

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
ARMENIAN DEVELOPMENT AGENCY (ADA)

**THE STUDY
FOR
DEVELOPMENT OF PRIVATE SECTOR
IN
THE REPUBLIC OF ARMENIA**

FINAL REPORT

SEPTEMBER 1999

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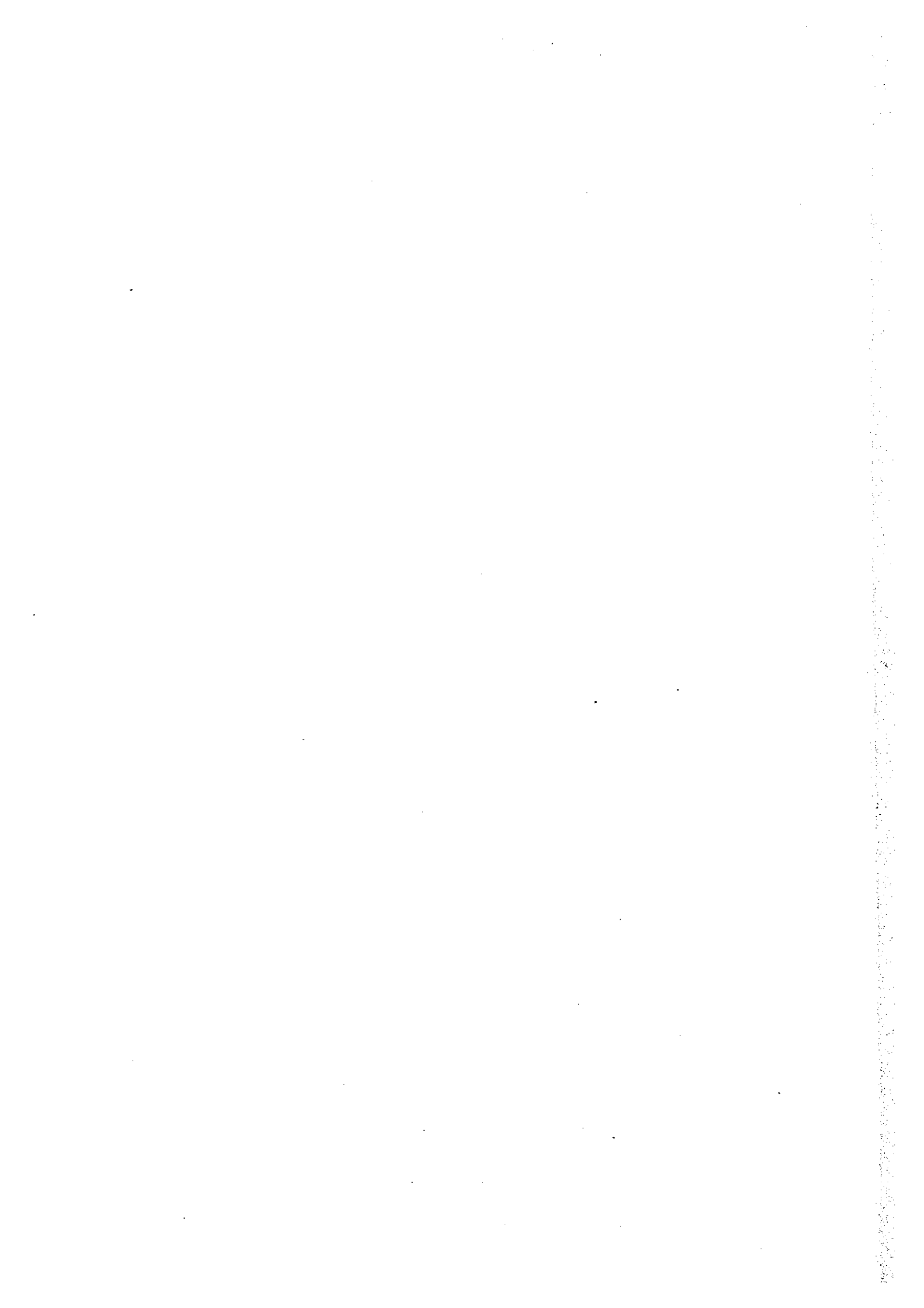
**CRC OVERSEAS COOPERATION INC.
TOHMATSU & Co.**

TOKYO, JAPAN

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PREFACE

In response to a request from the Government of the Republic of Armenia, the Government of Japan decided to conduct a Study for the Private Sector Development, and entrusted the study to Japan International Cooperation Agency (JICA).

JICA sent to Armenia a study team headed by Mr. Yujiro Higashi, CRC Overseas Cooperation Inc. and organized by CRC Overseas Cooperation Inc. and Tohmatsu & Co. from October 1998 to July 1999.

The team held discussions with the officials concerned of the Government of Armenia and conducted a field study. After its return to Japan, the team conducted further studies and compiled the results in this report.

I hope this report will contribute to the further development of the private sector in Armenia and to the enhancement of friendly relations between the two countries.

I wish to express my sincere appreciation to all those who participated in this study project for their close cooperation with the team.

September 1999



Kimio Fujita
President
Japan International Cooperation Agency

September 1999

Mr. Kimio Fujita
President
Japan International Cooperation Agency

Letter of Transmittal

We are pleased to submit herewith the Final Report of the Study for Development of Private Sector in the Republic of Armenia.

This report has been prepared as the Master Plan for the promotion of the Armenian private sector. It includes analyses of the principal issues facing the economy, detailed examinations of model enterprises including management improvement guidance, as well as identification of the development needs for the target sub-sectors as distilled through the micro level, formation of the Medium-Term Development Vision for the Armenian economy, the establishment of development priorities, development strategies and methodologies, recommendations for the enterprise management for the rebuilding of the enterprises and policy recommendations for the Armenian government including implementation programs.

The people of Armenia, over the past 11 years have suffered through unprecedented series of difficulties including the Spitak earthquakes in 1988, conflicts with Azerbaijan and the ensuing border blockages, the collapse of the FSU and the breakdown of the economic linkages resulting from the independence of the NIS states, collapse of the industries, hyper inflation, and the energy crisis. Armenia, amidst these difficult times, has led the way among the CIS countries in the transition to a market economy based upon the principles of democracy.

Sustainable economic development in Armenia rests upon the dynamic development of the private sector.

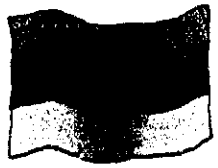
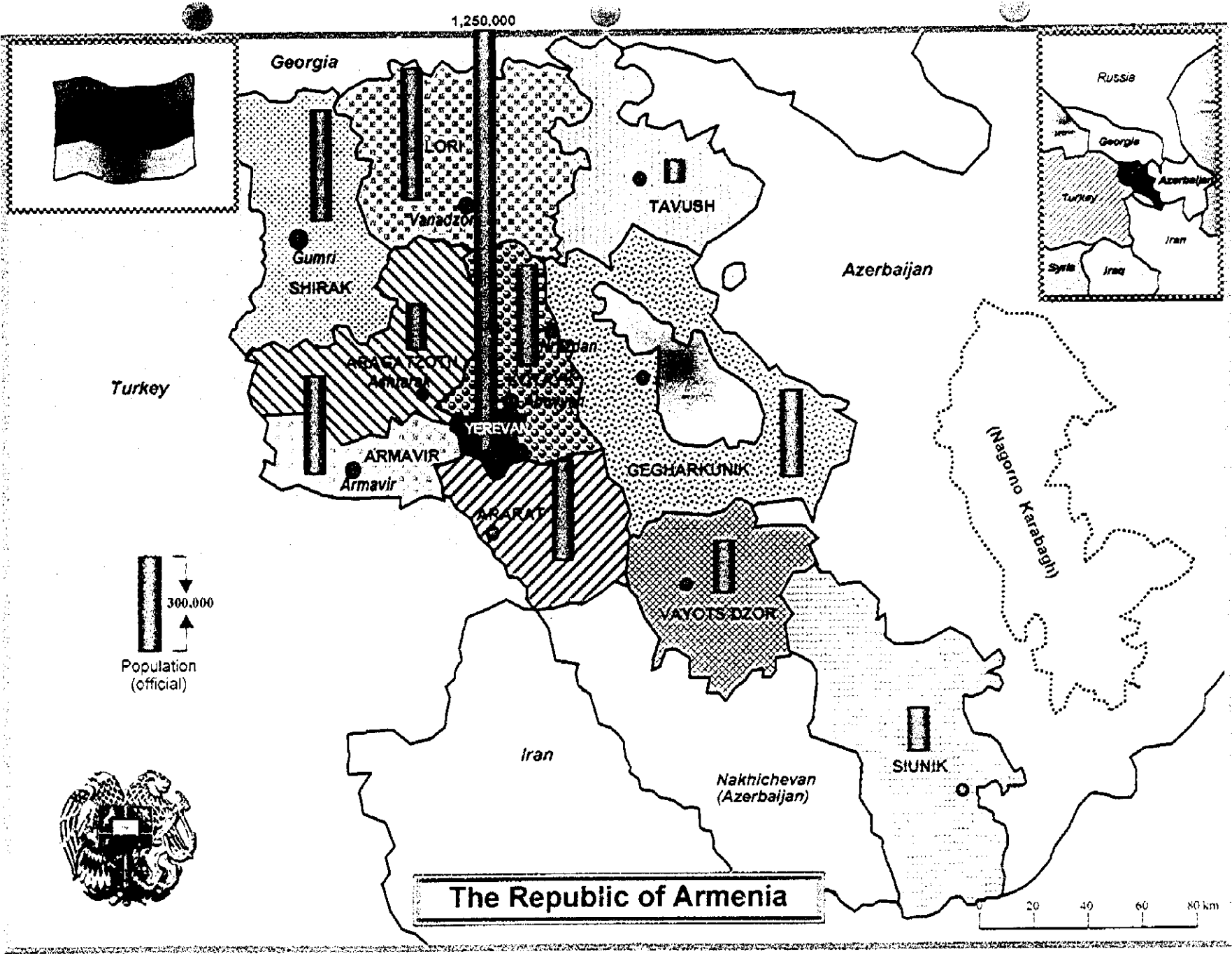
In this report, recommendations on the role of the government and some of the steps that need to be taken by the government that are essential for the private sector development are presented in some detail. The study team strongly believes that by the Armenian government, using the report as a reference, formulating and implementing the necessary development measures, an arena will be provided, in which the enterprising entrepreneurs can be productive and stimulus given to people's abilities and those measures will put Armenia's economic development on a sustainable track. In this respect, the study team sincerely desires that the report will become a document that may serve for the upcoming formulation and implementation of government policies.

Throughout the course of the study, we have received immeasurable amount of support from the Japan International Cooperation Agency and the related governmental agencies of Japan for which the team wishes to express their deep appreciation. We also would like to extend our appreciation to ADA, as well as to the relevant agencies of the Armenian government and the management of the enterprises for their support and cooperation.

Very truly yours,

東 勇 次 郎

Yujiro Higashi, Team Leader
Study for Development of Private Sector
in the Republic of Armenia



1,250,000

Turkey

Population (official)

The Republic of Armenia

20 40 60 80 km

Abbreviation

Abbreviation	Full Description
AAA	Armenian Accounting Association
ACCA	Association of Chartered Certified Accountants
ADA	Armenian Development Agency
AMD	Armenian Drams
CBA	Central Bank of the Republic of Armenia
CIS	Commonwealth of Independent States
EBRD	European Bank for Reconstruction and Development
ESF	Enterprise Support Fund
FSU	Former Soviet Union
GDP	Gross Domestic Product
GMP	Good Manufacture Practice
GOST	Governmental Standard of Soviet Union
GTZ	Deutsche Gesellschaft Fur Technische Zusammenarbeit
HEPO	Hellenic Foreign Trade Board
IAPC	International Auditing Practice Committee
IAS	International Accounting Standards
IASC	International Accounting Standards Committee
ICAO	International Civil Aviation Organization
IFAC	International Federation of Accountants
IMF	International Monetary Fund
IRIS	International Research Institutes
ISA	International Standards on Auditing
ISO	International Organization for Standardization
ITAR-TASS	Information Telegraph Agency of Russia
JETRO	Japan External Trade Organization
JICA	Japan Overseas Development Cooperation Agency
JODC	Japan Overseas Development Corporation
ME	Ministry of Energy, RA
MIT	Ministry of Industry and Trade, RA
MOA	Ministry of Agriculture, RA
MOT	Ministry of Transportation, RA
MoFA	Ministry of Foreign Affairs, RA
MoFE	Ministry of Finance and Economy, RA
NAS	National Academy of Sciences, RA
ODA	Official Development Assistance
R&D	Research & Development
RA	Republic of Armenia
SDR	Special Drawing Rights
SIPPB	State Investment Promotion and Protection Board, RA
SME	Small and Medium size Enterprise
SRI	Scientific Research Institutes
SWIFT	Society for Worldwide Interbank Financial Telecommunications
T.I.R.	International system for Road cargo Transport through different countries
TACIS	Technical Assistance to the Commonwealth of Independent State
TIA	Tax Investment Allowance
TRACECA	Transport Corridor Europe Caucasus Asia
UNDP	United Nations Development Program
USAID	United States Agency for International Development
VAT	Value Added Tax
WB	World Bank

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Chapter 1

Background and Objective of the Study



1. Background and Objective of the Study

1.1. Background and the Particulars to the Study

Armenia, since its independence on September 23rd 1991, amidst many political, foreign, social and economic turmoil has positively effected reforms to realize the principles of democracy and market economy and has taken the necessary steps toward legal reforms and privatization of the state owned enterprises. The collapse of the FSU had also caused the collapse of the industrial linkages among the CIS countries and Armenia, which had been industrialized under the FSU, faced dire economic conditions as the result of the disintegration of its industries. Many of the privatized enterprises are still shut down or operating at partial capacity.

Under this state of affairs, Armenian government, who had placed a priority on the promotion of foreign direct investments and exports that are needed for the rebuilding of the economy, had requested the Japanese government to undertake the "The Study on Master Plan for Development of Private Sector". Based upon this request the Japan International Cooperation Agency dispatched a Project Selection Confirmation Study Team to Armenia in February of 1998 and in June of the same year dispatched the Preliminary Study Team and together with the government of Armenia agreed upon the Scope of Work for the study. This "Private Sector Development Master Plan Study" is being performed based upon the Armenian government request and on the scope of work that had been agreed.

1.2. Objective and the Scope of the Study

The study has been undertaken with the objective of preparing a master plan for the private sector promotion and submitting the plan to the Government of Armenian. The study team undertook detailed studies of the Target Sub-Sectors that were defined under the Scope of Work: S/W, agreed on June 22nd 1998 between the Japan International Cooperation Agency and Armenian Development Agency (ADA), which were the electric-electronics industry, machinery industry, and chemical (pharmaceutical) industry. Throughout the study the study team also endeavored to pass onto the counterpart and to officials of the Armenian government related to the study expertise and techniques related to the study.

