ANNEX

Annex M.1: Change in Governmental Structure

Change in Governmental Structure in Dec 2000

Old	Changed
Presidencial Administration Office	Presidencial Administration Office
Ministry of Finance	Ministry of Finance (Committee of State Procurement of Ministry of Finance)
Ministry of Forreign Affair	Ministry of Forreign Affair (Committee of Investments of Ministry of Forreign Affair)
Ministry of Interior Affairs	Ministry of Interior Affairs
Ministry of Culture, Information and Public Concord	Ministry of Culture, Information and Public Concord
Ministry of Health, Education and Sport	Ministry of Health, Education and Sport
Miinistry of Agriculture	Miinistry of Agriculture
Ministry of Higher Education and Science	Ministry of Higher Education and Science
Ministry of State Revenues	Ministry of State Revenues
Ministry of Labor and Social Protection	Ministry of Labor and Social Protection
Ministry of Economy	Ministry of Economy and Trade (Committee for Construction Affairs of Ministry of Economy and Trade)
Ministry of Justice	Ministry of Justice (Committee on Drug Taking and Drug Trafficking Fighting of Ministry of Justice)
Agency for Economic Planning	Agency for Economic Planning
Agency on Investment	
Agency on Natural Monopoly regulation, Competition Protection and Small Business Support	Agency on Natural Monopoly regulation, Competition Protection and Small Business Support
Agency for State Procurement	
Agency on Migration and	Agency on Migration and
Agency on State Confidentiality Protection	Agency on State Confidentiality Protection
Agency for Strategic Planning	Agency for Strategic Planning
Statistics Agency	Statistics Agency
Construction Committee	
Ministry of Defence	Ministry of Defence
Ministry of Natural Resources and Environmental Protection	Ministry of Energy and Mineral Resources
Ministry of Transportation and Communication	Ministry of Transportation and Communication
Ministry of Energy, Industry and Trade	Ministry of Energy and Mineral Resources
(Committee of State Real Assets of the Ministry of Energy, Industry and Trade)	Agency on State Real Assets
Emergency Situation Agency	Emergency Situation Agency
Agency on Drug Taking and Drug Trafficking Fighting	
Prime Minister Chancerry	Prime Minister Chancerry

Annex M.2 Factors for Considering Infrastructure Facilities Management

There basically are two selective/combined solutions; to provide basic necessities of life by public sectors and to regulate the companies appropriately.

There presumably are two main factors that are important for the selection of infrastructure facilities management schemes; nature of service and suitability to private company structure.

Nature of Service

	High degree of public domain characteristics	**Low degree of public domain characteristics**
High Profitability	**(Could be) Private** - Essential goods or services for life - Need to regulate for ensuring provision of goods or services - Need to consider in terms of equality, security and stability before Privatization	**Private** - Low necessary goods or services for life - High profitability is attractive for private companies
Low Profitability	**Public** - Essential goods or services for life - Not attractive for private companies - Normally provided by public sector	**Private or Public** - Low necessary goods or service for life - Not attractive for private companies, thus may be provided by public sectors if necessary

Suitability to Private Company Structure

	High Profitability	**Low Profitability**
Easy user identification	**Private** - High profitability - Easy user identification - Self-Sustainable	**Semi-Public or Private** - Difficult to get profit (or difficult to charge high price) - Easy to identify users - Possibility in needs of public financial support
Difficult user identification	**Private or Semi-Private** - High profitability (if users can be identified) - Difficult to identify users - Risky Business for private companies	**Public** - Difficult to get profit (or difficult to charge high price) - Difficult to identify users (or public common use) - Developed/Operated by Public Sector

CHAPTER N
REGIONAL DEVELOPMENT PLAN FOR ASTANA CITY, AKMOLA PROVINCE AND KARAGANDA PROVINCE

SUPPORTING REPORT N: REGIONAL DEVELOPMENT PLAN FOR ASTANA CITY, AKMOLA PROVINCE AND KARAGANDA PROVINCE

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N.1 Objective of Regional Planning

The development of a city is possible only with close socio-economic linkages with the hinterland. A city provides various industrial goods and services to the surrounding area. In return it receives various natural resources from the hinterland as raw materials for industrial production such as agriculture produce and mineral resources. The City of Astana, the new capital of Kazakhstan since 1997, is expected to grow as the national center of administration, business and commerce in Kazakhstan. Industrial development is also expected in Astana to meet local demand. To achieve the development of Astana in these aspects, promoting development in the surrounding area would be inevitable. A rise in the income level of the surrounding rural population will create additional demand for industrial goods and services to be provided by Astana, leading to an expansion of economic activities in Astana. This will further necessitate an increased supply of raw materials by the hinterland, accelerating rural development. The development of other cities in the vicinity such as Karaganda and Kokshetau would benefit Astana through an increased supply of industrial goods and services not inherently available in Astana. To create this kind of circulatory and interdependent mechanism of economic growth, promotion of economic growth of the Astana's hinterland would be as important as planning the development of Astana itself.

With this objective, a regional development plan was worked out covering Astana and the surrounding area. The area covered includes the City of Astana, Akmola Province and Karaganda Province, mainly its northern area between Karaganda City and Astana City. Astana had been the provincial capital of Aklmola Province until 1997 with close economic ties, especially in terms of supply of agriculture produce and agro-processing products by Akmola Province. The City of Karaganda, a major industrial city in Kazakhstan, will maintain its important role in supplying mainly ferrous- and non-ferrous metal products as raw material of various industrial products to Astana and Akmola Province. Astana, on the other hand, would serve as the international gateway and regional hub as well as provide various administrative and high standard urban services and finished industrial goods to Akmola and Karaganda. These three administrative areas are abbreviated as " *AAKR* ", Astana, Akmola and Karaganda Region.

N.2 Present Condition of AAKR

N.2.1 AAKR in National Context

A socio-economic outline of *AAKR* is shown in Table N.2.1 and summarized as follows.

The *AAKR's* share in Kazakhstan in a number of indices is shown below. The share ranges from agriculture GRDP's 12% to area share at 21%.

Share of AAKR in Kazakhstan

Item	AAKR	Share to Kazakhstan
Population	2,604 thousand	17%
Area	575 thousand km^2	21%
GRDP	Tg. 261 billion	15%
Agriculture*	Tg. 17 billion	12%
Industry*	Tg. 110 billion	16%
Service*	Tg. 135 billion	15%

* In terms of GRDP

The structure of AAKR in terms of percentage distribution of various indices among the three regions is summarized as follows.

Structure of AAKR

(Unit: %)

Item	Astana	Akmola	Karaganda	Total
Population	12	33	55	100
Area	-	26	74	100
GRDP	17	18	65	100
Agriculture*	0	52	48	100
Industry*	19	12	69	100
Service*	17	18	65	100

* In terms of GRDP

In terms of population, Karaganda Province accounts for 55% of that in AAKR. Agriculture production in AAKR is shared almost equally by Akmola Province and Karaganda Province. Industrial and service production from Karaganda Province accounts for about two thirds of the total, resulting in the GRDP's share of Karaganda Province at 65%.

GDP and GRDP per capita in AAKR in 1998 are compared as follows. The Astana's GRDP per capita was about 22% higher than the national GDP per capita, while that in Akmola was 54% lower. That in Karaganda was almost same as GDP per capita of Kazakhstan.

Comparative GRDP per Capita

Area	Kazakh.=100
Kazakhstan	100
AAKR	86
Astana	122
Akmola	46
Karaganda	102

Lower per capita GRDP in Akmola Province is due to its higher dependence on the agriculture sector.

Structure of AAKR's Economy

(Unit: %)

Area	Agriculture	Industry	Service	Total
Kazakhstan	8	40	52	100
AAKR	6	42	52	100
Astana	0	47	53	100
Akmola	19	29	52	100
Karaganda	5	44	51	100

Since the independence of Kazakhstan in 1991, the economy had been experiencing a hard time with all sectors of economy declining. It was only in 1996 that the Kazakhstan economy grew for the first time since independence as a result of economic recovery and reform programs. Since then the Kazakhstan's economy seems to have start recovering. Most part of the AAKR economy also followed a similar process. In Astana, however, industrial production grew from 1993 to 1997. Table N.2.2 and the following table show the trend of production in the 1992/93-1997/98/99 period based on the data that could be processed for a time-series comparison.

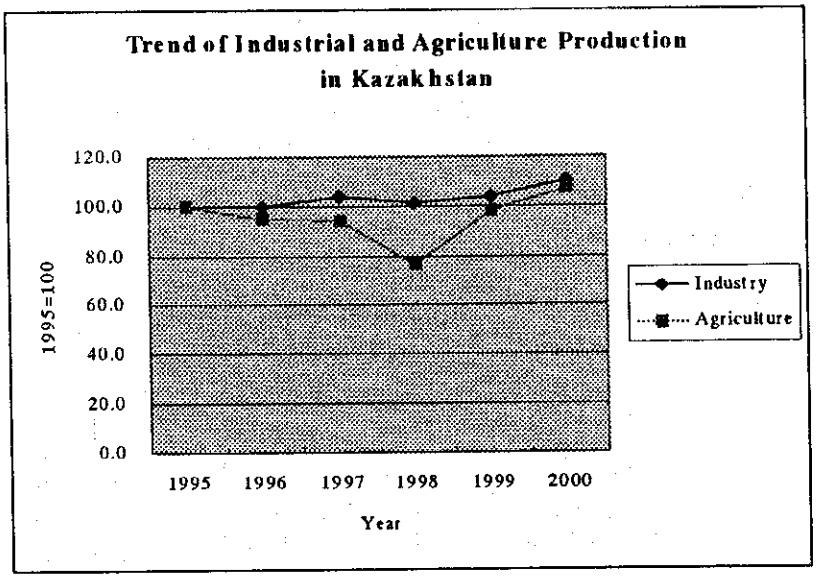
Trend in Production Level

(Unit: 1992/93=100)

Area/Sector	1992/1993	1997/1998
Kazakhstan		
GDP	100	73
Agriculture	100	47
Industry	100	62
Astana		
Industry	100	112
Karaganda		
Agriculture	100	40

Recent two years have seen a positive sign of Kazakhstan's economic growth as shown in Table N2.3. Industrial production, which declined by 2.4% in 1998, recovered by 2.2% in 1999 and 12.1% in July 2000 compared with July 1999. Agriculture production had been falling until 1998, but surged by a remarkable

29% growth in 1999 followed by a 9.2% growth in 2000. These trends are presented as below.



