October 1991, with a forecast of USD 70 to 80 000 million in total for 1991.

The former republics account for very varying shares of external trade. In 1991, it is becoming more apparent than ever that Russia is in the best position. In 1991, over 80% of the Union's total exports (excluding those from the Baltic republics) will be coming from Russia. Russia's share of imports is under 60% and it thus has a substantial trade surplus. All the other republics will have a trade deficit in 1991, since their share of the Union's imports is considerably higher than their share of exports.

#### Outlook for 1992

The economic indicators for 1991 do not suggest that the situation will stabilize during 1992. The economic decline of the former republics will no doubt continue in 1992, the only question being whether it will continue at the same rate or intensify. It is also uncertain whether 1992 will produce the political and economic framework for stabilization and an upturn in the economy during the following years.

Even if the political situation were to be basically favourable, it would be impossible to lay all the necessary foundations for a market economy in the former republics in the short term. In any event, 1992 will be a year of transition, a year in which economic policies will not be able to rely on self-regulating market forces. The chances of the former Soviet republics' agreeing on economic policies which will get the Commonwealth's financial and monetary system back on its feet again must be considered slim, since the individual republics are not politically prepared to accept a powerful central bank. The Commonwealth's financial health can therefore only be improved decentrally, on the basis of national currencies.

Once the financial and monetary system is up and running, the chances of stabilizing cooperation and improving contract discipline improve. If the Commonwealth also manages to put an end to corruption, to abuses of office and economic crimes, the economy may reach a certain degree of "normality" during 1992, thus awakening or reawakening the interest of entrepreneurs, enterprises and employees in the economic results of their activity.

Provided that the abovementioned "normality" begins to return to the economy in 1992, any further deterioration in the supply of foodstuffs, industrial goods and services to the population can at least be largely halted, but any substantial improvement in the food supply can only be achieved if there is a sharp decline in the high rate of losses in the harvesting, transport and storage of foodstuffs.

The structural adjustments and changes in agriculture, the manufacturing industries and other branches of the economy, which are all necessary if the economy is to be transformed, have hardly begun as yet. They are, however, unavoidable if there is to be a changeover to a market economy system. Also unavoidable are the concomitant adjustment crises, which will be reflected in declining output, shutdowns, unemployment and gradual reconstruction. Since 1992 is expected to mark the beginning of these structural adjustments, the decline in gross social product and industrial output is not expected to be any less severe than it was in 1991. Unemployment is likely to reach unprecedented levels.

When the medium- and longer-term outlook for the economy is being assessed, it must be remembered that the Russian Federation, the Ukraine and some of the other newly independent States of the ex-Soviet Union have a wealth of raw material reserves, largely favourable climatic conditions and a pool of labour with good basic training and experience in large-scale industrial production. These are necessary requirements if the Commonwealth is to have a good chance of developing successfully, once the handicaps of a centrally planned economy have been overcome and new, market-based economic policies are working effectively. The States of Central Asia and the Caucasus, where there is a shortage of raw materials, have less prospects for economic progress unless they receive outside help.

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