The scope of the study spans multiple areas as outlined below:

(1) Review and analysis of policies and current state of the private sector development

- National Development plan and other strategies and policies
- Plans and programs for the private sector development
- Laws and regulations
- Macro economy
- Privatization
- Foreign trade, investment and assistance
- Financial mechanism
- Taxation system
- Institutional framework and business supporting activities
- Human resources development
- Infrastructure

(2) Survey and analysis of the current status of the Target Sub-Sectors

- Measures by the government for the promotion of the Target Sub-Sectors
- Position of the Target Sub-Sectors in the Armenian economy
- Present situation of international market
- Industrial technology and productive capacity
- Performance of the major enterprises

(3) Detailed survey on the model enterprises selected from the Target Sub-Sectors

- Performance of the model enterprises
- Industrial technology and productive capacity
- Financial situation
- Organization structure
- Human resources
- Marketing of major or/and potential product(s)
- Sales promotion
- Purchase of raw materials

(4) Formulation of a master plan and an action plan for the private sector development

- Measures to improve the business environment
- Function of the relevant organizations
- Concept of development scenarios or schemes
- Action Plan for the private sector development

(5) Formulation of a sector wise development vision and action plan

- Future development plan of each Target Sub-Sector

- Reform plan of industrial structure of each Target Sub-Sector
- Management plan for each model enterprise
- Technical guidance to each model enterprise

This report embodies three parts, all of which are closely interrelated: the Private Sector Development Plan, Development Plan for the 3 Target Sub-Sectors that includes corporate analysis and management guidance, and Management Improvement Plan for the model enterprises including a detailed management and technical advice.

Fig. 1.2.1 is a schematic of the study including the technical transfer.



Fig. 1.2.1 Conceptual Framework of the Armenian Private Sector Development Plan Study

1.3. Study Methodology

The study in order to achieve the objectives set out in (2) above undertook the studies as schemed out in Diagram 1.2.1. Macro issues relating to the economy, policies, legal system, tax system, financial system, soft and hard infrastructure, population trends and human resources were

Reform plan of industrial structure of each Target Sub-Sector

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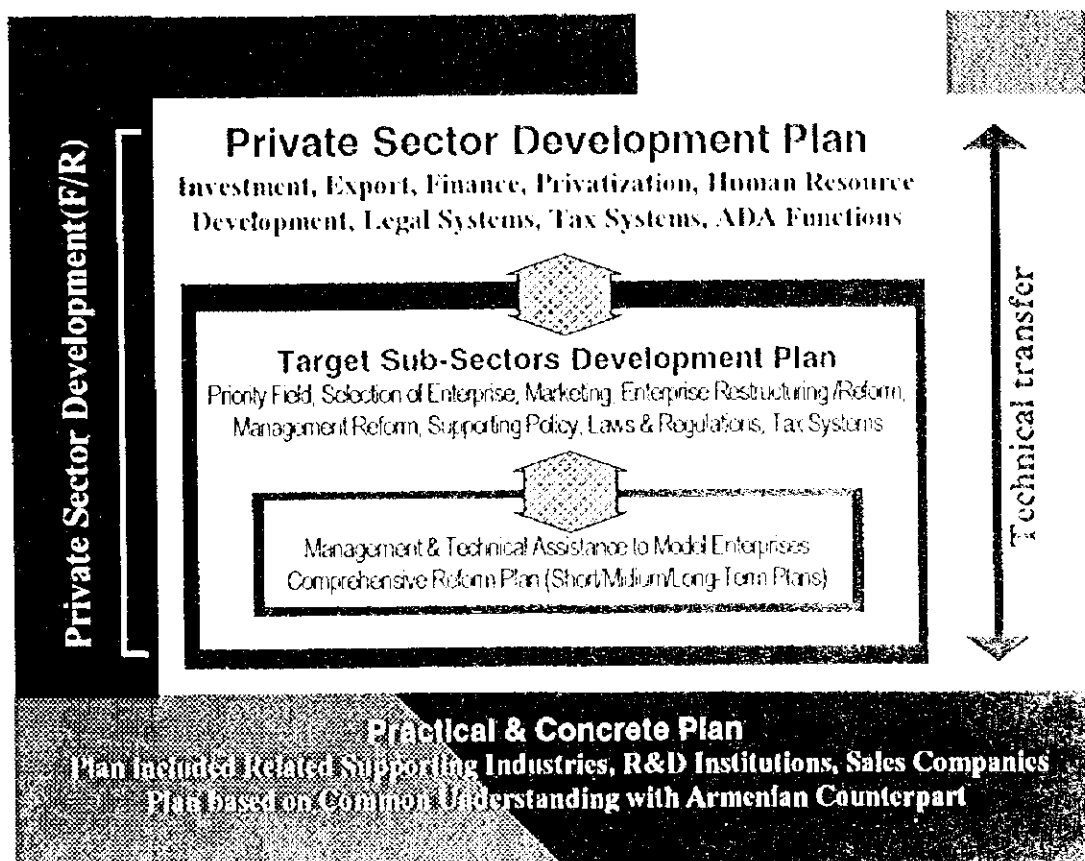


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identified and using a macro approach analyzed and the factors that were the roots of the issues were extracted.

In parallel to the macro study, in the 3 Target Sub-Sectors a total of 36 enterprises (29 defined under S/W and 7 additional enterprises added at the time of the study) were subject to quick surveys, questionnaire surveys and enterprises that were further selected after the quick survey were given a detailed examination and management assistance. Through this micro approach, problem areas and issues surrounding the enterprises were extracted. The results were then amalgamated for the preparation of this report.

In the Chemicals (Pharmaceutical) industry sector there were no enterprises that correspond to the criteria set for the model enterprises and the study team proposes to examine "Scheme for the Production of Medicinal Amino Acids" which utilizes a promising technology that is owned by the state.

1.4. Execution of the Study

The execution of the Study including preparation of this report was carried out by the Study Team comprising of the specialists mentioned below:

Yujiro Higashi	Project Leader, Macro Economy, Development Policies	
Theo Van Tricht	Marketing, Sales Promotion	
Koichi Hayase	Electric/Electronics Industry (Management)	
Kiyoshi Sugibuchi	Electric/Electronics Industry (Production Technology)	D. Sc.
Katsuhei Kubo	Machinery Industry (Management)	
Makoto Kono	Machinery Industry (Production Technology)	SME Consultant
Tadashi Sekikawa	Chemical/Pharmaceutical Industry (Management)	JCPA, USCPA
Tadayuki Kajiwara	Chemical/Pharmaceutical Industry (Production Technology)	
Tadashi Yoshitsugu	Interpreter (Russian)	

Many of the Armenian government officials, beginning with those from ADA and the Ministry of Industry and Trade, and the representatives of the organizations having relevance to the Study (Names are given in Annex 1) cooperated closely with the Study Team in the provision of data, enterprises surveys, discussions in the process of selecting Model Enterprise as well as in useful advice in the course of the Study.

A prominent member of the Board of the Armenian Central Bank rendered profound and valuable comments on the Draft Final Report via fax.

The executives of the 36 enterprises and research institutes, centered by the Model Enterprises, that the Study Team visited gave us their patient cooperation.

The Study was assisted by the top most echelons of specialists and interpreters in Armenia, as associated team members.

Overview of the Republic of Armenia

(Day of Independence: September 23, 1991, Presidential Republic, Unicameral System (131 members)

President: Robert Kocahrian, Prime Minister: Vazgen Sarkisian

1. Location:	Latitude 40°N. Longitude 45° E.
2. Area:	29,800 Km ² (1/13 th of Japan, smallest among FSU)
3. Boundary:	E.-Azerbaijan, W.- Turkey, S.- Iran, N. – Georgia
4. Capital:	Yerevan
5. Major Cities:	Gyumri, Vanadzor
6. Landscape:	Arable land 20%, pastures 20% other 60%
7. Climate:	Continental highland climate
8. Official Population:	3,791.2 thousand (as of January 1,1998)
9. Gross Domestic Product:	\$1,885 million (1998)
10. Per capita GDP:	\$497 (1998)

Chapter 2

Conditions and Issues in the Social Economy

2. Conditions and Issues in the Social Economy

2.1. Conditions of the Social Economy

- Armenian people experienced unprecedented period of difficulties in the 1988 -- 1994 period and have since achieved a relative macro economic stability with the 1998 GDP recovering to 61.7% of its level in 1990.
- The economic growth achieved in the recent 5 year period has been due principally to the growth in the agricultural sector (mainly cultivated farming) and the commercial sector while the industrial sector continues to stagnate since the dramatic decline suffered in 1992.
- The composition of the Armenian GDP, as defined under United Nations classifications, changed drastically in the period of 1988 -- 1998 and is not composed 33.2% by Primary Industries, 27.1% by secondary industries (of which Industry 18%) and 39.7% by the tertiary industries.
- Improvements in the fiscal deficit and the large trade deficit are issues on which the government must concentrate its efforts.

2.1.1. Macro-Economic Situation

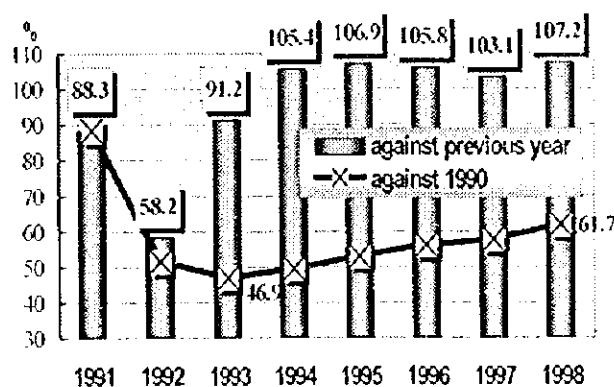
- The Gross Domestic Product (GDP) of Armenia has been recovering smoothly with a real yearly growth rate of 5.6% on average since the May 1994 cease-fire agreement with Azerbaijan, as shown in Fig. 2.1.1.1.

It can be said that this smooth economic recovery of Armenia is the result of a collective effort made by the government, the people of Armenia combined to the various financial and technical assistance of the IMF, the World Bank,

Donor countries, and so on.

The cumulative real economic growth for the recent 5 years corresponds to more than 1.3 times of that in 1993, but this economic recovery in recent years in comparison with 1990 shows that the GDP in 1998 recovered to only 61.7% of that of 1990 (See Fig. 2.1.1.1).

Armenia's GDP in 1998 was US\$1,885 million (AMD951,900



(Source: Ministry of Statistics, State Register and Analysis)

Fig. 2.1.1.1 Dynamics of Real GDP Growth

2. Conditions and Issues in the Social Economy

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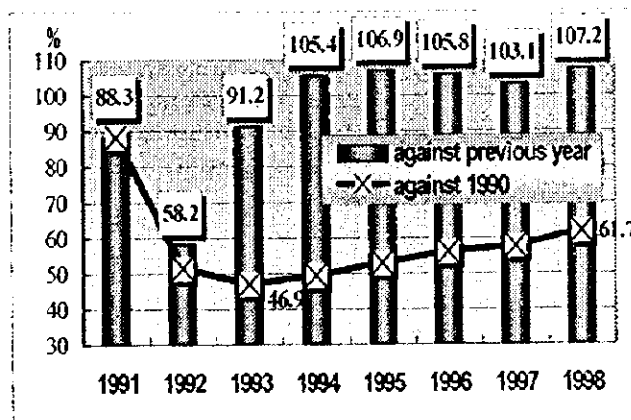
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(Source: Ministry of Statistics, State Register and Analysis)

Fig. 2.1.1.1 Dynamics of Real GDP Growth

million) and the GDP per capita (based on the official population) was US\$497, the economic situation of Armenia, without changes, still remains difficult.

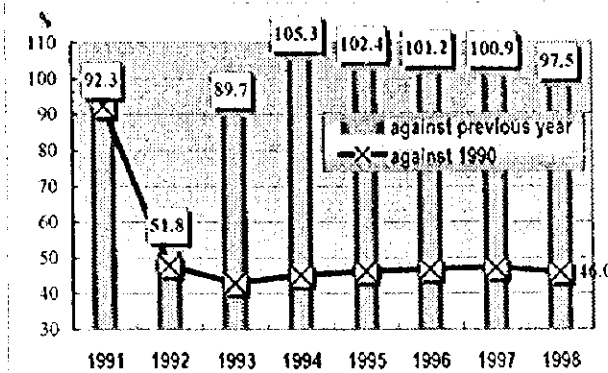
It was the agricultural and commercial sectors that have mainly supported the economic growth since 1994.

- The industrial sector is still in a state of stagnancy.

The industrial production of Armenia has not recovered from the sharp decline of production until 1993 as shown by Fig. 2.1.1.2. The export to Russia has been decreasing since August 1998, and the economic crisis of Russia became the reason for a new decline of production, due to the fact that Armenian enterprises have no substitute markets.

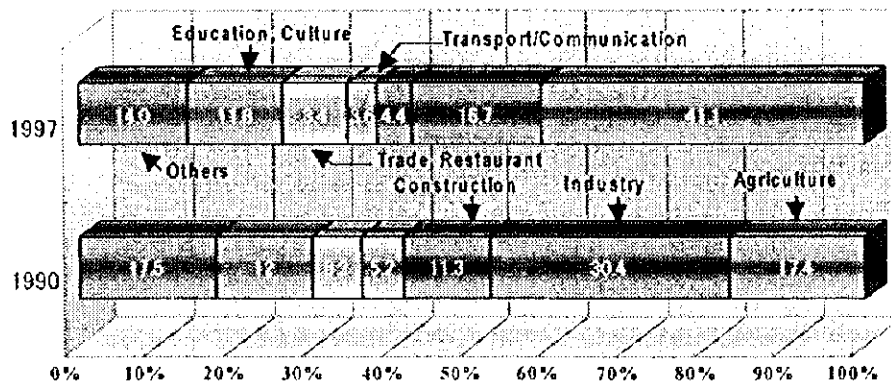
The industrial output (including electricity) in 1998 was equivalent to 46% of that in 1990, and 38.7% in comparison with 1988. At present many giant state enterprises and privatized former major enterprises are either in the state of shutdown or partial operation, and many of them have no prospects for rebirth.

- The GDP output structure by each sector has substantially changed since 1990 as shown by Fig.2.1.1.3.



(Source: Ministry of Statistics, State Register and Analysis)

Fig. 2.1.1.2 Dynamics of Industrial Output



(Source: Same as Fig. 2.1.1.1)

Fig. 2.1.1.3 Change of GDP Output Shares by Sectors

As the graph shows, the share of the **primary industries** (agriculture/forestry/fishery -- virtually only agriculture in case of Armenia) in Armenia's GDP increased by approximately more than 2.6 times from 12.5% in 1990 to 33.2% in 1998. Simultaneously, the share of the **secondary industries** (industry, construction) decreased roughly by half from 62.5% to 32.5%.