The Astana's industrial sector also shows a sign of recovery. The Astana's industrial sector, especially the following sub-sectors, registered growth in January 2000 compared with January 1999.

- Industrial sector total: 1.1%
- Textile/clothes: 18.9%
- Wood/wood products: 21.5%
- Non-metal mineral resources: 82.4%
- Power/gas/water: 12.4%

N.2.2 Existing Socio-Economic Condition of AAKR by Sector

(1) Industry

Table N2.4, N2.5 and N2.6 present the industrial production values in Astana City, Akmola Province and Karaganda Province by type of product. The industrial production values of each area were compared with the corresponding values of Kazakhstan in 1998 to derive the proportions. Those types of industries with the proportions higher than the population proportions, 1.8% for Astana, 5.5% for Akmola Province and 9.5% for Karaganda Province, are judged to maintain "High" production level. The following presents a summary. The percentage values in the parenthesis are the proportions to the national total production values by each category.

(Astana)

Population (1.8%)

Agro-processing (2.9%)

Textile/clothing (3.8%)

Timber/wood product (6.4%)

Paper/cardboard/publishing (4.1%)

Rubber/plastic products (8.5%)

Non-metal mineral products (11.8%)

Other (4.4%)

Electricity/gas/steam/hot water/water (4.2%)

(Akmola Province)

Population (5.5%)

Timber/wooden products (5.6%)

Chemical products (8.0%)

Other 7.4

(Karaganda Province)

Population (9.5%)

Coal/lignite mining (25.8%)

Metal ore mining (13.8%)

Other mineral resources industry (9.9%)

Chemical products (12.0%)

Ferrous metallurgy (100.0%)

Non-ferrous metallurgy (48.5%)

Electricity/gas/steam/hot water/water (11.8%)

Relatively a wide range of industries have advantage in Astana such as consumer goods including agro-processing and textile/clothing, construction related industries including timber/wood related, rubber/plastic products and non-metal mineral products and paper related products. Apparently the construction boom resulting from the new capital construction affected industrial production structure in Astana. Industrial production in Akmola Province and Karaganda Province are concentrated in fewer types of products. Timber/wood related products in Akmola Province are advantageous with a rich forestry reserve in the province. Chemical industry is also prosperous in Akmola. Karaganda Province is characterized by its concentration in mineral resource related activities. Mining of coal and metal ore accounts for 26% and 14% of Kazakhstan respectively. Karaganda Province is the largest area in metallurgy industry with ferrous metallurgy

monopolizing the national production and non-ferrous metallurgy production accounting for 49% of the national production. Consumer goods, on the contrary, are not produced within the province at such a level as to meet the provincial demand, most likely dependent on purchase from other provinces.

Table N.2.7 presents the industrial production volume by type of product in Astana from 1997 to 1999. Those types of industries with positive annual growth rates in the two-year period are presented in Table N.2.8. They include the following types of products.

- Food and beverage: fat, meat, dairy product, beer etc.
- Textile and cloth products
- Construction materials: building materials such as window, doors, plastic products etc.
- Furniture
- Printing and publishing
- Electricity and heat

It is judged that an increase in population due to the national capital relocation to Astana contributed to an expansion in the production of certain types of consumer goods. Heavy construction works resulted in accelerated manufacturing of construction and building materials in Astana.

(2) Agriculture

The production amount of major agriculture produce is presented in Table N.2.9 and N.2.10 for Akmola Province and Karaganda Province respectively. Those in 1999 are summarized in the following table

Production Amount of Major Agriculture Produce in Akmola and Karaganda Provinces in 1999

Produce	Unit	Akmola	Karaganda	Kazakhstan
(Production)				
Grain	10^3 tons	3,576	448	14,264
Potato	10^3 tons	138	126	1,695
Vegetables	10^3 tons	47	59	1,287
Meat	10^3 tons	87	62	635
Milk	10^3 tons	357	155	3,535
Egg	10^6 pieces	133	129	1,512
Wool	tons	437	963	22,300
(Share to Kazakhstan)				
Grain	%	25.1	3.1	100.0
Potato	%	8.1	7.4	100.0
Vegetables	%	3.7	4.6	100.0
Meat	%	13.6	9.8	100.0
Milk	%	10.1	4.4	100.0
Egg	%	8.8	8.5	100.0
Wool	%	2.0	4.3	100.0

Akmola Province produced 3,576 thousand tons of grain in 1999, accounting for 25% of the national production. Akmola Province forms a part of the Kazakhstan's granary comprising Kosatanai Province, North Kazakhstan Province and Akmola Province. Both in Akmola and Karaganda Provinces, the grain production in 1999 hit the highest level since 1995, with an annual growth rate in the 4 years at 10.0% per year and 4.6% per year respectively. The corresponding growth rate for Kazakhstan was 10.6% per year.

The production amount of potato, vegetables and eggs in Akmola Province and Karaganda Province was in a similar range. Milk production in Akmola Province was about double that of Karaganda Province. Wool production, on the contrary, was twice more in Karaganda Province.

The following table compares the agriculture production amount per person, derived by the total production amount divided by the total population, in Akmola Province, Karaganda Province and Kazakhstan. Grain production per capita in Akmola Province is more than four times higher than that in Kazakhstan. Fertility of the Akmola's land is indicated by most produce, both crops and livestock product, with per capita production higher than the national average except vegetables and wool. Vegetable production is still at a low level both in Akmola and Karaganda Provinces, implying the necessity for agriculture development by irrigation and greenhouse farming. Wool production is also low in the two provinces.

Agriculture Production per Capita of Akmola and Karaganda Provinces Compared with Those in Kazkahstan

Produce	Unit	Akmola	Karaganda	Kazakhstan
Grain	Tons	4.30	0.31	0.96
Potato	Tons	0.17	0.09	0.11
Vegetables	Tons	0.06	0.04	0.09
Meat	Tons	0.10	0.04	0.04
Milk	Tons	0.43	0.11	0.24
Egg	Pieces	161.00	89.63	101.53
Wool	Kg	0.53	0.67	1.50

Though not appearing in the official statistics, dacha farming is practiced in an area of 1,283 ha in the periphery of Astana City, playing an important role in supplying mainly vegetables to the urban population. Some of the challenges in the agriculture sector include recovering soil condition deteriorated by repeated cultivation and promotion of farm mechanization suited to reduce farm sizes as a result of the dissolution of the socialistic collective farming system.

N.2.3 Existing Spatial Structure of AAKR

Figure N.2.1 presents the basic spatial structure of AAKR. There are two major axes going through AAKR, one in the north–south direction and the other east–west direction. An axis here is defined as the artery comprising both republican road and railroad with both ends open to other regions and substantial traffic volume. The City of Astana is located at the crossroad of these two major axes. The north-south axis is formed by the republican highways No.P9 and P2 and the national railroad. These republican roads and railroad run from Almaty all the way up to the Southern Russian towns of Kurgan and Omsk, through major cities in AAKR such as Karaganda City, Astana City and Kokshetau City. The Almaty- Astana portion of this north-south axis has been strengthened by the rehabilitation of the republican road No.P2 with financial cooperation of the international organizations. The rehabilitation work of the P9 road for the Astana – Kokshetau portion is scheduled to be carried out in 2001.

The east-west axis is constituted by the national roads No F2 and P23 and the railroad. The national road No.F2 connects Astana to the west with Kostanai and Chelyabinsk in Russia and road No. P23 to the east with Pavlodar and further Novosibirsk in Russia. The east-west railroad line runs closely along this route.

AAKR is served by secondary arteries such as follows.

- The republican road running from Petropavlovsk in the north all the way down to Kyzylorda City in the south of Kazakhstan, through such

western cities in AAKR as Esil in Akmola Province and Zhezkazghan in Karaganda Province.

- East – west artery routing from Zhezkazgan in Karaganda Province eastward to Karaganda City with railroad running in parallel. This axis continues further eastward all the way to China through East Kazakhstan Province.

Figure N.2.2 presents a road network and urban hierarchy in AAKR. A dense local road network is developed in the hinterland of the east-west axis and the north-south axis in AAKR. The southern part of Karaganda Province and the area to the east and northeast of the AAKR, mainly in Pavlodar Province, are sparse in road network. Higher order urban centers are found also along these routes, especially along the north-south axis such as Kokshetau, Schuchinsk, Makinsk and Akkol. Schuchinsk on this axis functions as the gateway to popular Baraboe National Park as well as supplement Kokshetau in producing agro-processing products. Atbasar in the west and Ereimentau in the east on the east-west axis function as the nodes for their hinterlands. Stepngorsk developed independently based on its rich mineral resources apart from the total spatial development pattern in AAKR.

Such AAKR's spatial structure as mentioned above has developed out of the active agriculture sector activities in Akmola Province based on its fertile farm land and resultant traffic flows as well as the traditional role of AAKR as the transit route of commodities between Kazkahstan and Russia.

Table N.2.11 presents the functions of the major and secondary cities in AAKR.

N.2.4 Problem Structure of Kazakhstan and AAKR Economies

The Kazakhstan and AAKR economies suffer from a variety of problems of different nature and phase and mutually related. Figure N.2.3 and N.2.4 show a structure of problems in the industrial/service sector and agriculture sector to identify key problems to be tackled. Sound and effective policies and strategies could be worked out based on a clear understanding of the key issues. It should be noted that only negative aspects are focused in the analysis. Some positive signs beginning to appear, especially in the last two to three years, are not considered here.

The information for the problem structure analysis was collected from interviews with government officials, a factory/company interview survey and various documents. A factory/company interview survey was carried out in March 2000.

Altogether nine factories and companies located and operating in Astana were interviewed. The result of the interviews is summarized in Table N.2.12.

Some problems stemming from the political, geographical and natural factors are beyond control at a regional level. Problems related with human factor and policy and institutional aspects can be tackled through a consorted effort of the government and private sector. The table below summarizes the key problems and corresponding policy directions.