The **industrial output** in 1998 was AMD260.1 billion (US\$515 million - converted by the average annual standard rate of US\$1 = AMD504.87), accounting for 23.4% of GDP.

The **agricultural output** in the same year grew by 13.1% versus the previous year mainly because of a good harvest of the cultivation agriculture favored by fine weather, and produced AMD402.1 billion (US\$796 million) amounting to 33.2% of GDP. Agriculture has been the biggest GDP output sector in Armenia since 1993.

The share of the **tertiary industries** increased from 25% to 34.3% because of increase of commercial and restaurant business, etc.

In Armenia, which has experienced various historical difficulties since 1988, the economy has been shifting rapidly to agriculture and commerce following the almost overall collapse of the industry.

The gross industrial output of US\$340 million (excluding electricity) equals the output of a medium-size machine tool manufacturer with around 600 employees in Japan, and the above-mentioned figures show that the present Armenia transformed itself into a mainly subsistence farming low-productive agricultural country from a former industrial country.

- Armenia was hit by the severest **hyperinflation** among CIS countries.

The **Consumer Price Index (CPI)** for 5 years from 1990 to 1995 increased by 41,800 times, and the **Producer Price Index (PPI)** increased by 31,244 times. In 1998, the CPI was 108.45% and the PPI was 113.4% despite the economic crisis in Russia.

Table 2.1.1.1 Dynamics of PPI and CPI (unit: Times)

	1991	1992	1993	1994	1995	1996	1997	1998
CPI	2.2	10.5	9.9	48.1	3.8	1.22	1.19	1.084
Against 1990	2.2	23	229	11,000	41,800	50,996	60,685	65,782
PPI	2.2	10.5	9.9	50.6	2.7	1.19	1.14	1.134
Against 1990	2.2	23	229	11,572	31,244	37,180	42,385	48,064

(Source: Ministry of Statistics, State Register and Analysis)

- As for the **fiscal budget** in 1998, the revenue was AMD165 billion versus expenditure AMD

205.2 billion, creating a fiscal deficit of AMD40.2 billion (US\$79 million), although Armenia was implementing minimized severe budget under the guidance of the IMF.

The amount of Armenia's financial deficit of 1998 equals a shortage of 24.3% versus the revenue that corresponds to 4.2% of GDP. Taking the scale of the national budget and the very limited possibility of dissolution of the deficit by a future large increase of tax revenue into consideration, this deficit amount must be considered to be an enormous fiscal deficit for Armenia.

The government issued in 1997 various short-term treasury bills with a maturity of 1 to 12 months at the yields of 31.5~81.2% per annum (yearly yield average was 53.3% p.a.) in order to cover the budget shortage. It totaled AMD 1~4.5 billion every month and AMD 37.2 billion during the year. Also, there was issuance of treasury bills at the yield of 31.5%~63.9% per annum (yield average from January to September was 44.5%) in 1998.

The issuance of these high yield treasury bills caused increase of the fiscal deficit of around US\$20 million per year.

A drastic reduction of the fiscal deficit is an immediate task for the government of Armenia.

- The current account balance of Armenia shows a constant structural deficit due to the huge trade balance deficit.

The trade balance of 1995~1998 is shown in Table 2.1.1.2.

Table 2.1.1.2 Trade Balance of Armenia (Unit: Million US Dollars)

	1995		1996		1997		1998	
	Total	(CIS)	Total	(CIS)	Total	(CIS)	Total	(CIS)
Exports	271	170	290	128	233	95	223.4	85.1
Imports	674	334	856	278	893	300	895.7	221.2
Trade Balance	-403	-164	-566	-150	-660	-205	-672.3	-136.1

(Source: Same as Table 2.1.1.1)

As the above table shows, the trade of Armenia is in a large deficit with both of Non-CIS and CIS countries. The amount of the trade balance deficit (US\$672.3 million) in 1998 corresponds to 35.7% of Armenia's GDP, that is an enormous deficit considering the economic size of Armenia.

The constant reduction of the exports to CIS countries, since autumn last year, has been linked to the economic crisis in Russia, but mainly it was the result of the lack of international competitiveness of the Armenian commodities in quality, price and/or delivery terms.

It must be said that for the reconstruction of the Armenian economy, improvement of the trade balance is one of the biggest problems together with the reduction of the fiscal deficit.

This constant deficit of trade balance composes the main reason for the deficit of the Current

Account balance, and external borrowing covers the balance of international payments of Armenia.

- As a result the balance of external debt, at the end of 1998, reached US\$801 million that corresponds to 43% of GDP. Also in 1999 there is no real prospect for reducing the external debt.

- The Gross International Reserve at the end of 1998 was US\$309 million, an increase of US\$18 million versus the previous year and has reached for the first time the level of US\$300 million. However, the Net Official International Reserve, the amount calculated by deducting the debts for payment from the gross international reserves was US\$99.5 million.

- Armenia introduced its own currency the DRAM (AMD) in December 1993.

AMD to US\$ has been exchanged at a relatively stable rate. The Russian Ruble has declined to about one fourth since August 1998 after the currency-credit crisis, but the AMD rate has not declined much so far.

The Central Bank of Armenia has been playing an important role such as strict control of currency supply in the achievement of relative stability of the currency in recent years in Armenia.

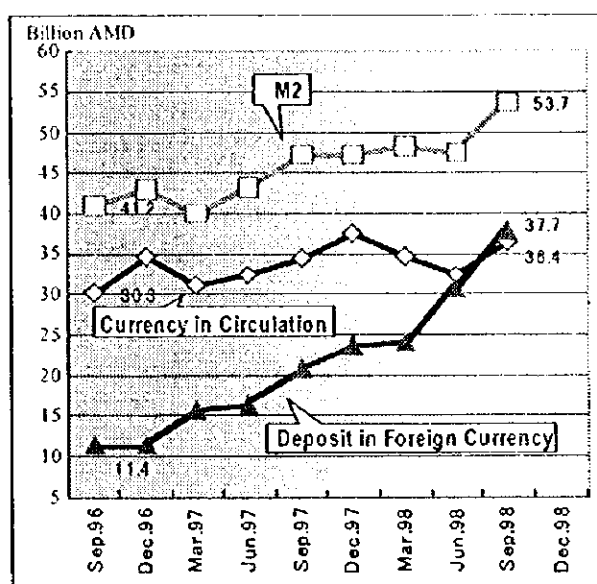
Another reason that may explain the stability of the AMD exchange rate is the constant supply of US Dollars to the market through cash remittance from the Armenian people staying in Russia, the USA, Europe and other countries (it is estimated at around US\$150-200 million) as well as the wide and deep spreading of the US Dollar in Armenia's economy.

Incidentally, since the beginning of 1999 the remittance from Russia has been decreasing substantially.

Money aggregates in circulation has been increased only by 20% during the past 2 years from 30.3 billion AMD since September 1996.

Such a severe money supply control implemented by the Central Bank brought a positive effect to the price stabilization.

During the abovementioned period M2 has increased constantly and for the first time it



(Source: Prepared from the data of CBA)

Fig. 2.1.1.4 Money Aggregates and M2

exceeded US\$100 million reaching to AMD 53.7 billion (US\$ 106 million) in September 1998.

The increasing of deposits in US Dollars by 3.2 times mainly caused this increase of M2.

The balance of deposits in US Dollars at the end of September 1998 reached US\$75 million.

It is a well known fact that there is a lot of cash US Dollars kept in each household due to the lack of their confidence in financial institutions, and dealing with housings is done 100% in US Dollars.

All the above-mentioned explains about a certain "dollarization" of the Armenian economy.

- **The number of unemployed**, as of the end of December 1998, was 139.1 thousands, and the **official unemployment rate** was 9.3% with decrease of 3.2 points in comparison with the same period of the previous year. It was 159.7 thousands as of April 1, 1999, and the **official unemployment rate** reached again to 10.5% with increase of 1.2 points.

Regions (Marz) which have the highest unemployment rates are Shirak (20.6%), Lori (14.7%) damaged by the earthquake and Siunik in the South region. In these regions the rate of workable population (65-68% from economic active population) was originally estimated to be lower than country's average. Therefore, the number of effectively unemployed and unemployment rate in these regions is to be rather highest than the official data.

- National income in 1998 increased by 7.7% in comparison with the previous year, and the average monthly income of a household was AMD 55,094 (US\$ 109) per one family. According to the data obtained by the Ministry of Statistics through the investigation of 1,000 families on **their household income**, the income from salary makes up only 1/4 - 1/5 of the gross income and the transfer income is almost equivalent to the salary income (in case of Japan the income from salary composes 94% from gross income). This means that people are making their living, covering the shortage of income from salary by the various measures, such as remittance from abroad, selling own property and so on, and it is quite characteristic phenomena of Armenia.

- **Privatization** in Armenia is overall performed successfully.

Privatization in the agricultural sector began at an early period and up to now over 95% of the agricultural land have been privatized.

1,875 state enterprises, mainly from the industrial sector, have been privatized. Progress of privatization as of January 1st, 1999 is shown in Table 2.1.1.3. As shown in the table, 70% of the privatized 1,460 enterprises were privatized for vouchers.

7 enterprises were sold to foreign companies such as Armen Tel (to a Greek company "OTE"), Yerevan Cognac Factory (to a French company "Pernot-Ricard"), Hotel Armenia, Hotel Ani and 3 other state enterprises.

Table 2.1.1.3 Situation of Enterprise Privatization as of 01.01.1999

Form of Privatization	Number of Enterprises	Privatized	Others		
			On process	Failed (1-st time)	Failed (3-rd time)
Open type Joint Stock Co.	1,319	1,085	29	202	3
Voucher	1,251	1,023	29	196	3
Auction	68	62	0	6	0
Closed type Joint Stock Co.	142	129	1	12	0
Selling of Assets to Tenant	184	178	2	4	0
Auction	35	16	0	16	3
Tender	154	45	4	57	48
International Tender	18	7	0	11	0
Liquidation	23	-	-	-	-
Total	1,875	1,460	36	302	54

- **Investment in construction** in 1998 totaled AMD 75.67 billion (about US\$ 150 million) with 17.5% increase versus the previous year. 44% of that, amounting to AMD 33.29 billion (about US\$ 66 million) was investment in private housing.

- **The annual amount of cargo transportation** in 1998 was 13,887 thousand tons with increase of 3% (5.4% by ton-km) versus the previous year. Table 2.1.1.4 shows the cargo transportation shares by means of transport.

Table 2.1.1.4 Cargo Transportation in 1998 (Unit: thousand tons)

Means of Transport	For 1998	Against 1997(%)
Total Cargo Transportation	13,887	103.0
Railway	1,731	117.6
Automobile	11,087	101.0
Airplane	19	71.3
Pipe lines	1,050	103.8

(Source: Same as Table 2.1.1.1)

80% of cargo transportation in Armenia rests on the road transportation because of the blockade. However, railway transportation increased in 1998, while there was a large decrease of air cargo.

2.1.2. Conditions of the Industry Sector

(I) Overview

As it has been shown in the Overview of the Macro-Economy in 2.1.1, in 1990 the Industry Sector accounted for 44.5% of the Armenian GDP but by 1998 this had declined to 23.4% (27.3% in production value). A closer examination will reveal that if the aggregate production value in 1998 is defined as 100, electricity is 34, production by enterprises under the Ministry of Agriculture's jurisdiction accounts for 10.9, other category accounts for 1.4 and the enterprises for which the jurisdiction and the production details are unclear accounts for additional 34 and production by enterprises for which the Ministry of Industry and Trade has jurisdiction account only for 19.7.

Table 2.1.2.1 Overview of Industrial Production (Unit: AMD million)

	1997	1998		1998/1997
	Production	Production	to Prod. to GDP	
1) All Industries	266,806	260,136	100%	97.5%
2) Total excluding Energy	178,466	171,707	66.0%	96.2%
3) Total of 3 Target Sub-Sectors	19,050	14,073	5.4%	73.9%
Electric & Electronics Industry	8,616	5,851	2.2%	67.9%
Machinery	2,954	2,466	0.9%	82.0%
Chem./Biotechnology	7,480	5,757	2.2%	75.6%
4) Total of other Sub-Sectors	36,035	37,156	14.3%	103.1%
Metallurgy	9,524	15,454	5.9%	159.4%
Precious Stones/jewelry	14,581	8,521	3.3%	57.4%
Light Industry	4,053	4,667	1.8%	113.1%
Construction Materials	7,419	7,991	3.1%	105.8%
Others	458	523	0.2%	114.2%
5) MIT total (3)+4))	55,085	51,229	19.7%	93.0%
6) Ministry of Energy	88,341	88,429	34.0%	100.1%
7) Ministry of Agriculture	47,909	28,267	10.9%	59.0%
8) Ministry of Urbanization	2,213	1,762	0.7%	79.6%
9) "Hykoop"	2,976	1,896	0.7%	63.7%
10) Unknown (Undisclosed Fields)	70,282	88,553	34.0%	126.0%
GDP	887,966	951,900		107.2%

(Note) Figures of 1997 Production are calculated based on the ratio of 98/97.

(Source: Ministry of Statistics, State Register and Analysis)

In another words, electric-electronic industries, machinery industry, chemical and bio-industries,

mining, processing of diamonds and other precious metals, light industries and construction materials industries combined have enormous numbers of enterprises and factories but produce a meager AMD 51.23 billion (US\$101.5 million) or 5.4% of the GDP. Table 2.1.2.1 gives a breakdown of industrial production.

The rationale for the addition of 10) Unknown category is that while the public data for industrial production is AMD 260,136 million (US\$515 million), the aggregate figures for 2) and 5) is only AMD 171,583 million (US\$340 million) leaving an unaccounted for differential of AMD 88,553 million (US\$175 million) (it is assumed that there are production that have not been individually identified).

1) Export Oriented Enterprises and Domestic Market Oriented Enterprises

If the industry is categorized into export oriented and domestic market oriented enterprises, in 1998 the following features can be observed:

a) Export Oriented Enterprises

1998 export shipments to the CIS countries totaled AMD 14,946 million (US\$30 million), exports to other countries totaled AMD 25,506 million (US\$50.5 million) and shipments to Russia declined drastically since the currency and credit crisis of August. Consequently, the production of the 20 large enterprises used by the Ministry of Statistics as samples for the production statistics approximately halved in 1998 to AMD 31.8 billion (US\$63 million) from AMD 60.1 billion (US\$119 million) in 1997. A large proportion of the production of these enterprises are destined for Russia and were directly affected by Russia's nonperformance under contracts and the previous contracts that were not exercised. It exposed the weakness of enterprises that depend on unstable markets for much of its sales and not having alternative markets.

b) Domestic Market Oriented Enterprises

Principal industries in this grouping are food industries and domestic resource processing industries. As a result of the breakup of the big food industry complex that had been under single control of the state into many private sector enterprises in the process of the coupled with each enterprise's efforts expended for tax minimization or simply underreporting the realities of production cannot be statistically identified. For example in bread factories, there does not appear to be a major decline in the production level, yet in the statistics based on the enterprise reporting the production has been halved. As a result, the group production while declining from a statistical point of view, overall, is evaluated as not experiencing a significant change over the previous year. This group includes the newly sprung industrial groups such as SIL that are experiencing rapid growth from commercial activities and import substitution manufacturing.

Table 2.1.2.2 Output of Industrial Products

	(Unit)	1998	1997	98/97(%)	Trend
Electric Engineering/Electronics					
Large Electric Machines	set	16	43	37.2	↘
AC Electric Motors	pcs.	4,465	4,955	90.1	↘
Relay	1,000 pcs.	470	726	64.7	↘
Power Cable upto 1kWt	km	1,180	705	140.6	↗
Small size Electric Motors	pcs.	2,416	4,755	50.8	↘
Bare Copper Wire	ton	15	22	68.2	↘
Portable Generator	pcs.	75	48	156.3	↗
Electric Lamp	pcs.	0	963	-	↓
Transformer	pcs.	0	16	-	↓
Machinery					
Metal Cutting Machine Tool	set	355	529	61.7	↘
Special Purpose Machine	set	90	64	140.6	↗
Automobile	pcs.	51	27	188.9	↗
Pump Centrifugal	pcs.	3,075	5,914	56.8	↘
Chemicals/Pharmacy					
Caustic Soda				86.0	↘
Synthetic Rubber				58.2	↘
Pharmacy				127.5	↗
Paint				50.2	↘
Metallurgy					
Rolled Aluminum				207.0	↑
Aluminum Foil				67.6	↘
Copper Concentrate				135.3	↗
Light Industry					
Cotton Fabric	1000 m ²	289	149	193.1	↑
Silk Fabric	"	262	172	152.2	↗
Carpet	"	13.9	13.8	100.7	→
Socks	pair	506	473	107.1	↗
Nit Wear	1000 pcs.	913.8	422.8	216.1	↑
Cotton Yarn	ton	144.8	37.3	388.2	↑
Jacket	1000 pcs.	1,060	488	217.2	↑
Shoes	1000 pair	65.4	87.7	74.6	↘
Apparel	mln AMD	3,822	2,329	121.2	↗
Diamond, Precious Metal & Stones					
				57.4	↓
Construction Materials					
Porous Filler				138.0	↗
Clinker				124.2	↗
Cement				105.1	→
Food Industry					
Beef & Beef Products	1000 ton	44.8	43.7	102.6	→
Ice Cream	ton	718	423	169.5	↗
Brandy	1000 doz.	252	392	64.4	↘

(Source: Same as Table 2.1.2.1)

2) Production Trends by Products

Table 2.1.2.2 shows the present trends of representative products of each sub-sector. It must be borne in mind, however, that as Armenian statistics do not publicize all sector details under uniform standards in some areas detailed volume figures are missing.

Table 2.1.2.2 highlights the lingering stagnation of electric-electronic industries and a mild recovery being experienced by light industries where problems regarding production equipment and transportation are not as pronounced. The figures should be interpreted as merely an indication of the overall trends.

Diamond processing experienced sharp increases in recent years as the result of a subcontract processing agreement with De Beers but due to problems related to, among others, quality issues the agreement had been canceled in 1998 and the production suffered a substantial decline. Production of brandy also declined dramatically as a result of the sharp decline in exports to Russia.

Production of shoes has declined substantially over the previous year but many people boast that some of the Italian shoes sold in Russia are actually made in Armenia. In short, in the production of consumer goods that have relative competitiveness there are cases where, while it declines in the Surface economy, it is thriving in the Shadow economy.

(2) State of the Target Sub-Sectors

1) Electric-Electronic Industry

Within the FSU until 1990, the Armenian electric-electronic industry played an important role and was responsible for the production of electric machinery, leading technologies for military and space system applications and computers (including components). The sector, as a result of the collapse of the FSU, lost their captive market and in addition to the lag in technology, the problems were exacerbated by shortage of materials and cash resulting in a continued decline in production.

Most of the enterprises were unable to find alternative export markets and were forced to cease production; consequently, qualified technicians and experienced workers left the enterprises. Most of the production equipment now is obsolete.

As the trump card for the regeneration of the sector, Mars which possessed modern facilities that had hardly been used since its completion was placed on sale in an international auction and the Ashtarak Plant of Transistor Company negotiated a major subcontract arrangement with a large foreign company. The former Mars was since withdrawn from the international auction and the Transistor's negotiation has still not been concluded to date demonstrating the difficulty in the reconstruction of this sector.

2) Machinery Industry

The main factories in the machinery industry had been set up across Armenia in order to undertake large scale production based upon FSU's overall strategy and plan. These enterprises had formed company towns in where they were located such as Hrazdan and Vanadzor.

The simplified survey performed by the Study Team revealed the complete disintegration of the sector due to the compounding of the problems of obsolete technologies, dilapidated machinery and equipment, transportation issues and lack of experience in selling. Many enterprises (particularly state owned enterprises) such as Hrazdanmash are suffering from low capacity utilization without being able to find a direction for restructuring.

Although they are few and far in between under the current circumstances, there are enterprises that have inherited the machining technologies and management resources and are seeking new needs or markets in their applied fields to develop a business on a scale that is appropriate to their enterprise.

3) Chemical (Pharmaceutical) Industry

The Armenian heavy chemical industry in the FSU system was part of a vertically integrated chemical industry structure and imported raw materials from Russia and shipped its products to the other republics in the Soviet Union. There are several heavy chemical enterprises in Armenia but there is very limited amount of direct complementary or supplementary relationships among them.

Armenian heavy chemical enterprises have large-scale plants and in their time had enjoyed a monopoly position in their particular products. These Armenian enterprises, as a result of the collapse of the FSU, were confronted difficulties at both ends of obtaining the necessary materials and being able to sell its output and, consequently, they were forced to suspend production or to operate at an extremely low level of utilization. Many of the plants are located in proximity to the capital of Yerevan and before the production is restarted an adequate environmental measures are necessary.

Armenian pharmaceutical industry, like the heavy chemical industry, had been part of a vertically integrated structure in the FSU. With the collapse of the FSU, many of the pharmaceutical enterprises were shut down. Among the research institutions there are some laboratories that continue to undertake unique research and development, albeit on a limited scale, and an opportunity for international exposure would be desirable.

During the FSU GMP (Good Manufacturing Practice), the standard for pharmaceutical manufacturing and product quality, issued by WHO was not a necessity, but under the newly enacted Pharmaceutical Law all drug production will be subject to compliance with GMP.

2.2. Key Economic Issues

- The economic adversities facing Armenia in the recent past and today stem from various historical factors.
- With the understanding the various problems of the government, enterprises, household and economic environment. We must examine the principal causes for the major problems.
- Fiscal Deficit of the government shall not be solved forever unless otherwise being increased production, export and income of population.
- Issuance of high yield short-term treasury bills causes not only the ballooning of the Fiscal Deficits but also absorbs limited private cash money which, under normal conditions, should have flowed to investments and loan. Besides, it leads to high market rates of interest and encourages easygoing management of the financial institutions, bringing thereby negative effects to economic re-construction of Armenia.
- Development of export industry, including export substitution is to be the key factor in solving most of economic problems in Armenia.

2.2.1. The Factors of the Key Economic Issues

The economic adversities facing Armenia in the recent past and today stem from various historical factors. Among them three major categories can be cited.

- 1) **Spitak Earthquake of 1988**
- 2) **Conflict with Azerbaijan over territories of Nagorno-Karabakh between 1988 and 1994**
- 3) **The collapse of the FSU**

- In the Spitak earthquake causing the loss of many lives, 20 cities and 342 towns and villages in the northern region of Leninakan-Spitak-Kirovakan were damaged, of these 58 cities and villages were totally destroyed. Most of the factories and housing, roads and other social infrastructure were decimated.

- Although the conflict with Azerbaijan was a conflict between Azerbaijan and Nagorno-Karabakh but Armenia was effectively involved in the conflict and, at the cost of several thousand casualties and enormous expenditures on the war, bore all responsibilities and consequences of the conflict that stretched out over 6 years. The roads and railroad lines that passed through Azerbaijan were cut off and the borders with Turkey were closed and an economic blockage was imposed on Armenia by the two countries that shared most of the Armenian border. Armenia, consequently, faced a severe energy crisis. The closures of the borders with the two countries still continue today.

Table 2.2.1.1 Major Economic Issues and Principal Causes and Effects

	Principle Issues		Principal Causes (Causes ← : Effect →)
Government	Fiscal Deficit	←	Tax revenue shortfall ← Insufficient enterprise profitability/Low wages ← Depressed sales ← Tax evasion/Shadow Economy ← Ineffective tax collection system/Moral hazard ← Loss making state owned enterprises, high unemployment
	Current Account Deficit	→	Issuance of high yield short-term T-Bills → Aggravation of Fiscal deficits Large Trade Deficits ← Depressed exports ← Increase in external debt → Decline in country's international credit rating
Enterprises	Depressed Sales	←	Loss of demand in CIS markets ← Production of products without underlying demand ← Lack of product competitiveness ← Deficient quality/performance ← Lack of marketing ← Lack of management capabilities ← Depressed conditions of customers in the CIS countries ← Bottlenecks in transportation/high cost of transportation
	Cash Shortage	←	Imports of low priced medium quality goods → Depressed domestic production → Difficulties in securing materials ← High cost of transportation → Lack of investment → Obsolescence of technology
Household	Low Income	←	Sharp decline in employment ← Effectively bankrupt enterprises ← Low wages ← Low productivity/Marginal farming → Lack of purchasing power → Depressed consumption → Depressed production → Low ability to save → Lack of capital formation for investments
Economic Environment	Under-developed Financial System	→	Lack of confidence in the financial system → low rates of saving → lack of capital formation
	High Interest Rates	→	Shortage of working capital in enterprises ← Mismanagement of financial institutions ← Earning from high yield treasury bills and transfers
	Lack of Confidence	→	Depressed inflow of foreign investments → Flight of domestic capital

- The collapse of the FSU and the independence of the Union Republics brought on major impact on the Republics including Russia. Highly militarized under a centrally controlled economy, many giant industrial enterprises located in the republics without any rational economic foundations lost its market for the goods with the collapse of the FSU.

In the period of 1960 -- 1980, Armenia, using funds from the Central Budget, rapidly expanded its industrial base and attracted high technology (by former Soviet Union standards) production plants and research institutions. Most of these facilities have ceased operations or are being operated at partial capacity. "Volume Quota" production culture and technology that had been nurtured over many years under an economic system where consumers did not exist clearly lacked the capacity to produce products that were able to meet the market requirements for price and non-price competition.

(I) Issues Confronting the Government, Enterprises, Household and Economic Environment

- Causes and Effects

With the understanding the background outlined above, we will examine the main issues facing the Armenian economy, the principal causes and consequences from the differing perspective of the government, enterprises, household and economic environment.

1) Issues Faced by the Government

The Armenian government is faced with many issues that cannot be resolved overnight, such as foreign relations, economic issues, and issues relating to the refugees. However, for the continued existence of the state and its development the most important and the most critical issues that the government must address and resolve are **the Fiscal Deficit and the Current Account Deficits**.

The reasons behind the low tax revenues lie in the low level of corporate tax revenue and individual income tax revenues. The enterprises are either operating at a deficit or at a marginal profitability level and the individuals are receiving either low levels of income or effectively unemployed.

When the economy of the country is in such dire straits, enterprises and individuals alike, in order that they may live, will make all efforts to avoid reporting incomes or to under-report their incomes. Under these conditions "Informal Sector or Unregistered Businesses" will develop. (In this report we shall hereinafter refer to these sectors as the "**Shadow Economy**")

Because the people's lives are filled with difficulties, tax collection will always be plagued with the problem of moral hazard.

Issuance of high yield deficit financing short-term treasury bills will cause not only the further ballooning of the Fiscal Deficits but also will result in inducing scarce capital to the government sector away from the private sector where, under normal conditions, would have flowed to investments and loans. High interest rates levels of the treasury bills leads to high market rates of interest and encourage mismanagement of the financial institutions. It also invites "hot money" from overseas and hinders the healthy development of financial institutions.

The cause for the Current Account Deficits rests solely on the large deficits in the Trade Balances. The Trade Deficit is due to the minuscule absolute amount of its exports suggesting that in Armenia only a very limited amount of products that are export competitive are being produced. Current Account Deficits causes an increase in the country's external debts that, in turn leads to the reduction of Armenia's external economic confidence.

2) Issues Confronting Enterprises

The most significant issue confronting the enterprises is that there are no orders and the sales are depressed. As shown in Table 2.2.1.1, the many factors are compounded together, but ultimately it comes down to not producing or not being able to produce products that can compete in the world markets. The enterprises are also faced with a real problem of lack of funds to purchase raw materials or production equipment. Compounding the problem is that there are no funds available that the enterprises can borrow on reasonable terms that would enable the enterprise to earn a profit.

There are some enterprises that if funds were to be made available, they would be able to revive themselves or to grow. The lack of funds and investments is promoting the aging and obsolescence of production equipment, which already are of inferior quality/capacity.

However, the mentality exhibited by some enterprise owners of "The quality of our products are highly regarded in the CIS markets and if only we had funds we would immediately be able to produce, sale and raise profits", reflects a naïveté of the reality of the market place and must be said to be a thoughtless misconception. The fact that corporate environment allows management with such ideas to linger is an issue in of itself.

3) Issues Facing Households

The most serious issue confronting the household is the low level of income. Employment opportunities are severely limited and what jobs exist are at low wage levels.

The people are experiencing with acute realism that the incomes that they are able to earn are far from commensurate with the quality or the amount of labor and services that they provide.

The drastic shrinkage in the employment opportunities in the secondary sector has resulted in the increase in the agricultural workforce perpetuating the low levels of agricultural productivity.

The low level of income has not been able to initiate the economic cycle of Increased Incomes → Increased Purchasing Power → Increased Production → Increased Employment. Low incomes have led to low levels of savings and as a result the capital formation required for investments has not taken place. Many people live with a strong apprehension of what is to come in the future.

4) Issues Confronting Economic Environment

In many areas of the economy there is **lack of trust and confidence**. Businessmen are able to

rely only on relatives, people from the same part of the country and friends in carrying out their business.

The economic Mafia has been able to lodge its roots deep into the seats of power and the occurrences of corruption of powerful politicians and high-level bureaucrats surface with some frequency.

Fragility of the financial institutions and high loan interest rates that exceed an average of 45~60% p.a., make financing working capital and equipment investment well nigh impossible. The high yielding government treasury bills have become a de facto subsidy for the financial institutions and have diminished their appetite for earning their revenues through the assumption of risks in lending and investments, their intrinsic and mandated business.