Key Problems and Policy Direction

Basic factor	Key Problems	Policy Directions
Human	Inexperience in market-economy	Human resource development
	Lowering technological level due to outflow of capable workers/engineers	
Policy/insti-tutional	Unstable macro-economic condition	Sound macro-economic management as prerequisite for all the other factors
	Lack of investment and operation fund	Strengthening private lending mechanism
		Strengthening public financial support schemes
	Limited financial capability of government and inadequate support measures	Strengthening of public finance structure
		Prioritization of public support measures and preparation of an effective support measure package
	Unfavorable investment environment	Improvement of physical infrastructure and laws/regulations/procedures

Human resource development would be an important policy direction to be pursued. Full transition to a market-oriented economy would be possible only with a sufficiently large stock of human resources in all spheres of economy adapted to market-oriented operations. Decline of the technological level caused by emigration of competent workers and managers should be overturned by upgrading the technological level of local human resources by providing training programs.

Sound macro-economic management is the prerequisite for all kinds of measures for economic development. Lack of investment and operating fund, the most common problem faced by farmers, factories and companies, should be solved by an increasing role of commercial banks through financial sector reform as well as by an expansion of the government financial support schemes where private lending is infeasible. The financial capability of the government needs to be strengthened by public finance restructuring. At the same time, support measures to be provided by the government should be prioritized so that an effective package of support measures can be prepared within a limited budget resource. The government has the sole responsibility to improve the investment

environment in terms of physical infrastructure and laws, regulations and procedures. Once the investment climate is improved, there would be an increasing number of investments by the private sector, leading to a production capacity increase and economic growth.

N.3 Advantages and Constraints

The advantages and constraints of Kazakhstan and AAKR are analyzed. Development strategies for AAKR are to be worked out in such a manner as to fully capitalize on its advantages and minimize constraints.

(1) Advantages and Constraints of Kazakhstan

Advantages

- Endowment of rich natural resource (oil, natural gas, coal, various mineral resources such as titanium, chrome, gold, silver, copper, rare metal/earth)
- Vast land area/arable land
- Strategic location between Asia and Europe
- Improving access with Europe and Asia ("Eurasia Land Bridge Project", "Druzha-Aktogai Railway Improvement" etc.)
- Comparatively well-developed infrastructure system (electricity, road, telecommunications) for its economic level
- Existence of well-educated human resource
- High level medical and health care system equivalent or superior to those in developed countries

Constraints

- Geographic condition as a land-locked country with no direct marine gateways
- Long distance from European and Asian Markets
- Limited access to European and Asian Markets
- Limited availability of water resources
- Unfavorable investment environment from the eyes of foreign investors in laws and procedures
- Shortage of modern technology
- [1] Human resources with limited experience in market economy

[1] Eurasia Land Bridge Project aims to strengthen the link between East Asia and Europe by developing a combination of communication infrastructures passing through the Central Asia including Kazakhstan. This project would expand trading of resources such as energy and food on the Eurasian continent.

- Deteriorating infrastructure and production facilities

(2) Advantages and Constraints Specific to AAKR

Advantages

- Geographical location at the central node of the international and inter-regional transportation networks and proximity to Russia
- Good transportation links with other part of Kazakhstan by road, railway and air routes. This is enhanced by the upgrading of Almaty-Astana-Kokshetau republican road and the Astana International Airport to be expanded as the new international gateway to the world.
- Availability of fertile agriculture area with high agriculture development potential (Akmola)
- Availability of unused water resources such as groundwater and the Irtish – Karaganda Canal water
- Availability of vast land with solid foundation 10-15 meters below ground level (Astana)
- Accumulation of industrial technology centering around agro-processing, textile/clothing, timber/wood, paper-related and non-metal mineral production in Astana, timber/wood and chemical industry in Kokshetau and mining, chemical and metallurgy industry in Karaganda Province. In addition, Astana City used to be the major production center of agriculture machinery (57% and 93% respectively of Kazakhstan's plant growing machinery and stock raising/forage production machinery in 1997).
- National capital status of Astana with an improving investment environment and easy access to government organizations for private sector entities in AAKR
- Existence of well-educated human resources with the quality higher than the national average.
- Endowment of international–class natural tourism/environmental resources rare in Kazakhstan such as Baraboe National Park, Kokshetau National Park and Kolgalgin Preservation Area, where various activities such as camping, swimming, bird watching, hiking, horse riding and falconry are possible.
- Endowment of rich mineral resource such as gold (50% of Kazakhstan, same hereafter), uranium, and molybdenum in Akmola as well as manganese (100%), copper (99%), gold (37%), and coal (27%) in Karaganda.

Constraints

- Limited direct access to the western part of Kazakhstan
- Long distance from Almaty, the largest market in Kazakhstan
- Drain of experts and capable personnel to other countries causing lack of competent workers and managers at production level
- Emerging environmental problems, especially in small towns where mixed land use pattern deteriorates the living condition of the people.
- Low income level of the rural population, limiting demand for industrial goods and straining use of various agriculture input such as machinery and fertilizer, leading to stagnation in agriculture production.
- Severe climatic condition, especially during winter
- Limited availability of accommodation, recreational facilities and infrastructure facilities at potential tourist destinations available in AAKR, constraining an increase in tourist arrivals

N.4 Regional Development Policies and Strategies

N.4.1 Existing Development Policies and Targets of the Kazakhstan Government

The government of Kazakhstan has produced the following four documents concerning national and regional development policy.

- "Kazakhstan 2030" by President Nazarbayev
- Regional development policies prepared by Kazinvest
- Indicative Plans by Year 2005 for Kazakhstan and each province
- "Blooming of Astana is Blooming of Kazakhstan"

There was an information from the Ministry of Economy that the following documents concerning the regional development policy in Kazakhstan are under preparation: "Draft Concept of State Regional Policy up to Year 2005" and "Diagram of Development and Location of Production Forces of Republic of Kazakhstan up to Year 2015". Upon the completion and release of these documents, they will be reviewed and integrated into the present study.

A brief explanation on the four documents listed above follows:

(1) " Kazakhstan 2030"

"Kazakhstan 2030", prepared by President Nazarbayev in 1998, presents the goals of Kazakhstan to be achieved by the year 2030. It analyzes the advantages, opportunities and shortfalls of Kazakhstan and presents the long-term priorities as follows.

- National security
- Domestic political stability and consolidation of the society

- Economic growth based on an open market economy with high level of foreign investments and internal savings
- Health, education and well-being of Kazakhstan citizens
- Effective utilization of power resources (oil and gas) to gain sufficient revenues for ensuring stable economic growth
- Development of transport and communication infrastructure
- Establishment of a professional state with an effective and up-to-date corps of civil servants

The following four priority goals are mentioned for the 1998-2000 period.

- National security strengthening through deepening relationships with leading countries, capital attraction into Kazakhstan's power engineering sector and working-out of the military doctrine of Kazakhstan.
- Settlement of the most pressing rural problems: combating poverty and unemployment and economic growth through strengthening internal political stability and unity of society
- Finalization of all social and economic reforms primarily in the budgetary sphere thus resulting in timely and complete payment of pensions, wages, salaries and social benefits
- Creation of a favorable investment environment through the acceleration of government and civil service reform and strengthening of activities in combating corruption and abuse

(2) Regional Development Policies of Kazakhstan by Kazinvest

The Kazakhstan government presents the regional development policies of Kazakhstan in "Investor's Guide 1999-2000" prepared by Kazakhstan Investment Promotion Center ("Kazinvest") as follows.

1) Staging
   - 1998-2000: Creating prerequisites for economic growth
   - 2000-2010: Realizing priorities of regional development policies
   - 2010-2030: Achieving goals of regional development policies

2) Characterization and Priority of Regions (detail in Table N.4.1):

   Group 1:

   - Atyrau, Aktyubinsk, Mangistau, Western-Kazakhstan, part of Kyzylorda, Zhambyl
   - Rich mineral and hydrocarbon resources and socio-economic backwardness in the rural area

- The priority is to attract investors to modernize production technology.

Group 2:

- Eastern Kazakhstan, Pavlodar, Karaganda, Kostanai, Northern Kazakhstan
- Heavy industry areas
- The priority is to restructure production with modern technology and management improvement.

Group3:

- Northern Kazakhstan, Akmola, Kostanai, Zhambyl, South Kazakhstan, Western Kazakhstan, Almaty (province)
- Agriculture area
- The priority is to expand agriculture and agro-processing production.

Group4:

- Rural areas of Atyrau, Mangistau, Karaganda, Southern Kazakhstan
- Depressed regions with social crisis
- The priority is to initiate a step in promoting local-resource based production and improves living condition with foreign humanitarian assistance.

(3) Indicative Plans until 2005 of Kazakhstan and AAKR

Each province in Kazakhstan prepared indicative plans until 2005, containing policy directions and economic growth targets. Table N.4.2, 4.3 and 4.4 show the economic growth targets of Kazakhstan, Astana City, Akmola Province and Karaganda Province. The following is a summary.

Economic Growth Targets of Indicative Plans until 2005

(Unit: average annual growth rate in %/year between 2000 and 2005)

Area	GDP/GRDP	Agriculture	Industry	Service
Kazakhstan	4.2	1.9	4.2	n.a
Astana	n.a	-	11.8	n.a
Akmola	n.a	2.7	2.2	n.a
Karaganda	n.a	2.9	4.5	n.a

Note: No calculation is made for GRDP at provincial level. The values for agriculture and industry are in terms of production value.

Concerning Astana, there is another information indicating the industrial sector's target growth rates as follows: 3.0% (2000), 4.0% (2001), 6.0%

(2002), 7.0% (2003), 8.0% (2004 and 2005). The average annual growth rate is 6.0% per year between 2000 and 2005.

In either case of the above, a high growth rate is assumed for the industrial sector in Astana, presumably considering the rapid urban expansion in Astana foreseen in the next five years. The industrial growth rates assumed for Kazakhstan and Karaganda are in a similar range, while that of Akmola Province is about half. The agriculture growth rates of Akmola Province and Karaganda Province are close, both higher than the national target.