It is no easy task but still possible to resolve the issues outlined above in 1) - 4) confronting the government, enterprises, households, and the economic environment; however, in order to realize a resolution the following steps, which are common to all of the issues, must be implemented.

- (a) Implementation of practical measures for fostering exports and import substitution industries.
- (b) Drastic reduction (if possible termination) of issuance of high yield treasury bills and undertake a reform of the financial system
- (c) Implementation of measures to instill confidence in the government and the country

(2) Fiscal Deficit

The 1998 budgetary revenues and expenditures were implemented close to the original budget and the annual Fiscal Deficit totaled AMD40.1 billion (US\$79.5 million). Table 2.2.1.2 outlines the revenues, expenditures, fiscal deficit and GDP comparison.

The Expenditure levels have been trimmed as far as it can be practicably trimmed. According to the statistics the average salary of a civil servant is only AMD10,000 (US\$20).

Table 2.2.1.2 Revenue, Expenditure and Deficit of the Government Budget

	1997	1998
Revenue (Billion AMD)	126.1	165.0
(% to GDP)	(15.8)	(17.3)
Taxes	102.8	130.3
Revenue other than Taxes and Grant	23.2	34.6
Expenditure (Billion AMD)	146.8	205.2
(% to GDP)	(18.4)	(21.5)
Deficit (Billion AMD)	-20.7	-40.1
(% to GDP)	(2.6)	(4.2)

(Source: Ministry of Statistics, State Register and Analysis)

There are too many civil servants and reductions can be made, for example, it would be possible and necessary to reduce the number of teachers in the schooling system from elementary schools through universities by half.

However, the expenses freed up from such a reduction must not be used to fund a further trimming of expenditures but rather should be expended in improving the substandard working conditions and teaching conditions. The military expenditures, which account for over 20% of the budget, can be reduced but this would require improvements in the relations with the neighboring countries. This would require all parties, including the other countries, to make mutual efforts and it will take time before this can be realized.

The Fiscal Revenue already is equivalent to 17.3% of the GDP and it would not be realistic to expect further significant increases in the revenue. The only possibility would be via new tax revenues being collected from the Shadow Economy. In order for the Shadow Economy, which is said to be equivalent to 40 - 50% of the official economy, to transform itself to the Surface Economy, the economy must experience a major recovery and regain the confidence of the society. It is, of course, possible to reduce tax evasion substantially with improvements in tax collection know-how.

In 1998, there were AMD35.6 billion (US\$70.5 million) of delinquent payments of various tax payments and delinquency surcharge payments. This amount is equivalent to 27% of the tax collection amount and even if only one third of this amount could be recovered through seizure and liquidation of delinquent taxpayer's assets, it would be equivalent to achieving a 9% increase in tax revenues. For the time being, these measures are about all that can be expected in terms of increasing revenues.

In order to achieve major improvements in revenues, increases in the production of high value added products, exports and people's incomes are necessary.

Another issue that is tied with the Fiscal Deficits is the large scale, for financing above mentioned Fiscal Deficits, issuance of **high yield short-term Treasury Bills** that have maturities ranging between 28 - 364 days.

Table 2.2.1.3 in the Following page shows the details of the Treasury Bills issued in 1997 and between January and September of 1998. The amount of Treasury Bills issues in 1997 totaled AMD 37.22 billion and in the first 9 months of 1998 AMD 27.7 billion which represented 29.5% of fiscal revenues and 25.3% of expenditures in 1997.

Table 2.2.1.3 Allocation Volumes and Yields of Short-Term Treasury Bills (Unit: AMD Million)

1997	A B C		D 1997		E F G		H 1997		I J K		L 1997		M N O		P 1997		Q R S		Total of Allocated T-Bills			
	28-day		91-day		182-day		273-day		364-day		Volume allocated	Yield %	Weight	Volume allocated	Yield %	Weight	Volume allocated	Yield %		Weight		
	Volume allocated	Yield %	Weight	Volume allocated	Yield %	Weight	Volume allocated	Yield %	Weight	Volume allocated											Yield %	Weight
Jan	156	46.3	72.2	615	67.5	415.1	Jan	481	69.9	336.2	Jan	0	0.0	0.0	0.0	0	0	0	0.0	1,252		
Feb	237	49.8	118.0	1,356	76.6	1038.7	Feb	493	80.4	396.4	Feb	0	0.0	0.0	0	0	0	0	0.0	2,086		
Mar	152	50.1	76.2	1,300	71.9	934.7	Mar	940	75.5	709.7	Mar	750	81.2	609.0	0	0.0	0	0	0.0	3,142		
Apr	100	49.3	49.3	967	70.2	678.8	Apr	1,128	78.7	887.7	Apr	0	0.0	0.0	0	0.0	0	0	0.0	2,195		
May	0		0	1,400	54.0	756.0	May	1,200	56.5	678.0	May	400	59.9	239.6	0	0.0	0	0	0.0	3,000		
Jun	222	42.9	95.2	1,200	54.8	657.6	Jun	525	48.3	253.6	Jun	364	57.4	208.9	500	60.9	304.5	500	60.9	304.5	2,811	
Jul	150	48.5	72.8	2,250	47.8	1,075.5	Jul	600	51.6	309.6	Jul	400	54.4	217.6	400	50.4	201.6	400	50.4	201.6	3,800	
Aug	0		0	870	47.8	415.9	Aug	1,053	50.9	536.0	Aug	1,200	50.2	602.4	Aug	47.4	189.6	400	47.4	189.6	3,523	
Sep	0		0	300	44.7	134.1	Sep	1,500	46.5	697.5	Sep	1,200	46.2	554.4	Sep	1,100	43.7	480.7	900	39.2	352.8	4,470
Oct	0		0	2,070	37.1	768.0	Oct	800	38.3	306.4	Oct	700	38.8	271.6	Oct	900	39.2	352.8	500	49.3	246.5	3,631
Nov	500	31.5	157.5	1,200	45.9	550.8	Nov	831	45.6	378.9	Nov	600	47.0	282.0	Nov	500	49.3	246.5	600	48.5	291.0	3,213
Dec	125	28.6	35.8	678	45.9	311.2	Dec	760	48.5	368.6	Dec	1,050	48.7	511.4	Dec	4,400	47.0	2,066.7	4,400	47.0	2,066.7	37,223
Total	1,642	41.2	676.9	14,206	54.5	7,736.4	Total	10,311	56.8	5,858.6	Total	6,664	52.5	3,496.9	Total	4,400	47.0	2,066.7	4,400	47.0	2,066.7	27,909
Total-2	1,017	47.6	483.7	10,258	59.5	6,106.4	Total-2	7,920	60.7	4,804.7	Total-2	4,314	56.4	2,431.9	Total-2	2,400	49.0	1,176.4	2,400	49.0	1,176.4	

1998	A B C		D 1998		E F G		H 1998		I J K		L 1998		M N O		P 1998		Q R S		Total of Allocated T-Bills			
	28-day		91-day		182-day		273-day		364-day		Volume allocated	Yield %	Weight	Volume allocated	Yield %	Weight	Volume allocated	Yield %		Weight		
	Volume allocated	Yield %	Weight	Volume allocated	Yield %	Weight	Volume allocated	Yield %	Weight	Volume allocated											Yield %	Weight
Jan-Sep	0		0.0	1,038	49.5	513.8	Jan-Sep	683	50.3	343.5	Jan-Sep	700	49.8	348.6	Jan	300	48.2	144.6	300	48.2	144.6	2,721
Jan	0		0.0	701	53.1	372.2	Jan	862	54.0	465.5	Jan	600	55.8	334.8	Feb	642	50.8	326.1	642	50.8	326.1	2,805
Feb	0		0.0	417	59.4	247.7	Feb	1,124	61.2	687.9	Feb	675	61.9	417.8	Mar	581	63.9	371.3	581	63.9	371.3	2,870
Mar	73	53.7	39.2	1,200	47.7	572.4	Mar	500	49.5	247.5	Mar	900	56.2	505.8	Apr	400	54.3	217.2	400	54.3	217.2	3,100
Apr	100	45.8	45.8	800	38.8	310.4	Apr	1,400	40.0	560.0	Apr	500	37.9	189.5	May	400	42.6	170.4	400	42.6	170.4	3,100
May	0		0.0	800	34.2	273.6	May	1,100	35.6	391.6	May	1,000	34.3	343.0	Jun	1,000	35.2	352.0	1,000	35.2	352.0	3,900
Jun	0		0.0	1,796	36.0	646.6	Jun	756	35.6	269.1	Jun	511	45.5	232.5	Jul	600	50.6	303.6	600	50.6	303.6	3,800
Jul	137	31.5	43.2	800	35.1	280.8	Jul	1,028	39.9	410.2	Jul	1,200	35.4	424.8	Aug	1,000	35.2	352.0	1,000	35.2	352.0	4,028
Aug	0		0.0	144	48.1	69.3	Aug	711	43.0	305.7	Aug	412	40.5	166.9	Sep							1,367
Sep	100	37.3	37.3				Sep				Oct			Oct								
Oct							Oct				Nov			Nov								
Nov							Nov				Dec			Dec								
Dec							Dec				Total	6,498	45.6	2,963.7	Total	4,923	45.4	2,237.2	4,923	45.4	2,237.2	27,691
Total	410	40.4	165.5	7,696	42.7	3,286.8	Total	8,164	45.1	3,681.1	Total	6,498	45.6	2,963.7	Total	4,923	45.4	2,237.2	4,923	45.4	2,237.2	27,691

Remarks: 1) Figures are rounded at 2-nd digit of decimal point 2) Total-2 is the total of Jan-Sep, 1997

(Source: Prepared from the data of Central Bank of the Republic of Armenia)

At the time of writing of this report official data for bond issuance for the whole year has not been published. But if it is assumed that the conditions and details of bond issuance between October and December were to be the same as those for January and September, the estimated amount of treasury bills issued in 1998 would be AMD 36.9 billion (AMD 27.2 billion x 12/9). This would be equivalent to 22.3% of the year's revenue and 18% of the expenditures.

Tables 2.2.1.4 - 2.2.1.6 presents the calculation of the premium (interest) paid at the time of maturity redemption of the treasury bills.

The interest paid by the government on the T-bills issued in 1997 totaled AMD9.58 billion and, in 1998, AMD9.48 billion (based on the above assumption) which represents 46.3% and 23.6% of the government's Fiscal Deficits in 1997 and 1998 respectively.

A comparison of 1998 (January through September) with the comparable period (Table 2.2.1.4) in the previous year shows an increasing trend in both the issued amounts and interest paid.

It would be partially comprehensible that the Government resorts to high yield short-term treasury bills as an unavoidable measure to finance budget deficit. However, we would urge that the measure cannot bring the country's economy any constructive effect, but it is rather giving handful of commercial banks an opportunity of making money without exerting legitimate business efforts. If the Government continues this measure, it does have the critical risk to snowball its debt following the laps of year, as

Table 2.2.1.4 Interest paid for T-Bills (Unit: Million AMD)

1997 T-Bills	Allocated Volume	Average Yield %	Interest Amount	(Weight)
28-day	1,642	41.2	51.9	676.5
91-day	14,206	54.5	1,930.3	7,742.3
182-day	10,311	56.8	2,920.3	5,856.6
273-day	6,664	52.5	2,616.8	3,498.6
364-day	4,400	47.0	2,062.3	2,068.0
Total	37,223	53.3	9,581.6	19,842.0

(Source: Calculated from the data of CBA)

Table 2.2.1.5 Interest paid for T-Bills (Unit: Million AMD)

1997(Jan-Sep) T-Bills	Allocated Volume	Average Yield %	Interest Amount	(Weight)
28-day	1,017	47.6	37.1	484.1
91-day	10,258	59.5	1,521.7	6,103.5
182-day	7,920	60.7	2,397.1	4,807.4
273-day	4,316	56.4	1,820.7	2,434.2
364-day	2,400	49.0	1,172.8	1,176.0
Total	25,911	57.9	6,949.4	15,005.3

(Source: Same as Table 2.2.1.4)

Table 2.2.1.6 Interest paid for T-Bills (Unit: Million AMD)

1998(Jan-Sep) T-Bills	Allocated Volume	Average Yield %	Interest Amount	(Weight)
28-day	410	40.4	12.7	165.6
91-day	7,696	42.7	819.3	3,286.2
182-day	8,164	45.1	1,835.9	3,682.0
273-day	6,498	45.6	2,216.2	2,963.1
364-day	4,923	45.4	2,228.9	2,235.0
Total	27,691	44.5	7,113.1	12,331.9

(Source: Same as Table 2.2.1.4)

the interest should be added to the original debt at the time of redemption falling due within one year. Though the current standing amount of the treasury bills can be adjudged as not in the red zone to bankrupt the National Account, we would point out the shortcomings of this measure.

Issuance of high yield treasury bills poses a risk of possibly exposing the country itself as a target for the giant western financial institutions. Fortunately, in Armenia's case the inflow of hot money was minimal and the effect of the currency/credit crisis that struck East Asia → Russia → Central and South America was limited.

Nevertheless, as it is shown in Fig. 2.2.1.1, such funds which totaled \$ 220 million in May of last year has fallen in a period of only a few months to \$ 88 million in September.

Payment of interest on treasury bills amounting to around \$ 20 million per year is enormous burden for the Armenian government.

The government must exercise all means and firm resolve to achieve a reduction in the issuance of the Treasury Bills and reduction in the level of yield rates.

In regard to the privatization of the state owned enterprises post 1999, divestiture to foreign capital under an international auction would be a favored option for electric power companies, airlines and other giant state enterprises.

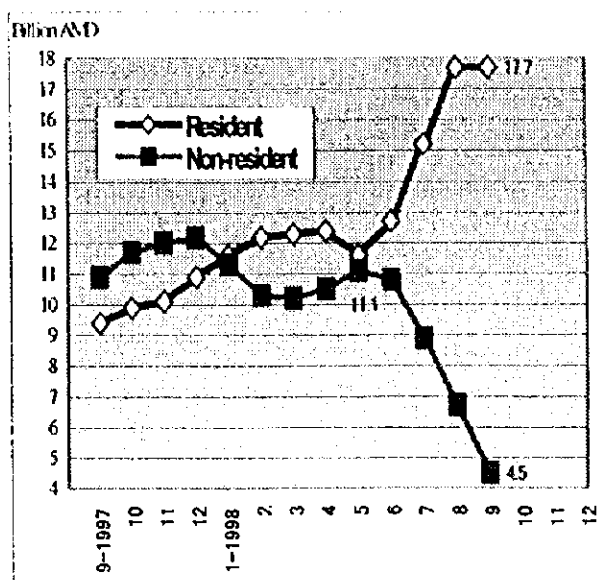
These enterprises are saddled with enormous amount of accumulated losses, as substantial capital and management know-how will be required for the acquisition and post acquisition management.

It is likely that prior to the divestiture the major portion of the accumulated losses would need to be written off, which will be an additional fiscal burden for the government.