The production growth targets at sub-sector or commodity level indicates that the following types are accorded priority judging from their high growth targets assumed.

Astana City

- Non-alcoholic beverage
- Reaping machine

Akmola Province

- Mining
- Non-ferrous metal products
- Agro-processing (milk, meat, butter, soft drinks)
- Oil seed
- Egg

Karaganda Province

- Mining (coal, iron ore, non-ferrous ore)
- Textile/clothing
- Wood/wooden goods
- Rubber/plastic goods
- Non-ferrous metallurgy
- Machinery/equipment
- Light industry
- Livestock (egg, milk)

(4) "Blooming of Astana is Blooming of Kazakhstan"

"Blooming of Astana is Blooming of Kazakhstan" was prepared by Ministry of Economy and Institute of Economic Studies in 2000, following the Prime Minister's order. It presents the major policy directions concerning the development of Astana until the year 2005. The following gives a summary on some of the major policy directions presented in the early version in March 2000 and the later version in September 2000, which are closely related with the present project.

a. Astana will pursue "Government and Business City" rather than "Government, Business and Industrial City". Alamty will continue to be the cultural, business, scientific and education center of Kazakhstan.

b. Astana would encompass legislative and executive authorities, embassy city, business structures, other state bodies, business and commercial entities and local-market based industries.

c. Economy-wise, priority is given to the service sector including transportation, communication, engineering services etc. Significant development of industry is not assumed except for construction. Priority in the industrial sector is the modernization of production technology and application of information technology (IT). Those industries to locate in Astana would mainly fulfill the increasing demand in Astana City, especially small and medium scale industries.

d. Human resources development is to be emphasized especially in such fields as information technology, microelectronics and biotechnology.

e. Those industries targeting markets outside Astana or environmentally harmful need to be closed, transformed or relocated. Agriculture machinery factories need to be gradually converted to assembling plants with closer cooperation with the plants in other provinces.

f. Research and development activities will be strengthened in the fields of import substitution industries, energy saving technology, bio- and genetic engineering, telecommunication and information technology, advanced machinery and equipment and new material development.

g. "Center for Information Technology and Application" will be established to develop IT-related private activities and promote application of advanced IT technology to industrial production process.

h. Provision of tourism opportunities to the Astana residents would be important. In this sense development of tourist destinations of various kinds in the vicinity of Astana would be necessary in such locations as Akkol, Korgalginsky and Baraboe.

i. International cooperation would be required to promote agriculture development in the surrounding area of Astana to ensure year-round food supply.

j. A range of production growth targets is estimated as follows.
   - Industry: not less than 17.5 % per year
   - Service: 15 to 20% per year

k. "Blooming of Astana is Blooming of Kazakhstan" presents a number of

national and inter-regional infrastructure projects as important for the economic growth of Astana and Kazakhstan as follows.

- Yesil-Arkalyk-Zhezkazgan-Kyzylorda railway connection to bypass Astana
- Renovation and upgrading of Astana-Almaty railway (15 billion Tenge)
- Establishment of direct railway lines from Astana to Semipalatinsk, Ust-Kamenogorsk, Kyzylorda, Atyrau and Aktau
- Upgrading of Almaty-Karaganda-Astana-Schuchinsk-Kokshetau Highway with improvement of access to Baraboe
- Astana Ring Road to divert traffic to/from Karaganda, Kosatanai, Pavlodar and Petropavlovsk.
- Gas pipeline connecting Karachaganak – Orenburg – Arkalyk – Aktybinsk – Astana.
- Telecommunication line connecting Almaty – Karaganda – Astana – Kokshetau – Petropavlovsk - Omsk
- Widening of Irtish-Karaganda canal
- Irtish-Karaganda-Ishim canal

l. Investment cost needed for constructing new Astana is estimated to be in a range of 200 to 250 billion Tenge by the year 2005.

m. Social development is equally essential in order to improve the living standard of the population in the fields of public health, science and education and physical training and sport. The establishment of a scientific-research institute covering humanitarian, mathematical, technical and chemical-biological fields is proposed.

N.4.2 Objective and Regional Development Strategies Proposed for AAKR

(1) Objective

The objective of regional development in AAKR is to promote economic growth so as to raise the living standard of the population in an environmentally sustainable manner. The following strategies are worked out based on an analysis of the exiting conditions, problem structure, advantages and constraints and the existing development policies and strategies of AAKR and the Kazakhstan government.

(2) Regional Development Strategies

The following three regional development strategies are proposed

- Promotion of economic development under appropriate division of functions
- Development of a spatial structure, which is more balanced and with easier access to other regions
- Creation of an appropriate institutional set-up instrumental in promoting a balanced economic development of AAKR

Promotion of Economic Development under Appropriate Division of Functions

The AAKR's economy could be developed most effectively by fully taking advantage of the strengths of each region. The City of Astana will see a substantial improvement of its urban environment and population growth, providing big potential for business and commercial development. The ongoing upgrading of the Astana International Airport would enhance this potential for international business. Karaganda Province is the major industrial province in Kazakhstan based on its mining and ferrous- and non-ferrous metallurgy production activities. Akmola Province forms a part of the Kazakhstan's granary with a big potential in further agriculture development and agro-processing industries at an international level. AAKR should aim at growing into a leading and model area for other regions in Kazakhstan in these fields. Based on the characteristics of AAKR's each region, the following basic division of functions is proposed. It should be noted that an emphasis of this concept is laid on strengthening these advantages rather than excluding other possibilities for each region. Those activities that do not match the concept below are actually taking place on a local basis and these activities could further develop.

Astana

- Political/administrative center
- Business and commercial center at an international level
- Leading research and development (R/D) center of advanced technologies in Kazakhstan such as information technology and environmental science

Akmola Province

- Leading agriculture area in Kazakhstan, expanding the production of the existing crops and introducing new crops
- Agro-processing industry based on its rich agriculture potential and taking advantage of its proximity to Russia, a potential big market
- Comprehensive agronomic center with strong distribution function with such facilities as depots and transshipment terminals

- Tourism development area capitalizing on its rich environmental resource
- Research and development (R/D) on farming and bio-technology

Karaganda Province

- Center for processing industry in Kazakhstan and CIS
- Research and development on advanced industrial technology, with an emphasis on application to production
- Center for human resource development in industrial technology for Kazakhstan and CIS countries

Measures to support economic growth of AAKR would comprise the promotion of investment and the upgrading of productivity. Investment would increase as a result of the development of various infrastructure facilities, streamlining of legal system and procedures and improvement in financing mechanism. The productivity improvement would be achieved by human resource development, research and development activities and extension services for disseminating technological information. These support measures by the government should be applied to each region based on the division of functions for AAKR as proposed above.

Development of a Balanced Spatial Structure

The spatial structure of AAKR needs to be strengthened in order for AAKR to effectively play a leading role as the advanced technology, administrative and business/commercial center of Kazakhstan, paying due consideration to the development of the surrounding rural area. Two points of view, macroscopic and regional, are taken. From a macroscopic perspective, AAKR's access to and from other regions of Kazakhstan needs to be improved. Figure N.4.1 shows a concept of access upgrading for AAKR. As is often pointed out, there is no east-west artery in Kazakhstan, resulting in much of freight traffic detouring through the neighboring countries. Improved access from AAKR to the Caspian region such as Aktau and Atyrau would open a new direct route to the Caucasian countries and further to the European countries through the Caspian Sea route. Improved access to the southwestern direction would benefit the depressed rural area of Karaganda Province as well as ensuring smoother traffic flow from the southern part of Kazakhstan such as agriculture commodities produced in the south, leading to economic growth in the region. An improvement in access is especially needed between the Astana-Zhezkazgan portion where there is no republican road. The improved access of this portion could benefit the Korgalgynski region of Akmola Province on its way, endowed with rich

natural environmental resource potential for eco-tourism development. Access to the east, mineral resources producing area, through such cities as Semipalatinsk and Ustkamenogorsk, would accelerate the exchange of commodities and technology as well as adding a new trade route to China on top of the Aktogai-Dostyk route currently being upgraded.

An improvement of the AAKR's spatial structure from the regional perspective would comprise the strengthening of the existing two axes in AAKR, north-east and east-west and enhancing the function of the secondary cities in AAKR. The north-south axis running from Almaty all the way up to Kokshetau through Karaganda City and Astana is being upgraded by the rehabilitation work of the republican road. Upgrading of the railroad and telecommunication lines along this axis is yet to be initiated. The east-west axis from Kostanai to Pavlodar through Astana, lagging behind the north-south axis in upgrading work, would require an improvement from the viewpoint of balanced economic growth.

Secondary cities would play an important role in receiving rural population and providing various urban services to the hinterland. It would be possible that the large cities such as Astana, Karaganda and Kokshetau be flooded with in-migrating population seeking for job in the event that no improvement in living condition takes place in the rural area. The secondary cities with the reinforced urban functions could intercept these emigrating rural people, leading to a balanced growth of first order cities and lower order cities. At the initial stage, an emphasis in urban development could be placed on such second-tier cities as Schuchinsk, Stepnogorsk, Atbasar, and Erimentau with population of more than 30,000. The lower-tier cities could be developed at a later stage.

Creation of an Appropriate Institutional Set-up

Success in the implementation of a regional development plan hinges upon the readiness on the part of the Kazakhstan government in carrying out the proposed plan in a comprehensive manner and with a regional perspective. So far much attention has been paid to the development of Astana, but with lower attention to the surrounding areas. Consequently no sufficient coordination seems to be made among the related organizations in planning and implementing measures for development. As stressed at the outset of this sector report, Astana's growth is possible only with the development of the neighboring provinces. To effectively plan and realize the development of AAKR, an appropriate institutional set-up would be needed, involving

central policy and line government organizations as well as provincial governments. Under this kind of institutional-set-up, various coordination works will be carried out such as analyzing the present condition of AAKR, capturing the most pressing problems, their interrelations, strategies for solving problems, working out measures and projects, and making financial arrangements for implementing the measures.