In addition, sometime within the short future, the government will need to address compensation for the depositors of SBERBank. For the government, post 1999 fiscal management will be compounded in its difficulty having to find ways to fund such burdens.

(3) International Balance of Payments

Armenia's current accounts are structurally faced with large and chronic deficits. 1998 current



(Source: Prepared from the data of CBA)

Fig. 2.2.1.1 Investors in short-term Treasury Bills (Unit: Billion AMD)

account deficits stood at \$442 million. The 1998 Balance of Payments prepared under IMF Balance of Payment Manual (Fifth Edition) has not yet been obtained, thus detailed breakdown of the current account items are not available.

The major item breakdown is as follows:

Trade Balance - \$672 million (See Table 2.1.1.2 in section 2.1.1.)

Current Transfer Balance (Official) - \$123 million (including IMF, World Bank),

Current Transfer Balance (Private) - \$103 million (Repatriation from migrant workers abroad and emigrants).

The Trade Account deficit, equal to 35.2% of the GDP, is the most significant cause of the deficits of not only the current account but for the overall balance of payments.

The balance of payment equilibrium is barely being achieved through improvements in the capital account balance as result of foreign direct investments, drawings under the IMF Facility, and borrowings from the World Bank and other sources. This type of symptomatic therapy cannot be relied upon as a permanent cure. Under the SDR Facility, in 1998 \$161 million (SDR 114 million) had already been drawn.

1999 has not exhibited any improvement and there is apprehension that the vicious cycle of Large Trade Deficits → Large Current Account Deficit (as the private transfer balances will decline this will be exacerbated) → Increases in External Borrowings will be magnified. As it has been pointed out in 2.1.1 the most crucial task is to increase the exports and to this end the government and the private sector must expend its entire means and efforts.

(4) Employment

The drastic changes to the Armenian industrial structure outlined in 2.1.1 brought about a major change in the employment structure. Table 2.2.1.7 shows the changes of employment distribution by sectors.

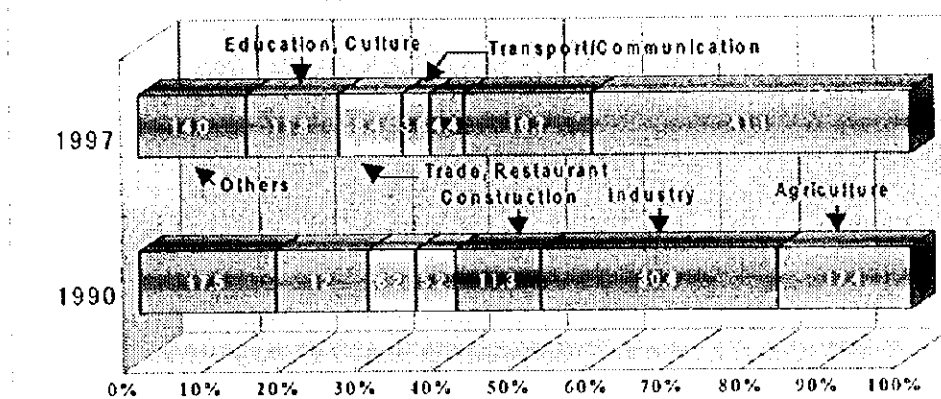
Table 2.2.1.7 Change of Employment Distribution by Sectors

	1990	1992	1996	1997
Agriculture	17.4	30.7	40.6	41.1
Industry	30.4	25.7	17.8	16.7
Construction	11.3	8.6	4.7	4.4
Transport/Communication	5.2	4.2	3.3	3.6
Trade, Restaurant	6.2	4.7	7.7	8.4
Education, Culture	12.0	11.1	12.1	11.8
Others	17.5	15.0	13.8	14.0

{Source: Same as Table 2.2.1.2}

The share of the primary industries sector (agriculture) increased by approximately 2.4 fold from 17.4% in 1990 to 41.7% in 1998 while the share of the secondary industries sector (manufacturing, construction) declined from 41.7% to 21.1% during the same period. The tertiary sector overall showed a slight decrease with increases being exhibited in commerce-restaurant industries while transportation and communications industries showed declines.

Figure 2.2.1.2 shows a comparative employment distribution by sectors between 1997 and 1990.



(Source: Ministry of Statistics, State Register and Analysis)

Fig. 2.2.1.2 Change of Employment Distribution by Sectors

The number of employed in the industrial sector declined from 495 thousand in 1990 to 229 thousand in 1997 and in 1998 showed a further decline of 7.8% (refer to Table 2.2.1.8).

Table 2.2.1.8 Decrease of Employment in the Industrial Sector (Unit: Thousand)

	1990	1992	1994	1997	1998
Number of Employment	494.8	405.2	355.2	228.9	211.0

(Source: Same as Table 2.2.1.2)

The official unemployment rate 9.3% as of 1998 year end does not necessarily give a true reflection of employment and unemployment picture as this figure is taken of dividing number of registered unemployed (139.1 thousand) by the official economically active population data (estimate – 1,490 thousand as of December 1998).

In the above unemployment statistic, some 90 thousand who have been forced to take extended vacation from the enterprises are not included.

Also in order to be recognized as unemployed under the new Employment Laws, a minimum of 1-year employment history is required prior to becoming unemployed. If one fails to renew the formalities, the severe conditions are levied on the unemployed including the loss of his unemployed status; therefore there is always a gap between the real number of unemployed and the number of registered unemployed and this is not reflected.

Unemployment rate statistics under the ILO methodology does not exist in Armenia and the unemployment rate measured using an internationally accepted measure is unclear. UNDP 1998 report pegs the real unemployment rate to be 25 - 28%. Several of the experts in Armenia have also cited estimates ranging from 25% to 30%.

There are various methodologies to estimate the real unemployment including potentially unemployed, but one methodology that may be useful as reference is an estimation based on the correlation between GDP and the number of employed. Per capita productivity has been increasing historically but for the purposes of this exercise if we assume this to be constant as well as holding constant wages and other productive factors, a proportional correlation can be established between the number of people employed and the level of GDP.

In other words, if the number of employed increases, then the GDP will increase in the same proportion. Conversely, if the number of employed declines, the GDP will decline. Based on this assumption, the equations **Rate of increase or decrease in number of employed = Rate of increase or decrease of GDP** can be formulated. Assuming that per capita productivity of the workers in 1998 was the same as that in 1990 and applying 61.7% which is the proportion of 1998 GDP to 1990 GDP to the equation, and calculate the required number of workers by sector and compare the results with the actual number of employed by sector.

The headings A through F in the Table 2.2.1.9 have the following definitions:

- A** = Calculated percentage of GDP by sector in 1990
- B** = Calculated percentage of GDP by sector in 1998
- C** = Number of employed in each sector in 1990
- D** = Number of employed in each sector in 1997 (due to lack of data for 1998)
- E** = 1,630 thousand x **B**
- F** = **D** - **E** (surplus/shortage employment)

Table 2.2.1.9 Estimate on Over Employment based on GDP (Unit: Thousand people)

	GDP (%)		Employment		Required Employment for 1998 E	Over Employment F
	1990	1998	1990	1997		
	A	B	C	D		
Agriculture	12.5	20.5	284	612	334	278
Industry	44.5	14.4	495	249	235	14
Construction	18	5.6	184	66	91	-25
Transport/Communication	5.1	3.4	85	54	55	-1
Trade, Restaurant	4.1	5.7	101	125	93	32
Education, Culture	3.5	1.4	196	176	23	153
Others	12.3	10.7	285	208	174	34
Total	100%	61.7%	1,630	1,490	1,006	484

(Source: Calculated from the data of Ministry of Statistics, State Register and Analysis)

According to the above calculation, the number of employed that is commensurate to the level of 1998 GDP is 1,006 thousand and there is a surplus labor force of 484 thousand which includes 278 thousand in the agricultural sector, 153 thousand in the education / culture sector. This is equivalent to 32.5% of the total number of employed in 1997. This type of situation implies a continued presence of pressure for population outflow as described in 2.1.2..

2.2.2. Government Economic Policy

(1) Industrial Policy

Aside from government's policy responses taken on individual cases and assistance programs of the international agencies, Armenian government has not established a comprehensive industrial policy that maps out the present and future industrial development. It was not possible for the Study Team to obtain opinions or overall direction relating to the industrial policies in the interviews held with many officials of the Ministry of Industry and Trade (hereinafter "MIT") and the chief of the policy departments.

There are several reasons why the government while placing emphasis on the declining industry and the resultant employment issues were not as diligent in establishing industrial policies.

- The government was preoccupied with immediate and difficult problems and had not the luxury of thinking about industrial policies.
- A priority was placed on the creation of a framework for the transition to a market economy such as the stabilization and privatization of the economy, and preparation of the legal system.
- A reaction to the "Planning" of FSU age has encouraged the extreme "syndrome of market as the panacea". In another words, the idea that the judgement on the worth of an industry is for the market to decide and the government ought not make policy interference in the process by promoting specific industries have permeated and dominated the minds of the many young technocrats in the government.
- MIT is a collection of the many ministries, which during the FSU era were in charge of production plans for each industry and lacked policy planners with the international perspectives and knowledge base.

The collapse of the FSU brought about the disintegration of industries not only in Armenia but also in all independent republics. Industrial technology and product quality had been acceptable in the FSU but save for a part of military technologies, lagged the international standards by 10 - 20 years. In the sudden transition from an economy based on quotas and lacking in both consumers and management to a market driven economy the obsolete technology and the lack of information

on international industries or markets exacerbated the situation causing many enterprises to fail or fall to a situation very close to failing. Armenia is further handicapped by its conflicts with Azerbaijan and the ensuing border blockages.

Industrial policy formulation for Armenia is no easy task but recognizing the realities and mobilizing the available human and other resources it is possible and its implementation not impossibility.

In some of the assistance programs by the foreign donors, recommendations regarding industrial policies were included. Many of the recommendations presented in the reports were such that they were not appropriate to the existing realities in Armenia or based on principles of horizontal equal opportunity that applied to the advanced nations but lacking practicality in Armenia and which had been proposed without sufficient prior examinations of the realities or the existing potential in Armenia.

MIT had undertaken a major reorganization in early 1998 under recommendations given by a British consulting firm. It has policy formulation departments such as Department of Industrial Policy, Investment & Export Policy Directorate, Department of Regional Development Policy and SME Support Department but the expert staff who possess the passion for the formulation of industrial policy and investment export policies are few. Policy issues abound such as sorting out and reconstruction of industries that have collapsed, promotion of new industries, supporting the SME, putting in place conducive environment for business, expansion of exports and inducing foreign direct investments.

In terms of SME Promotion, MIT is preparing a set of documents on SME promotion policy, creation of a new Government implementation agency, draft of related laws, etc, incorporating the results of relevant aid program of TACIS.

It would be hoped that the policy drafting work is being carried out based upon an objective assessment of the issues facing the SME and reality of the strengths and weaknesses of the country.

(2) Trade Policy

Armenia's trade as seen in the Table 2.1.1.2 in section 2.1.1, shows that while the imports continue to increase every year the exports are declining resulting in an ever expanding Trade Deficit reaching US\$672.3 million in 1998. Table 2.2.2.1 presents the volume of trade by markets and Table 2.2.2.2 presents the commodity composition of trade.

Except for trade with Belgium, which is almost balanced due to the subcontract processing of diamonds, trades with almost all other countries are in a large deficit position. (The surplus with Turkmenistan is a result of performance of a past liability). In terms of commodities all

commodities except for Metal Scrap, which is classified in Non-Precious Metals, are in substantially surplus of imports position.

Table 2.2.2.1 Market Distribution of Foreign Trade (Unit: US\$ million)

	Export		Import		Balance
	Amount	%	Amount	%	Amount
Total	223.4	100.0	895.7	100.0	-672.3
CIS countries	81.1	36.3	221.4	24.7	-140.4
(o/w) Russia	39.9	17.9	182.7	20.4	-142.7
Turkmenistan	22.7	10.2	0.6	0.1	22.1
Others	18.4	8.4	38.2	4.3	-19.8
EU	75.0	33.6	259.4	29.0	-184.4
(o/w) Belgium	49.8	22.3	54.6	6.1	-4.8
Germany	9.4	4.2	34.0	3.8	-24.6
Italy	0.4	0.2	34.6	3.9	-34.2
England	6.2	2.8	69.1	7.7	-62.9
Others	9.1	4.0	67.0	7.5	-57.9
Iran	31.7	14.2	63.8	7.1	-32.1
Turkey	3.0	1.3	56.6	6.3	-53.6
UAE	6.2	2.8	54.1	6.0	-47.8
USA	12.5	5.6	97.9	10.9	-85.5
Others	13.9	6.3	142.4	15.9	-128.5

(Source: Ministry of Statistics, State Register and Analysis)

Table 2.2.2.2 Foreign Trade Structure (Unit: US\$ million)

	Export		Import		Balance
	Amount	%	Amount	%	Amount
Total	223.4	100.0	895.7	100.0	-672.3
Animals & Foods	18.3	8.1	294.5	33.0	-276.2
Mineral Products	31.7	14.2	197.6	22.1	-165.9
Chemicals, Rubber, etc.	10.2	4.6	102.0	11.3	-91.8
Textile, Textile products	13.6	6.1	31.7	3.5	-18.1
Precious Metal & Stones	53.1	23.8	45.5	5.1	7.6
Non-precious Metals	40.4	18.1	20.4	2.3	20.0
Machinery, Equipment	40.1	18.0	78.8	8.8	-38.7
Other Goods	16.1	7.2	125.2	13.9	-109.1

(Source: Same as table 2.2.2.1)

Armenia needs to depend on imports for most of its industrial materials, production equipment, and food stuff and consumer durable goods. The domestic market in Armenia is limited. Exportable goods are severely limited.

The above factors have driven the Trade Deficits to a level reaching in excess of 1/3 of the GDP and this is a structural cause for the Current Account Deficit and resulting in increasing external borrowings. Based on this it is clear that an Armenia's trade policies must focus on expansion of exports, or in another words foster export industries (including import substitution industries) and trade policy must be considered in unison with the industrial policies.

The Study Team, unfortunately, were not able to much evidence of such trade policies being seriously examined. There have been no concrete promotion plans for fostering of the export industries or for the expansion of exports.

ADA, under a technical guidance from UNDP, undertook a study on Export Development Strategy and as the first phase examined the issues and potentials on the supply side and put together an interim report titled, "Export Supply Survey ARM 98/003" in February of 1999 (in the course of the study had adopted some of JICA study methodologies). Of the 7 sub-sectors surveyed, 6 of the sub-sectors, jewelry processing, Electric/Electronics industry, machinery and parts industries, light industries, food processing industry, and computer software industry were deemed to have potential for export promotion. Chemical industry, due to the multitude of issues and the requirement for large investments for regeneration, was excluded from the survey.

Under the study, Electric/Electronics industry, machinery and parts industries, light industry and computer software industry were selected as a follow-up study in order to prepare a prioritized and concrete export promotion policies.

ADA has since 1999 begun accepting application for a non-interest bearing loans for exports and investment promotion from the World Bank's Enterprise Support Fund (US\$1 million).

Among the trade policies, a special note must be made of Armenia's efforts to join the WTO. In 1993, Armenia made a decision to apply for membership into the WTO and have since been lobbying aggressively and are making steady progress for its aim of entry by the middle of 1999. As shown in section 2.2.3 (2), the import tariffs on most commodities have been reduced to zero. The section in charge of WTO in MIT is staffed with excellent staff with an international perspective.

(3) Advantages and Disadvantages

The current conditions in Armenia from the perspective of private sector development and foreign direct investment present many points of competitive superiority and inferiority. Quite often strength and weakness are two sides of a coin or what is a weakness for one party may not necessarily be for another.

Although Armenia is a small country with limited purchasing power and limited market size it is

located in strategic location for transport with the Caucasus countries with which it shares life patterns and culture. Today the borders at Turkey and Azerbaijan are closed and the only access to the outside is through Georgia to the north and Iran to the south. The resultant transportation conditions, which inherently is not a factor for weakness, has caused high transportation costs and has become one of the most serious weaknesses.

For the Armenian entrepreneur the inability to raise funds at a reasonable terms is a major competitive disadvantage but for the foreign company who have access to funds at favorable terms from the outside, Armenia's high interest rates and the inability of Armenian banks to lend do not pose a competitive disadvantage.

The largest advantage enjoyed by Armenia is the existence of a diligent highly educated workforce. Many of the people have a strong work ethic and excel in creativity and are multilingual speaking Russian and English. It has been said that adversity is the source of creativity and energy, but Armenian people who have long endured hardships have persistence and have an excellent ability to adapt to the changing environment. Investors would be able to utilize these excellent workers at a low wages.

For the foreign investors, the Preferential Tax System for Investments offered by the Armenian government lacks sufficient incentives – close to being a disadvantage, for the Armenian entrepreneurs until the end of 1998 they were granted a preferential tax treatment in which they could enjoy the merit of the tax treatment continuously by forming a new company every two years and transferring profitable businesses into the new company; thus it was an advantage for them.

A favorable point that is true for both domestic and foreign investors is the abundance of idle production facilities that can be acquired cheaply. The presence of approximately 5 million Diaspora who are active worldwide including Europe and the United States is also an advantage.

Additional advantage possessed by Armenia is, compared with the other CIS countries, the implementation of liberal external policies in its preparation for entry into the WTO. Although it has not been made explicit in policies but the government has taken a positive attitude toward the reopening of production, introduction of technologies and management methods that are competitive, and attracting foreign direct investments to secure employment and depending upon the project the government is ready to make flexible responses can be anticipated.

Table 2.2.2.3 is a chart outlining the advantages and disadvantages but in understanding each item reasoning similar to those outline above is necessary.

Table 2.2.2.3 Advantages and Disadvantages

Advantages	Disadvantages
<ul style="list-style-type: none"> - Highly intelligent human resources - Readily available willing workforce - High Sense of arts inherited through years of tradition - Existence of unutilized production facilities - Geo-politically important location - High potential scientific research capability - Adaptability to circumstances - Quality, less expensive labor force - Multi-lingual capability - Climate conditions...Resources for tourism & agriculture - Capable merchant with world wide network - Close relationships with Diaspora who play an active part in widespread activities world wide 	<ul style="list-style-type: none"> - Weak fundamentals (Fiscal Deficit, Huge trade in-balance. Weakness of International Payments etc.) - Small Domestic Market - Weak financial sector - High interest rate - Lack of confidence - Very limited & expensive transportation - Not stable & expensive energy and telecommunication - Emigration of qualified and young work force - Not very attractive foreign investment incentives - Closed Borders with Azerbaijan and Turkey due to blockade

(4) Investment Promotion Policies

In Armenia establishment of new businesses is quite active. As of January 1 1999 the number of enterprises totaled 38,352 (excludes state institutions and state service organizations). Of the 35,080 enterprises that existed as of January 1 1998, 2,398 enterprises have been removed from the registry and 5,670 enterprises registered anew (including reorganizations). Table 2.2.2.4 breaks down the enterprises by sectors.

Table 2.2.2.4 shows that there are some 21,551 enterprises engaged in wholesale, retail and various repair services and typifies the current Armenian economy. In some of the sectors it is thought that state enterprises are included and if the comparison is restricted to include only the private sector, then the weight of the above mentioned commercial sector may be more than 60%. (Japan has many Wholesale, and retail trade, eating and drinking places [in the statistics lumped into a single category] but it still only accounts for 27% of the total number of companies)

The net increase in the enterprise numbers (new registration – de-registration) also show a heavy weight by the commercial sector accounting for 60% of the net increase. Manufacturing is 19% in terms of the number of enterprises while the construction accounts for 6%.

The number of manufacturing enterprises are shown to have increase by 658 but in this number are thought to include many of those nominal new enterprises that have taken advantage of the

preferential treatment given in profit taxes and it is not determinable how many new enterprises of substance have increased.

Table 2.2.2.4 Number of Enterprises

Sectors/Sub Sectors	As of 1.1. 1998	As of 1.1. 1999	Increase
Agriculture (incl. Forestry & Fishery)	2,089	2,342	253
Mining Industry	49	54	5
Manufacturing Industry	6,642	7,300	658
Electricity, gas and water supply	361	382	21
Construction	2,336	2,275	-61
Wholesale & Retail Trade, Repairing	19,600	21,551	1,951
Hotels and Restaurants	951	1,042	91
Transport, Warehouse and Communication	1,089	1,147	58
Finance	101	123	22
Real Estate, and Commercial activities	1,862	2,136	274
Total	35,080	38,352	3,272

Note: The figures may include some of state enterprises
(Source: same as Table 2.2.2.1)

Although the above data is only in terms of the numbers of enterprises and generalizations cannot be made, but it does show that under the current Armenian economic conditions, the environment is such that it favors investments that require little capital with a quick capital recovery period and investments concentrate in sectors like a commercial or cateries. As of January 1st 1999 the number of wholly owned foreign subsidiaries totaled 434 and joint ventures 608. Table 2.2.2.5 shows the number of enterprises registered during 1998 and the reported capital amounts.

Table 2.2.2.5 Enterprises registered during 1998

		Number	Capital (million AMD)	(in million US\$)
Total of registered enterprises in 1998		4,431	30,483	60.4
o/w	Foreign Investment	313	7,680	15.2
	o/w Joint Venture	174	5,187	10.3
	100% Foreign capital	139	2,493	4.9

Note: Capital is declared capital in document (not paid up capital)
(Source: same as Table 2.2.2.1)

Based strictly on the above figures, the number of foreign entrants totaled 313 but the investment per enterprise, assuming the full amount of the declared amount was in fact invested, was less than \$50,000 and the majority were small scale enterprises.

Although the investment environment is at a glance put in place, as stated in section 2.2.3 on Legal system, Tax System and other institutional infrastructure, considering the long and medium gestation period required for investments in mining and manufacturing before turning profitable, in spite of many advantages offered by Armenia such as having a high quality workforce, if the disadvantages of the poor logistics and the high cost, limited market size due to the restrictions against selling into Azerbaijan and Turkey are considered it must be pointed out that the Armenian investment climate under its present conditions lacks in attraction.

In order for the Armenian economy to regenerate, small investments into commercial sector or domestic market, be that as it may, foreign investments into manufacturing that has a high value added and are able to earn foreign currencies (or save foreign currencies) or other industries that are able to earn foreign currencies must be attracted on a full scale basis. In order to achieve this, new laws, new framework must be put in place to create a climate which is attractive for investment.

Introduction of foreign capital has in addition to the direct economic impact, but also its intangible coincidental benefits of introducing business and management expertise that are lacking in Armenia is a set of benefits that should be weighed carefully. The foreign companies will conduct their business in their own way preparing financial statements that are acceptable globally, and will educate the staff in ways that will be accepted under free market principles and further they will expose all those that interact with them, raw material suppliers, trade merchants, banks and will provide opportunities to transmit the ways of conducting business as they should be conducted under free market economy.

In the period of the latter half to the end of 1998, there were nine joint ventures formed with American firms in the computer software sector. In this sector, the issue of transportation of the product or supply of materials, which are the major disadvantages facing Armenia plays no part (Communication though may be higher) and its greatest area of advantage, the intellectual resources are being used in an international arena. This must be said to be a desirable area for foreign investment in spite of the small scale of the actual investments.

(5) Privatization Policy

The Armenian government undertook to privatize 95% of the agricultural land, 1,878 medium and large-scale enterprises (some could not attract buyers and the actually privatized totaled 1,460 enterprises – refer to Table 2.1.1.3 of section 2.1.1), 117 uncompleted construction sites, and 6,678 small-scale enterprises by March of 1999. System of granting loans against agricultural land as mortgage is showing signs of its functionality.

Most of the privatization through the end of 1997 had been on a voucher system but since then auctions, including international auctions have been introduced. Recently an approach using the Yerevan Stock Exchange has also been adopted.

In spite of the efforts made by the Ministry of Privatization to ensure fairness in the privatization, like in other CIS countries the implementation had unfair and non-transparent elements to it. However, considering the political, social and economic turmoil following the FSU collapse, and the novelty of the exercise on the part of both the implementers and the beneficiaries, and the traditional values of the Armenians it can be said that it was, in most respects, he said to have been executed in a regular manner. These are, of course, all past events but some have lingering effects to this day. The events below are events that the Armenians openly point out.

- Many of the management and investors who obtained vouchers inexpensively are principally interested in liquidating the various assets that had been acquired at an extremely low price in comparison to the value in when the enterprise was in operation, such as products in inventory, raw materials, equipment, buildings and usage rights to the land and earn a quick profit and have no interest in resuming operations. There have been cases where the investors sold off the equipment and sheet steel to a buyer in Iran and earned profits in multiple of his investment within a short period of time.
- The results of an auction for an attractive property were often decided in a prior meeting among the influential people with capital. Bidders who were outside were dissuaded from entering the auction through various means. As a result, the enterprise was sold at a price substantially lower than its intrinsic value. The subject company often reduced its valuation by deliberately posting losses.
- At times the minimum prices set for a successful bid was reduced significantly.
- The number of small enterprises successfully privatized reached 82.5% of the target but the total sales value reached only 54.9% of the established target amount.
- Why the Yerevan Cognac factory had to be sold to a French company for \$ 30 million? Many people still find it puzzling.
- Communication business, a strategic infrastructure area was sold to a Greek concern in the form of granting a 15 year exclusive right to operate. For the information industry in Armenia this creates an obstacle to the formation of a competitive market and the consumers may be forced to pay high information costs (This has been debated in numerous occasions in the assembly).
- The above events, even if it were factual, since it had been commonly practiced in other CIS countries, Armenia's case is not especially bad. In comparison with Russia and some other

countries because substantial rights or concessions in Armenia it was rather modest.

Small enterprises, farmers and merchants had used vouchers to acquire enterprises, shops, land and animals effectively without paying but the civil servants (bureaucrats, police officers, teachers, etc.) were not able to obtain assets through the privatization as the buildings and universities remained in the hands of the state. In the privatization of houses, some profited from the privatization while other missed the opportunity. Considering the circumstances, these should be considered to be unavoidable unfairness.

Openness is the quality that is most required in the process of privatization. It is incumbent upon the Ministry of Privatization to inform the public in a way that is easy to comprehend through some means the prices at which the 1,460 enterprises were privatized and the current status of such privatized enterprises. The asset evaluation methods that will be employed in future privatization should also be widely diffused to the public.

A few large-scale enterprises, including Armenia Airlines are progressing under the new approach. The government has laid out a comprehensive plan for 1997 - 2000 relating to the privatization of the energy sector. According to the plan, the sector will be split into electric generation plants, trunk transmission systems and normal transmission network to be divested.

The government revenues from the privatization totaled as of January 1999, AMD 44.7 billion (approximately US\$90 million). It is not clear how this money was expended but there is a concern that the bulk of the funds were used to supplement the budgetary deficits.

IMF and the World Bank have made strong requests that the funds from privatization be pooled in a special account at the Central Bank under strict management and that the government not freely spend the funds.

2.2.3. Current State of Institutional Infrastructure

(1) Legal System

New laws and regulations have been adopted by the National Assembly and have been ratified by the President at a steady pace. Some members of the international community consider Armenia's legal system as one of the most advanced in the CIS. Meanwhile, others point out that since the laws have been pushed through the National Assembly without proper deliberations, the system is opaque and contains numerous inconsistencies with other relevant laws. Up to now, the legal environment has been volatile. As such, it can be said that the business legal environment is not necessarily stable.

Problems with the legal system are outlined below.

- 1) Some important laws are still missing such as a law on monopolies.
- 2) Some laws lack transparency such as the Law on Foreign Investment where several issues are resolved "as per legislation of the Republic of Armenia".
- 3) Some laws lack proper implementation regulation and guidance.
- 4) Laws on Intellectual Property are very limited.
- 5) Knowledge of the legal business framework is generally limited among business people and company managers.

An examination of the contents of the Russian version reveals that the civil code adopted in July 1998 is very substantial. Some specialists point out that since parts of the code are based on the Russian civil code, these do not necessarily meet Armenia's requirements and that the relationship between civil code and other laws that went into effect prior to that has not been studied fully.

(2) Taxation

1) Overview

The new "Law on Taxes" was ratified in July 1998. It defines the (corporate) profit tax, (individual) income tax, value-added tax, excise tax, property tax, and land tax. The National Assembly is now working on a Universal Tax Code expected to be adopted in 1999.

Local government does not have separate taxation system. However, a certain percentage of revenue from some taxes, such as property tax is transferred to local governments.

Each tax is summarized in the Table 2.2.3.1.

Table 2.2.3.1 Main taxes and their rates

Name of Tax		Description
Profit tax (corporation)		25% of marginal tax rate Loss carry-over is allowed permanently.
Income tax (individuals)		30% of marginal tax rate
Value-added tax		20% of single tax rate, EU type value-added tax using invoices
Excise tax		Tax on luxury consumer products
Property tax		Tax on automobiles, buildings and others
Land tax	Farm	15% of assumed income (Alternative of income tax for farmer)
	Other than farm	Tax on land user: 0.5%-1% of appraisal value

Employers must also pay social security fees, which is calculated in the following formula.

$$22\% \text{ of the amount above } 16 \times \text{minimum wage (MW)} + \text{AMD } 1,200$$

In addition, employees must pay 3% of their salary.

All exports from Armenia are duty free. The import tariff schedule is rated either 0 or 10 %. The 10% tariff is levied on the items consisting mainly of consumer goods and luxury items. Zero rate is usually applied for equipment and raw material. Valuation of merchandise can be done by Customs Officials and is reportedly often a source of bribery. Also, VAT is payable at the border if the good is taxable for import tariff.