(3) Sectoral Development Strategies

Table N.4.5 gives an idea on the directions for industrial development for Astana, focusing mainly on the existing types of industries. Most of the industries mentioned here could benefit from the expanding market of Astana, if the production capacities are accordingly expanded. So the first priority would be to fulfill the expanding demand in Astana and AAKR as a whole by local products. This is import-substitution strategy. For certain products already domestically or internationally competitive, upgrading the quality of product would be needed to expand export to CIS countries, or even to non-CIS countries. This is export-promotion strategy to be promoted either following or in parallel with import substitution stage.

It is recommended that a detailed analysis is carried out to work out a set of sectoral strategies for agriculture, industry and service sectors in AAKR based on the regional development strategy presented in N.4.2 (2).

N.5 Measures and Projects Proposed for AAKR

N.5.1 Projects Ongoing and Planned by the Kazakhstan Government

Table N5.1, N5.2 and N5.3 present a list of projects prepared either by the republican government or city/provincial governments, which are ongoing or planned in Astana City, Akmola Province and Karaganda Province. There are altogether 80 such projects in AAKR, comprising 27 projects in Astana City, 35 projects in Akmola Province and 18 projects in Karaganda Province. The projects and measures proposed for AAKR in Section N.5.2 incorporates some of the concepts presented in these ongoing and planned projects.

N.5.2 Development Programs Proposed for AAKR

A set of measures and programs are proposed to accelerate economic growth in AAKR. They are worked out at a conceptual level based on an analysis of the present condition, problems, the development strategies for AAKR and the

ongoing and planned projects presented in section N.5.1. They include an institutional measure, seven area development programs (ADP) and two sector development programs (SDP) as follows. ADPs are to be implemented for specific regions, while SDPs are applicable to all regions. They are mutually supportive.

Establishment of AAKR Regional Development Committee

Area Development Programs (ADP)

(1) Eurasian IT Oasis Program
(2) Greater Astana Integrated Agriculture Development Program
(3) Akmola Agro-processing Corridor Program
(4) Karaganda Processing Industry Revitalization Program
(5) Akmola, Karaganda and Pavlodar Tourisn Development Program
(6) Integrated Urban Infrastructure Development Program (IUIDP)
(7) Research and Development Center Program

Sector Development Program (SDP)

(8) Comprehensive Enterprise Support Program
(9) Technology Education Pilot Scheme

A brief explanation on these measures and projects follows.

The objective of establishing the AAKR Regional Development Committee is for those organizations concerned with the AAKR development to discuss AAKR's development issues, work out strategies for development and implement them on a common ground. Relevant organizations would include Astana City, Akmola Province, Karaganda Province and republican organizations, both policy agencies such as Ministry of Economy and line agencies responsible for each relevant sector. It is proposed that representatives of these relevant organizations existing at present meet, on a regular basis, to discuss the AAKR's development issues. Creation of a new organization for this purpose is not recommendable. Various development projects and measures tend to be implemented individually without duly considering the relations with other projects in adjacent regions. The AAKR Regional Development Committee would enable the organizations concerned to coordinate and integrate projects and measures to maximize the benefit generated by each project.

Table N.5.4 presents an outline of the proposed seven ADPs and two SDPs. Figure N.5.1 shows their locations. Eurasian IT Oasis Program aims to apply advanced information technology (IT) to regional development of AAKR through developing telecommunication networks and supporting IT industries by

incubation service. This program would ensure an increased and smoother exchange of technical and market information for industries and farmers to upgrade productivity. A country like Kazakhstan, characterized by a vast land area and long distance among cities, can benefit most from IT application. Astana is proposed to grow into the IT center for Kazakhstan and CIS. Human resources development in IT would be the prerequisite in pursuing this direction. It would be meaningful to hold an international seminar on IT as an initial step to publisize the importance of IT for the economic development of Kazakhstan.

Greater Astana Integrated Agriculture Development Program supports agriculture production in three districts in Akmola Province, Arshanlysky, Tselinogradsky and Shortandynsky and one district in Karaganda Province, Oakarovsky district in the vicinity of Astana. "Greater Astana" here indicates the areas surrounding Astana City. The aim of the program is to increase food supply capability of this area to meet growing demand in Astana. Irrigation farming, greenhouse farming and livestock are to be supported. Promotion of *dacha* farming and small-scale farm mechanization will be sought. Table N.5.5 presents a preliminary estimate of a food balance in Astana and Akmola Province combined by the year 2030. Yhis estimate indicates a sharp shortage of vegetables, potato, and livestock and dairy products by 2030. Table N.5.6 presents a socio-economic profile of the three districts in Akmola Province.

Akmola Agro-Processing Corridor Program will turn the north-south Astana-Kokshetau corridor and Erimentau-Esyl-Atana east-west corridor into a major agro-processing corridors based on a rich agriculture growth potential of Akmola Province. Investment environment of the major secondary cities along these corridors will be improved through infrastructure development, technical and support measures and investment incentives. Access with the hinterland will also be improved.

Karaganda Processing Industry Revitalization Program would support restoration and growth of metallurgy industries and processing industries in Karaganda City and Temirtau City by technical and financial support. This area could develop into a major processing industry center in CIS. Industrial Human Resource Center would train factory workers and managers from Karaganda Province, other part of Kazakhstan and CIS on technical and managerial issues. Application of "Cleaner Production" technology, which is the technology generating minimum pollution load, is proposed with the involvement of the United Nations Environmental Program initiative.

Akmola, Karaganda and Pavlodar Tourism Development Program would start with the preparation of a tourism development master plan for the tourism areas in three Provinces; Akmola, Karaganda and Pavlodar of which potential regions for tourism development are shown in the Figure N.5.2. The Program outline of which is given in the Table N.5.4 is aimed at the enhancement of the tourism potential through improvement of accessibility and on-site infrastructure in environmentally sustainable manner. Promotion of nature-oriented tourism along with the revival of national traditions is proposed. An increased and upgrading of receiving capacity of such tourism and recreational areas as "Burabai" Historical-Cultural and Health Rehabilitation Center, Kokshetau National Park, Korgaldjy Preservation Area containing Tengiz lake in Akmola Province as well as "Bayanaul" National Park in Pavlodar Province and Karkaraly National Park and "Ulytau" outdoor National Museum in Karaganda Province will benefit urban residents in Astana and relevant cities and towns as well as international tourists.

Accessibility from Astana to the above tourism site, particularly, Baraboe, needs to be improved. In order to improve the rail transport between Baraboe and Astana which takes about 3 hours by local train now, introduction of express train services is indispensable. This will not only improve the accessibility for tourists, but also commuters from Kokshetau and Shuchinsk to and from Astana, which could be extended to Karaganda.

Integrated Urban Infrastructure Development Program (IUIDP) would improve the urban environment of the major two cities in AAKR, Kokshetau City and Karaganda City (including Temirtau City) and 20 secondary cities in AAKR. The designated function of Kokshetau City (agro-processing center and Farming/bio-technology research and development center) and Karaganda City (processing industry center) would be fulfilled with an improved urban environment. IUIDP would be conducive to strengthening the urban functions of the secondary cities, which is important in offering job opportunities and better living environment to the rural population. A unique component of IUIDP is the provision of IT infrastructure and services such as public access terminal where residents can use computers to acquire and disseminate various kinds of information. Telecommunication system will be improved for this purpose. Table N.5.7 presents an outline of urban infrastructure facilities in Kokshetau City and 9 secondary cities in Akmola Province, for which data were made available.

Research and Development Center Program would enhance the AAKR's leading role in Kazakhstan in spearheading advanced technology development and application to productivity increase. RD centers are to be established in the fields of information technology and environmental science in Astana, farming and bio-technology in Kokshetau and advanced industrial technology in Karaganda.

Comprehensive Enterprise Support Program is to be applied to economic entities in agriculture, industry and service of all scales in AAKR. This program is not area-specific, applicable to all the areas in AAKR. Financial support would be provided in the form of a loan with favorable conditions. Technical support will be provided through enhanced extension service for farmers and advisory and consultative service for factories. Managerial support is to be provided especially for small and medium enterprises with low managerial capability. IT will be fully utilized.

Technology Education Pilot Scheme is an SDP on a pilot basis proposed in Astana. The basic subjects for technology would be increased such as mathematics, science, information technology and English language.

TABLE

Table N.2.1
Outline of AAKR in 1998

Item	Unit	Kazakhstan	AAK	Astana	Akmola Province	Karaganda Province
(in Values)						
Population	thousand	14,958	2,604	309	858	1,437
Area	10^3 km^2	2,724.9	574.9	0.3	146.6	428.0
Population density	person/km^2	5.5	4.5	1,030.0	5.9	3.4
GDP/GRDP	Tg 10^9	1,748.0	261.0	44.0	46.0	171.0
GDP/GRDP per capita	Tg 10^3	117	100	142	54	119
	$	1,520	1,303	1,852	697	1,547
Agriculture	Tg 10^9	143.3	16.8	0.0	8.8	8.0
Industry	Tg 10^9	694.0	109.6	20.5	13.3	75.8
Service	Tg 10^9	910.7	134.6	23.5	23.9	87.2
(in % to Kazakhstan)						
Population	%	100.0	17.4	2.1	5.7	9.6
Area	%	100.0	21.1	0.0	5.4	15.7
GDP/GRDP	%	100.0	14.9	2.5	2.6	9.8
GDP/GRDP per capita	Kazkh.=100	100.0	86	122	46	102
Agriculture	%	100.0	11.7	0.0	6.1	5.6
Industry	%	100.0	15.8	3.0	1.9	10.9
Service	%	100.0	14.8	2.6	2.6	9.6
(Structure of Economy)						
GDP/GRDP	%	100.0	100.0	100.0	100.0	100.0
Agriculture	%	8.2	6.4	0.0	19.1	4.7
Industry	%	39.7	42.0	46.7	28.9	44.3
Service	%	52.1	51.6	53.3	52.0	51.0

Note:
$ = 76.9 Tenge in 1998
Industry: manufacturing and construction
Source: (1) Akmola Provincial Office (2) "Statistical Yearbook '99" Agency on Statistics of the Republic of Kazak

Table N.2.2
Trend of Kazakhstan and AAKR Economies

Year	Kazakhstan (1992=100)			Astana (Industry) [1] 1992=100	Karaganda Agriculture [2] 1992=100
	GDP	Agriculture	Industry		
1992	100.0	100.0	100.0	n.a	100.0
1993	90.8	93.1	86.0	100.0	92.7
1994	79.3	73.5	62.4	120.1	74.3
1995	72.8	55.6	57.0	138.0	62.5
1996	73.2	52.8	57.2	108.2	61.6
1997	74.4	53.8	59.4	111.8	46.3
1998	72.5	46.8	61.7	n.a	39.9
1999	n.a	n.a	n.a	n.a	38.8

1) Estimated by JICA study team
2) In terms of output value in 1994 price level
Source:
(1) "Statistical Yearbook '99" Agency on Statistics of the Republic of Kazakhstan
(2) "Republic of Kazakhstan: Recent Economic Developments" IMF, August 1998

Table N.2.3
Trend in Real Wage, Production and Investment in Kazakhsta between 1995 and 2000

(Unit : previous year/period=100.0)

Year	Real wage index	Production Index		Capital investment
		Industrial production	Agriculture production	
1995	100.4	91.8	75.6	57.5
1996	102.6	100.3	95.0	60.1
1997	106.4	104.0	99.2	111.6
1998	104.8	97.6	81.1	141.9
1999	104.7	102.2	128.9	103.8
2000	106.2 *(1)*	112.1 *(2)*	109.2 *(2)*	135.3 *(2)*

Note : *(1)* January to June *(2)* July
Source: "Statistical Bulletin 2'2000" Agency of the Republic of Kazakhstan on Statistics

Table N.2.4

Industrial Production Value in Astana City from 1997 to 1999 Compared with Kazakhstan

(Unit : Tg 10^6)

	Type of Industry	Astana			b. Kazakhstan	a. / b.	Comparison with Nation
		1997	a. 1998	1999	1998	(%)	*(1)*
1.	**Mining industry**	**24.2**	**54.3**	**65.6**	**62,289.0**	**0.1**	Low
2.	**Processing industry**	**9,219.30**	**9,395.40**	**9,901.70**	**418,643.0**	**2.2**	High
2-1	Agro-processing	4,653.80	4,775.70	5,498.90	166,148.0	2.9	High
2-2	Textile/clothing	308.4	457.5	535.4	11,991.0	3.8	High
2-3	Leather and leather products	0.0	0.0	0.0	1,081.0	0.0	Low
2-4	Timber and wood products	146.9	155.6	186.6	2,444.0	6.4	High
2-5	Paper/cardboard/publishing	180.3	344.7	382.4	8,333.0	4.1	High
2-6	Coke/oil distilling/nuclear material	0.0	0.0	0.0	35,342.0	0.0	Low
2-7	Chemical products	33.6	81.8	97.3	11,263.0	0.7	Low
2-8	Rubber/plastic products	83.2	201.5	286.4	2,380.0	8.5	High
2-9	Non-metal mineral products	1,589.70	1,599.80	1,547.60	13,512.0	11.8	High
2-10	Metallurgy/metal processing	864.1	971.9	579.4	132,103.0	0.7	Low
2-11	Machinery/equipment	622.2	347.9	357.5			
2-12	Electric/electronic equipment	36.7	60.7	97.9	29,992.0	1.8	Low
2-13	Transport equipment	588.5	219.8	96.9			
2-14	Other industry	111.9	178.5	235.4	4,054.0	4.4	High
3.	**Electricity/gas/Steam & hot water/water**	**7,086.00**	**7,044.60**	**5,749.50**	**167,006.0**	**4.2**	High
3-1	Electricity	3,060.40	2,546.60	1,922.50	92,666.0	2.7	High
3-2	Gas	68.7	276	263	10,020.0	2.8	High
3-3	Steam/hot water	3,610.60	3,872.20	3,192.00	51,696.0	7.5	High
3-4	Water	346.3	349.8	372	12,624.0	2.8	High
4.	**Total Industrial Production Value**	**16,329.50**	**16,494.30**	**15,716.80**	**808,044.0**	**2.0**	-
5.	**Population (thousand)**	**275.1**	**275.3**	**318.2**	**14,957.8**	**1.8**	-
6.	**Industrial Production per capita (Tg 10^3/capita)**	**59.4**	**59.9**	**49.4**	**54.0**	**110.9**	-

Source: " Astana in Figures 2000 " Statistical Department of Astana City

Note : *(1)* Production level is judged "high" if the proportion of the industrial production to Kazakhstan's is higher than the population 's proportion at 1.8%. "Lower" for otherwise.

Table N.2.5
Industrial Production Value in Akmola Province in 1998 and 1999

Type of Industry	Akmola Province 1999 Number of industry	Akmola Province 1999 Output (Tg 10^3)	a. Output estimated for 1998(Tg 10^3) *(1)*	b. Kazakhstan's Industrial Output in 1998 (Tg 10^6)	a./b (%)	Comparison with Nation *(2)*
Mining industry	9	742,091	808,879	62,289	1.3	Low
Processing industry						
Agro-processing	12	4,830,377	5,265,111	166,148	3.2	Low
Timber and wooden products	-	124,815	136,048	2,444	5.6	High
Production/recycling of nuclear material	1	567,490	618,564	35,342	1.8	Low
Chemical products	1	829,204	903,832	11,263	8.0	High
Non-metal mineral products	3	311,887	339,957	13,512	2.5	Low
Metallurgy and metal processing	3	911,105	993,104			
Machinery/equipment	8	1,609,273	1,754,108	162,095	2.5	Low
Transport equipment	5	704,158	767,532			
Other	6	273,431	298,040	4,054	7.4	High
Power/gas/water	17	8,101,690	8,830,842	167,006	5.3	Low
Total Industrial Production	65	19,005,521	20,716,018	808,044	2.6	Low
Population (thousand, October 1999)	824.8			14,958	5.5	-
Industrial production per capita (Tg 10^3/capita)	23			54	-57.4	-

Source : " Socio-economic Passport of Akmola Province " by Economic Department of Akmola Province

Note:

(1) Conversion of 1999 production values to 1998 values was made by applying the coefficient of 1.09, which was derived by total industrial production in comparable price at Tg 21,640 million in 1998 and and Tg 19,846 million in 1999 (21,640/19,846=1.09).

(2) Production level is judged "high" if the proportion of the industrial production to Kazakhstan's is higher than the population 's proportion at 5.5%. "Lower" for otherwise.

Table N.2.6

Industrial Production Value of Karaganda Province in 1998 and 1999 Compared with Kazkhstan

(Unit: million Tenge)

Type of Industry	Karaganda a. 1998	Karaganda 1999	b. Kazakhstan 1998	a. / b. (%)	Comparison with Nation (1)
1. Mining industry	**11,602.5**	**12,582.6**	**62,289.0**	**18.6**	High
1-1 Materials mining for energy	6,960.3	5,379.5	26,986.0	25.8	High
Coal and lignite mining, turf exploitation	*6,960.3*	*5,379.5*	26,986.0	25.8	High
1-2 Mineral resources industry excluding material mining for energy	4,642.2	7,203.1	35,303.0	13.1	High
Metal ore mining	*4,061.7*	*6,583.7*	29,433.0	13.8	High
Iron ore mining	*1,428.4*	*1,277.5*	n.a	-	-
Non-ferrous metal ore mining	*2,633.3*	*5,306.2*	n.a	-	-
Other mineral resource industry	*580.5*	*619.4*	5,870.0	9.9	High
2. Processing industry	**94,769.3**	**161,705.0**	**418,643.0**	**22.6**	High
2-1 Agro-processing	5,229.2	5,056.8	166,148.0	3.1	Low
Foodstuff	*4,397.8*	*4,276.5*	n.a	-	-
Meat products	*838.3*	*730.8*	n.a	-	-
Fish products	*277.0*	*150.3*	n.a	-	-
Dairy products	*306.1*	*236.8*	n.a	-	-
Flour grinding/starch containing products	*598.8*	*754.4*	n.a	-	-
Other foodstuff	*2,377.6*	*2,404.2*	n.a	-	-
Animal fodder	*141.8*	*153.4*	n.a	-	-
Beverage	*689.6*	*626.9*	n.a	-	-
2-2 Textile/clothing	296.7	267.7	11,991.0	2.5	Low
2-3 Leather products	53.4	44.6	1,081.0	4.9	Low
2-4 Timber	34.6	42.2	2,444.0	1.4	Low
2-5 Paper/cardboard	223.0	223.5	8,333.0	2.7	Low
2-6 Coke, oil distilling, nuclear material	332.7	190.2	35,342.0	0.9	Low
2-7 Chemical products	1,354.0	1,552.3	11,263.0	12.0	High
2-8 Rubber and plastic products	70.3	40.3	2,380.0	3.0	Low
2-9 Non-metal mineral products	561.5	924.5	13,512.0	4.2	Low
2-10 Metallurgical industry, metal processing	86,499.5	153,290.7	162,095.0	53.4	High
Metallurgical industry	*84,962.9*	*152,075.9*	*132,103.0*	64.3	High
Ferrous metallurgy	*40,496.2*	*74,002.4*	*40,496.0*	100.0	High
Non-ferrous metal	*44,466.7*	*78,073.5*	*91,607.0*	48.5	High
Metal finished articles	*1,536.6*	*1,214.8*	*29,992.0*	5.1	Low
Machine and equipment	*1,125.0*	*939.4*	29,992.0	3.8	Low
Electric and electronic products	*411.6*	*275.4*	n.a	-	-
2-11 Other industries	114.4	72.2	4,054.0	2.8	Low
3. Generation and distribution of power, water and gas	**19,636.9**	**16,188.9**	**167,006.0**	**11.8**	High
3-1 Electricity generation and distribution	10,516.0	8,901.0	92,666.0	11.3	High
3-2 Gas fuel production and distribution	277.9	235.6	10,020.0	2.8	Low
3-3 Steam/hot water supply	6,885.4	5,407.1	51,696.0	13.3	High
3-4 Water intake, treatment and distribution	1,957.6	1,645.2	12,624.0	15.5	High
4. Total Industrial Production	**126,008.7**	**190,476.5**	**808,044.0**	**15.6**	High
5. Population (thousand)	**1,413.7**	**n.a**	**14,957.8**	**9.5**	-
6. Industrial Production per Capita (Tg 10^3/capita)	**89.1**	**-**	**54.0**	**65.0**	-

Source : (1) Karaganda Province (2) "Statistical Yearbook of Kazakhstan 1999" by Agency on Statistics of the Republic of Kazakhstan

Note: (1) Production level is judged "high" if the proportion of the industrial production to Kazakhstan's is higher than the population 's proportion at 9.5%. "Lower" for otherwise.

Table N.2.7

Industrial Production Volume in Astana City from 1997 to 1999 (1/6)

Type of Industrial Output	Unit	1997	1998	1999
Mining industry				
Natural sand	10^3 m^3	24.0	109.9	14.0
Granules, stone crumb and stone powder; pebble, gravel, crushed stone	10^3 m^3	37.5	33.7	21.0
Processing industry				
Agro-processing				
Meat and food semi-products of cattle, pigs, goats, horses	tons	2,139.0	1,217.0	728.0
Plucked wool and raw skins, skins of cattle or animals of horse type	tons	78.0	101.0	32.0
Fats of cattle, goat, pigs and poultry	tons	4.0	20.0	14.0
Meat semi-products	tons	19.0	297.0	254.0
Sausages, tons		2,745.0	1,882.0	1,120.0
Dry animal fodder (meat and bones)	tons	-	517.0	661.0
Ready and conserved fish	tons	114.0	52.0	48.0
Processed watery milk and cream	tons	1,552.0	2,040.0	2,520.0
Butter	tons	10.0	51.0	170.0
Cheese and cottage cheese	tons	501.0	420.0	541.0
cheese	tons	420.0	247.0	225.0
Yogurt and other types of fermented or sour milk or cream	tons	3,220.0	5,613.0	5,345.0
Ice-cream and other food ice	tons	46.0	39.0	113.0
Cereal flour and vegetable flour; their mixtures	tons	122,580.0	115,712.0	115,713.0
Groats, flour of coarse grinding and granules or cereal products	tons	8,732.0	4,311.0	2,459.0
Wheat middling, bran and other wastes from grain processing	tons	49,940.0	43,323.0	47,137.0
Ready fodder for livestock	tons	2,286.0	1,212.0	648.0
Fresh bread	tons	11,409.0	10,969.0	11,104.0
Fresh cookies and bakery products and cakes	tons	250.0	383.0	994.0
Crackers, cookies; bakery products for storage	tons	1,631.0	2,313.0	1,311.0
Noodles, spaghetti, and other flour analogue products	tons	613.0	623.0	507.0
Mayonnaise	tons	36.0	39.0	37.0
Vodka, thousand l	10^3 liter	6,880.0	7,838.3	4,515.0
Alcoholic beverages	10^3 liter	1,540.0	2,444.9	1,455.0
100% ethyl alcohol	10^3 liter	2,960.0	5,231.4	2,512.0
Beer	10^3 liter	445.0	1,102.8	1,518.0
Mineral sparkling water, not sweet and non-aromatized	10^3 liter	764.0	604.7	572.0
Other soft beverages	10^3 liter	694.0	694.0	624.0
Textile and tailoring industry				
Ready textile products for households, thousand pieces	10^3 pieces	36.0	42.9	19.0
linen	10^3 pieces	29.0	29.0	8.0
table cloth	10^3 pieces	1.0	7.0	5.0
Other ready textile products	10^3 pieces	1.0	8.0	18.0
Jumpers, pull-over, cardigans, vests, and other products	pieces	-	5,366.0	5,903.0
Men's uniform	pieces	9,483.0	10,215.0	7,171.0
Women's uniform	pieces	547.0	19.0	190.0
Other uniforms	pieces	318.0	1,979.0	3,590.0
Outer clothing, stockinet, knitted by machine or by hands	pieces	662.0	102.0	-
Other outer clothing for men and boys	pieces	1,380.0	2,074.0	2,022.0
Other outer clothing for women and girls	pieces	4,856.0	6,418.0	7,039.0
Underwear, stockinet and knitted cloth	10^3 pieces	163.0	24.0	11.0
Underwear, other	10^3 pieces	3.0	2.0	3.0
Infant wear, and stockinet accessories, except those of machine or hand knitted	10^3 pieces	6.0	6.0	1.0
Hats and head gears	10^3 pieces	1.0	1.0	3.0
Manufacturing of timber and wooden products				
Timber materials, longitudinally sawed, split, cut 6 mm and more in width;	10^3 m^3	3.0	5.0	5.0
Windows, double-leaf windows and their frames, doors and their frames and	10^3 m^2	18.0	29.0	31.0
Construction wooden structures and carpenter products, not included in other	10^3 m^2	2.0	8.0	12.0
Wooden package	10^3 Tenge	49.0	3,307.0	1,680.0
Other wooden products	pieces	2,381.0	4,572.0	6,941.0

Source : " Astana in Figures 2000 " Statistical Department of Astana City

Table N.2.7

Industrial Production Volume in Astana City from 1997 to 1999 (2/6)

Type of Industrial Output	Unit	1997	1998	1999
Manufacturing of paper and cardboard; publishing				
Paper stationery	kg	15,560.0	10,744.0	10,495.0
Paper and cardboard labels	kg	5,185.0	7,331.0	1,169.0
Books, brochures, sheets and other printed material on separate sheets	10^3 pieces	87.0	130.0	350.0
Newspapers, magazines, periodic editions, published at least 4 times a week	10^3 pieces	4,747.0	5,344.0	5,932.0
Newspapers, published less than 4 times a week	10^3 pieces	80,621.0	59,666.3	53,678.0
Magazines, periodic editions, published less than 4 times a week, th.p.	10^3 pieces	6.0	25.0	145.0
Post cards, greeting cards, art editions and other printed materials	10^3 pieces	350.0	293.6	614.0
Registered magazines, accounting books, file folders, forms and other	tons	123.0	190.0	124.0
Thick notebooks, tons	tons	4.0	-	-
School pads	tons	1.0	1.0	-
Chemical industry				
Oxygen	10^6 m^3	0.1	0.3	0.3
Other oils and lacquers and related products; paint for painters and for printing	tons	79.0	29.0	59.0
Medicines	10^3 Tenge	14,401.0	8,462.0	7,615.0
Soap and organic surface active substances	tons	6.0	-	-
Oil-paints and lacquers based on polymers, tins	tons	-	-	27.0
Manufacturing of rubber and plastic products				
Bags and packets, including conical, of ethylene polymers	kg	-	12,002.0	37,448.0
Doors, windows, frames, door thresholds, shutters, jalousie and analogue	10^3 m^2	6.0	26.0	25.0
Other plastic products, not included in the other groups	10^3 pieces	54.0	83.4	105.0
Table, kitchen, toilet, and other plastic household equipment, thousand	10^3 pieces	54.0	82.8	94.0
Manufacturing of other non-metal mineral products				
Construction bricks (of burnt gault)	10^6	0.6	0.5	21.0
Tile, slabs, bricks and analogue products made of cement, concrete or artificial	10^3 m^3	18.0	24.0	21.0
Lime-and-sand and slag bricks	10^3 m^3	2.0	0.8	-
Assembling concrete construction structures	10^3 m^3	85.0	76.8	53.0
Ready-mixed concrete	tons	247,953.0	300,514.0	258,115.0
Stone for construction works or memorials, thousand m2	10^3 m^2	0.3	-	0.1
Artificial or natural porous fillings, thousand tons	10^3 tons	8.0	3.0	3.0
Metallurgy and metal processing				
Metal structures with parts	tons	2,378.0	3,390.0	2,319.0
Tanks for compressed or liquid gas, of ferrous metal, thousand pieces	10^3 pieces	20.0	28.0	1.0
Caps for conservation	10^3 pieces	277.0	121.3	-
Mechanical engineering, machinery and equipment manufacturing				
Centrifugal pump for pumping of liquids; other pumps; liquid' lifter	pieces	7.0	56.0	80.0
Ploughs and disc harrows	pieces	422.0	544.0	357.0
Ploughs	pieces	388.0	468.0	297.0
Harrows, except for disc ones, cultivators, rippers, hacks	pieces	78.0	21.0	-
Rippers and cultivators	pieces	78.0	14.0	-
Harrows, except disc ones	pieces	-	7.0	-
Sowing, planting and seedling machines	pieces	239.0	-	6.0
Sowing machines	pieces	239.0	-	6.0
Harvesters	pieces	1,099.0	251.0	170.0
Mowers, including mowers, assembled with tractor, and not included in the	pieces	1,099.0	231.0	160.0
Row reapers	pieces	-	20.0	10.0
Other machinery for agriculture and cilviculture, not included in the other	pieces	115.0	40.0	4.0
Parts of agricultural and cilvicultural machinery	Tg 10^3	193,280.0	117,551.0	48,076.0
Washing machines	pieces	-	213.0	-
Supplies for preparing food, using gas fuel, made of ferrous metals, thousand	10^3 pieces	3.0	0.5	-
Manufacturing of electric and electronic equipment				
Lamps and lighting instruments	pieces	757.0	361.0	428.0
Manufacturing of transport equipment				
Vehicles for cargo transportation	pieces	17.0	16.0	31.0
Other parts not included in the other groups, for motorcars	Tg 10^3	869.0	-	-
Maintenance service, restoration of railway wagons, tram and motor wagons or	Tg 10^3	394,075.0	186,718.0	96,099.0

Source : " Astana in Figures 2000 " Statistical Department of Astana City

Table N.2.7
Industrial Production Volume in Astana City from 1997 to 1999 (3/6)

Type of Industrial Output	Unit	1997	1998	1999
Other branches of industry				
Furniture for seats, mostly with wooden framing	pieces	1,435.0	310.0	330.0
Other furniture for organizations and trade companies	pieces	664.0	1,371.0	1,263.0
Kitchen furniture	pieces	480.0	111.0	748.0
Wooden furniture for bedrooms, dining rooms and living rooms	pieces	246.0	164.0	289.0
Spring beds	pieces	5.0	8.0	1.0
Other toys, not included in other groups	Tg 10^3	22.0	957.0	96.0
Artificial flowers, leafs, fruits and plastic products	Tg 10^3	910.0	2,523.0	1,688.0
Production and distribution of electric power, gas and water				
Electric power	10^6 kWh	950.0	1,039.5	1,184.0
Heat energy	10^3 Gcal	2,278.0	2,522.3	2,885.0
Natural water	10^3 m^3	55,302.0	47,462.0	43,422.0

Source : " Astana in Figures 2000 " Statistical Department of Astana City

Table N.2.7

Industrial Production Volume in Astana City from 1997 to 1999: Growth Rates (4/6)

Type of Industrial Output	Unit	1997-98	1998-99	1997-99
Mining industry				
Natural sand	%/year	357.9	-87.3	-23.6
Granules, stone crumb and stone powder; pebble, gravel, crushed stone	%/year	-10.1	-37.7	-25.2
Processing industry				
Agro-processing				
Meat and food semi-products of cattle, pigs, goats, horses	%/year	-43.1	-40.2	-41.7
Plucked wool and raw skins, skins of cattle or animals of horse type	%/year	29.5	-68.3	-35.9
Fats of cattle, goat, pigs and poultry	%/year	400.0	-30.0	87.1
Meat semi-products	%/year	1463.2	-14.5	265.6
Sausages, tons		-31.4	-40.5	-36.1
Dry animal fodder (meat and bones)	%/year	-	27.9	-
Ready and conserved fish	%/year	-54.4	-7.7	-35.1
Processed watery milk and cream	%/year	31.4	23.5	27.4
Butter	%/year	410.0	233.3	312.3
Cheese and cottage cheese	%/year	-16.2	28.8	3.9
cheese	%/year	-41.2	-8.9	-26.8
Yogurt and other types of fermented or sour milk or cream	%/year	74.3	-4.8	28.8
Ice-cream and other food ice	%/year	-15.2	189.7	56.7
Cereal flour and vegetable flour; their mixtures	%/year	-5.6	0.0	-2.8
Groats, flour of coarse grinding and granules or cereal products	%/year	-50.6	-43.0	-46.9
Wheat middling, bran and other wastes from grain processing	%/year	-13.2	8.8	-2.8
Ready fodder for livestock	%/year	-47.0	-46.5	-46.8
Fresh bread	%/year	-3.9	1.2	-1.3
Fresh cookies and bakery products and cakes	%/year	53.2	159.5	99.4
Crackers, cookies; bakery products for storage	%/year	41.8	-43.3	-10.3
Noodles, spaghetti, and other flour analogue products	%/year	1.6	-18.6	-9.1
Mayonnaise	%/year	8.3	-5.1	1.4
Vodka, thousand l	%/year	13.9	-42.4	-19.0
Alcoholic beverages	%/year	58.8	-40.5	-2.8
100% ethyl alcohol	%/year	76.7	-52.0	-7.9
Beer	%/year	147.8	37.6	84.7
Mineral sparkling water, not sweet and non-aromatized	%/year	-20.9	-5.4	-13.5
Other soft beverages	%/year	0.0	-10.1	-5.2
Textile and tailoring industry				
Ready textile products for households, thousand pieces	%/year	19.2	-55.7	-27.4
linen	%/year	0.0	-72.4	-47.5
table cloth	%/year	600.0	-28.6	123.6
Other ready textile products	%/year	700.0	125.0	324.3
Jumpers, pull-over, cardigans, vests, and other products	%/year	-	10.0	-
Men's uniform	%/year	7.7	-29.8	-13.0
Women's uniform	%/year	-96.5	900.0	-41.1
Other uniforms	%/year	522.3	81.4	236.0
Outer clothing, stockinet, knitted by machine or by hands	%/year	-84.6	-	-
Other outer clothing for men and boys	%/year	50.3	-2.5	21.0
Other outer clothing for women and girls	%/year	32.2	9.7	20.4
Underwear, stockinet and knitted cloth	%/year	-85.3	-54.2	-74.0
Underwear, other	%/year	-33.3	50.0	0.0
Infant wear, and stockinet accessories, except those of machine or hand knitted	%/year	0.0	-83.3	-59.2
Hats and head gears	%/year	0.0	200.0	73.2
Manufacturing of timber and wooden products				
Timber materials, longitudinally sawed, split, cut 6 mm and more in width;	%/year	66.7	0.0	29.1
Windows, double-leaf windows and their frames, doors and their frames and	%/year	61.1	6.9	31.2
Construction wooden structures and carpenter products, not included in other	%/year	300.0	50.0	144.9
Wooden package	%/year	6,649.0	-49.2	485.5
Other wooden products	%/year	92.0	51.8	70.7

Source : " Astana in Figures 2000 " Statistical Department of Astana City

Table N.2.7
Industrial Production Volume in Astana City from 1997 to 1999: Growth Rates (5/6)

Type of Industrial Output	Unit	1997-98	1998-99	1997-99
Manufacturing of paper and cardboard; publishing				
Paper stationery	%/year	-31.0	-2.3	-17.9
Paper and cardboard labels	%/year	41.4	-84.1	-52.5
Books, brochures, sheets and other printed material on separate sheets	%/year	49.4	169.2	100.6
Newspapers, magazines, periodic editions, published at least 4 times a week	%/year	12.6	11.0	11.8
Newspapers, published less than 4 times a week	%/year	-26.0	-10.0	-18.4
Magazines, periodic editions, published less than 4 times a week, th.p.	%/year	316.7	480.0	391.6
Post cards, greeting cards, art editions and other printed materials	%/year	-16.1	109.1	32.4
Registered magazines, accounting books, file folders, forms and other	%/year	54.5	-34.7	0.4
Thick notebooks, tons	%/year	-	-	-
School pads	%/year	0.0	-	-
Chemical industry				
Oxygen	%/year	200.0	0.0	73.2
Other oils and lacquers and related products; paint for painters and for printing	%/year	-63.3	103.4	-13.6
Medicines	%/year	-41.2	-10.0	-27.3
Soap and organic surface active substances	%/year	-	-	-
Oil-paints and lacquers based on polymers, tins	%/year	-	-	-
Manufacturing of rubber and plastic products				
Bags and packets, including conical, of ethylene polymers	%/year	-	212.0	-
Doors, windows, frames, door thresholds, shutters, jalousie and analogue products and their parts	%/year	333.3	-3.8	104.1
Other plastic products, not included in the other groups	%/year	54.4	25.9	39.4
Table, kitchen, toilet, and other plastic household equipment, thousand	%/year	53.3	13.5	31.9
Manufacturing of other non-metal mineral products				
Construction bricks (of burnt gault)	%/year	-16.7	4,100.0	491.6
Tile, slabs, bricks and analogue products made of cement, concrete or artificial	%/year	33.3	-12.5	8.0
Lime-and-sand and slag bricks	%/year	-60.0	-	-
Assembling concrete construction structures	%/year	-9.6	-31.0	-21.0
Ready-mixed concrete	%/year	21.2	-14.1	2.0
Stone for construction works or memorials, thousand m2	%/year	-	-	-42.3
Artificial or natural porous fillings, thousand tons	%/year	-62.5	0.0	-38.8
Metallurgy and metal processing				
Metal structures with parts	%/year	42.6	-31.6	-1.2
Tanks for compressed or liquid gas, of ferrous metal, thousand pieces	%/year	40.0	-96.4	-77.6
Caps for conservation	%/year	-56.2	-	-
Mechanical engineering, machinery and equipment manufacturing				
Centrifugal pump for pumping of liquids; other pumps; liquid lifter	%/year	700.0	42.9	238.1
Ploughs and disc harrows	%/year	28.9	-34.4	-8.0
Ploughs	%/year	20.6	-36.5	-12.5
Harrows, except for disc ones, cultivators, rippers, hacks	%/year	-73.1	-	-
Rippers and cultivators	%/year	-82.1	-	-
Harrows, except disc ones	%/year	-	-	-
Sowing, planting and seedling machines	%/year	-	-	-84.2
Sowing machines	%/year	-	-	-84.2
Harvesters	%/year	-77.2	-32.3	-60.7
Mowers, including mowers, assembled with tractor, and not included in the other groups	%/year	-79.0	-30.7	-61.8
Row reapers	%/year	-	-50.0	-
Other machinery for agriculture and cilviculture, not included in the other	%/year	-65.2	-90.0	-81.3
Parts of agricultural and cilvicultural machinery	%/year	-39.2	-59.1	-50.1
Washing machines	%/year	-	-	-
Supplies for preparing food, using gas fuel, made of ferrous metals, thousand	%/year	-83.3	-	-
Manufacturing of electric and electronic equipment				
Lamps and lighting instruments	%/year	-52.3	18.6	-24.8
Manufacturing of transport equipment				
Vehicles for cargo transportation	%/year	-5.9	93.8	35.0
Other parts not included in the other groups, for motorcars	%/year	-	-	-
Maintenance service, restoration of railway wagons, tram and motor wagons or rolling stock	%/year	-52.6	-48.5	-50.6

Source : " Astana in Figures 2000 " Statistical Department of Astana City

Table N.2.7
Industrial Production Volume in Astana City from 1997 to 1999: Growth Rates (6/6)

Type of Industrial Output	Unit	1997-98	1998-99	1997-99
Other branches of industry				
Furniture for seats, mostly with wooden framing	%/year	-78.4	6.5	-52.0
Other furniture for organizations and trade companies	%/year	106.5	-7.9	37.9
Kitchen furniture	%/year	-76.9	573.9	24.8
Wooden furniture for bedrooms, dining rooms and living rooms	%/year	-33.3	76.2	8.4
Spring beds	%/year	60.0	-87.5	-55.3
Other toys, not included in other groups	%/year	4,250.0	-90.0	108.9
Artificial flowers, leafs, fruits and plastic products	%/year	177.3	-33.1	36.2
Production and distribution of electric power, gas and water				
Electric power	%/year	9.4	13.9	11.6
Heat energy	%/year	10.7	14.4	12.5
Natural water	%/year	-14.2	-8.5	-11.4

Source : " Astana in Figures 2000 " Statistical Department of Astana City