Planned revenue of each tax and its ratio, based on the 1999 budget are as follows:

Table 2.2.3.2 Revenue by tax in Armenia

Type of Tax	Tax Revenue (AMD bln.)	Percentage
Value-added tax	70.43	47.9%
Excise tax	27.88	19.0%
Profit tax	14.28	9.7%
Custom duty	14.78	10.0%
Income tax	10.00	6.8%
Fix payment*	6.22	4.2%
Others	3.46	2.4%
Total	147.05	100.0%

(Source: 1999 budget)

*Combined assessed tax of VAT and income tax (profit tax) for certain line of business (See 2)

We can easily find extremely high weight on indirect taxes such as VAT and excise tax

2) Operation and Collection

Increase in tax collection is one of current issue in Armenia. The amount of taxes in arrears in fiscal 1998 amounted to AMD 35.6 billion (US\$70.5 million), accounting for 27% of tax revenues.

For 16 businesses such as casinos, restaurants, shops, whose profit is not easily checked, the income (or profit) tax and value-added tax is combined in requiring fixed payment based on the shop area, location and other conditions. After February 1999, cash registers certified by the Tax Authority have been introduced in those lines of business. Those shops and others which introduced cash registers are payable for VAT and income (profit) tax by principal method.

Interest on late payment of taxes is high especially after 90days (0.30%/day), which is over 100% annual interest rate.

3) Tax Incentives for Foreign Investment

There are tax incentives for foreign investors with investments over AMD 500 million since January 1, 1998. Profit taxes are reduced by 100% for the first 2 years, then by 50% for another 8 years at most, which depends on year of investments. The term of the 50% reduction varies

according to the fiscal year in which investment was made. The term is 8 years for investments made in 1999, 6 years for investments made in 2000, 4 years for investments made in 2001, and 2 years for investments made in and after 2002. Investments made before December 31, 1997 continue to benefit from the prior law, which allow tax holiday for smaller amounts of investments. By the change, tax incentive is limited to larger investments.

In addition to the foregoing, there was a system exempting new enterprises from profit tax for two years from their establishment regardless of domestic and foreign ownership and the amount of investment. However, this system was abolished as a result of the 1998 tax reforms. It failed to achieve its original goal of promoting investment because corporations established new companies every two years in order to avoid profit tax payment by transferring their businesses to these new companies. This attests to the difficulty of implementing tax incentives that efficiently achieve policy goals without allowing unnecessary loopholes.

4) VAT Treatment within CIS Countries

Until June 1997, Armenia had a dual VAT system, which treated items traded within CIS countries according to the origin principle, and non-CIS countries according to the destination principle, international practices. Based on the consent within CIS countries, since July 1997 destination principle have been applied for trades within CIS countries. However, Russia still applies origin principle for trade within CIS countries. It means dual taxation for Armenian importer from Russia.

(3) Financial System

1) Overview

The financial system is at an elementary stage and does not satisfy the current needs of the enterprises. The Central Bank (CBA) is well organized. They conduct the national monetary policy and license the individuals and organizations engaged in banking and other financial activities.

Twice a week they organize T-bills auctions (less than one-year term). Interest during 1998 varied between 31.5 and 63.9%. The average rate in March 1999 was 58 to 60%. The amount of short-term T-bills issued during March 1999 totaled AMD22 billion (roughly US\$42 million), a sharp rise over the past amount, of which non-residents held 5%. Foreign residents held up to 70% in the past.

As of September 30, 1998, there were 35 banks in Armenia, with one state bank, Sverbank. The largest private bank is Midland Armenia with a capital of AMD2.6 billion (US\$5.2 million), assets of 12 billion (US\$24 million) and loans of AMD1.5 billion (US\$3 million). As of October 1, 1998, the deposits in banks amounted to AMD22.4 billion, of which AMD13 billion were held by non-

residents (Delovic Express). CBA has been tightening the capitalization requirements to come closer to international standards. According to CBA rules, banks may not give credits to one customer of more than 20% of the bank's equity.

International money transfer is performed through SWIFT.

2) Credit by Aid Fund

Money from EBRD and WB is made available in a 2-step loan. The Treasury Department extends these virtually interest-free loans to commercial banks at LIBOR + 2%, and to final fund users at a rate of 15-21% in U.S. dollars. This is a high interest rate for long term industrial investments. Each loan has a lending limit of US\$500 to US\$500,000 and is mainly provided on the basis of collateral and the borrower's business plan. Long-term investment and loan for working capital are practically non-existent. Bank employees are being trained in credit risk management to expand the financing scope to industry.

Interest-free funds of the LINCY FUND operated by Mr. Kerkorian have been made available in U.S. dollars to local enterprises at a rate of 12.5%-15% for three years. Although this level of interest is still high from an international perspective, the government's margin is small, thus lower the final interest.

3) Securities Transactions

There are 4 stock exchanges. The largest is the Yerevan Stock Exchange, which has 74 companies listed with a total market capitalization of US\$ 16.3 million at the end of October 1998. Daily trade volumes are small or non-existent. Market of corporate shares is very weak, because a few investors, who do not want to sell the shares, accumulate many shares.

For the sake of their own safety, people are cautious about letting others know that they have money to purchase stocks or that they made money by selling stocks. For this reason, the bulk of stock transactions are made between individuals without going through the stock exchange.

Since there are no strict monitoring systems and penalties against insider trading, there is leeway for certain people with access to special information such as new listing and foreign investment to make a profit in a short period of time by using such information.

The infrastructure such as a central depository, clearing-house and registry is required. The law requires the central registry of shares of the companies having more than 50 shareholders.

(4) Accounting and Auditing System

1) Accounting

The bookkeeping system practiced under the FSU is still employed within many businesses. It does not reflect adequate internal management reporting, nor external financial reporting on the

purpose of credits, joint ventures or investments. The new accounting law was approved by the National Assembly to suit the new Armenian accounting standards which based on International Accounting Standards (IAS) established by the International Accounting Standards Committee (IASC). Companies are given an option either to use new standards, to continue old one, or to apply new and old standards in parallel. However, in 1999, mandatory application was imposed on 18 state joint stock companies in infrastructure. Banking and some other regulated industries adopted IAS earlier than 1999. Since new accounting system is introduced as a voluntary basis, only few enterprises are expected to move new accounting system.

About a half of IAS documents were adopted in 1998, and a remaining half will be adopted within 1999. Unlike other CIS countries, Armenia adopts IAS documents as Armenian Accounting Standards without alteration. Training courses have been provided for current accountants, while IAS accounting will be introduced to undergraduates from 2000.

2) Audit

The audit law is also under review. Although some enterprises such as banks and joint ventures with foreign investments are subject to financial audits, the current audit practices in Armenia are not financial audits but compliance-type audits based on the statutory auditing framework of FSU. Ministry of Finance and Economy is currently establishing new auditing standards based on the International Standards on Auditing (ISA) which is established by the International Federation of Accountants (IFAC). The new audit law will require audits to regulate industries such as banks and big enterprises.

By the middle of 1999, the first audit training courses will begin and the first graduates will appear by mid 2000. Currently, international accounting firms KPMG, Grant Thornton and one local firm have the skill and ability to perform financial audits at international level.

3) Accountants' Organization

Currently, three Accountants' Organizations exist in Armenia and are in the process of merging into one organization. The object is that the Association will become the certified authority to take over the Ministry of Finance and Economy.

Currently, international accreditation courses and exams are given by the Association of Chartered Certified Accountants (ACCA) from London. The courses are being translated into Russian and will be taught throughout the CIS. The Armenian Accounting Association (AAA) will certify these courses in Russian, as of now, ACCA only accredits in English. There are three levels: as a bookkeeper, as a manager and as a CPA. Once AAA reaches the required educational level, they will become a member of IASC and IFAC. Meanwhile AAA will become an associate member.

(5) Human Resources Development

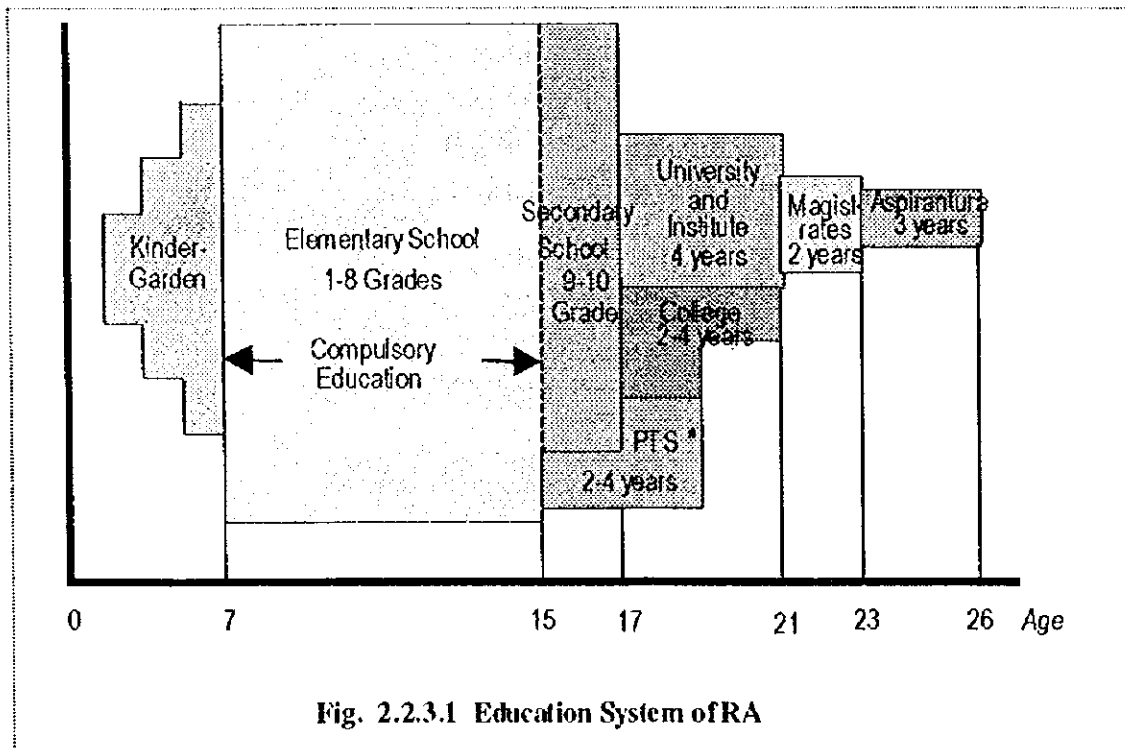
1) The General Situation

Amid harsh times for the finances of the state, the Armenian government is turning its attention towards education and has allotted 10.4% of its 1999 budget to education. However, many problems have grown from this very small budget, from the huge changes to the educational environment caused by problematic socialist economics since the breakdown of the FSU and the independence of the new republics, and further from educational reform based on these changes that has been unable to keep pace with the changing times.

These problems include, 1) a drop in the quality of education, 2) excessive numbers of teaching staff, 3) ruined school facilities, 4) revisions to the curriculum, 5) unauthorized private institutions of higher education and problems with recognition of their graduates, 6) large numbers of low quality profit-engrossed schools among the many newly established private schools, 7) existence of many professional technical schools that do not answer to the current needs of Armenia, and 8) low staff wages, lack of passion for education and greater energies being poured into part-time work.

2) The Armenian School Education System

Generally speaking, Armenia inherited its school education system from the FSU. Fig. 2.2.3.1 illustrates the structure of the education system.



(5) Human Resources Development

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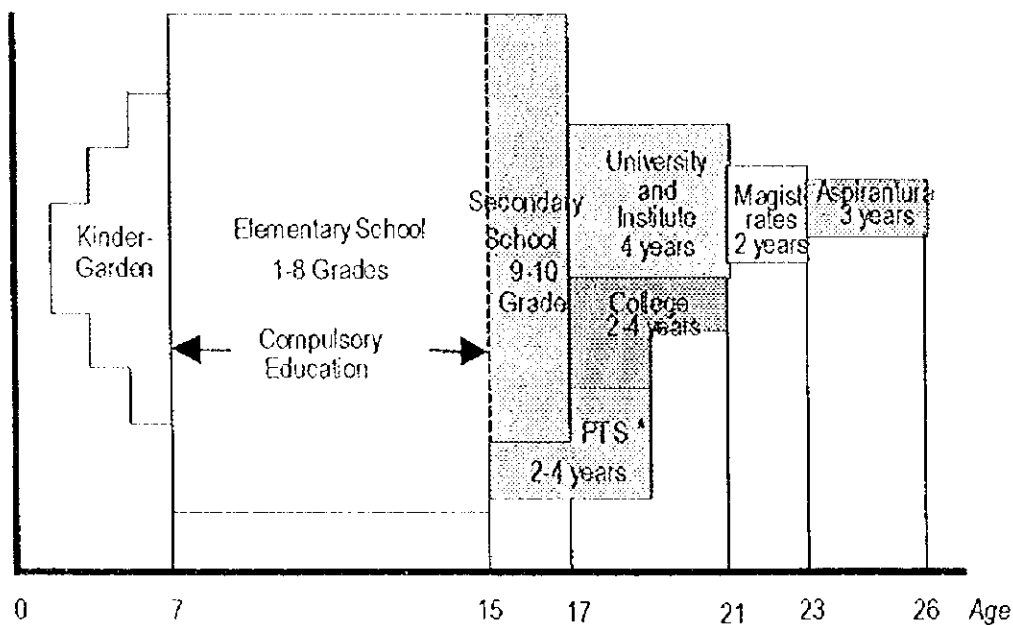


Fig. 2.2.3.1 Education System of RA

3) School/Staff Numbers and Pupil/Student Numbers

There exists no accurate data on private schools, therefore the following Table 2.2.3.3 gives data about state educational institutions run by the Ministry of Education and Science in Armenia.

Table 2.2.3.3 State Educational Institutions of RA

Number	Institution	Students	Post-graduates	Lectures	Other Employees	Students	Teacher & Employees	Children
Higher Education Institutes	15	34,812	531	2,610	8,080			
Colleges	7	843		153	403			
Technical Secondary Schools	45					4,207	3,005	
Professional Technical Schools	69					3,925	3,035	
Schools	1,399					591,265	60,181	
Boarding Schools	9						621	1,084
Special Schools	2						80	162
Orphanages	1						36	120
Kindergartens	904						8,043	64,385
TOTAL	2,451	35,655	531	2,763	8,483	599,397	75,001	65,751

(Source: Ministry of Education and Science)

What is conspicuous in the above table is the almost 1:1 ratio between the number of teaching staff and students at professional technical institutions. In the FSU era, it was the role of these institutions to supply the manufacturing industry with engineers. However, today when the manufacturing industry is in a state of fairly low operational activity, job openings for graduates are scarce, and moreover, since the technologies studied at the institutions lag behind the rest of the world, the decline in the number of applicants to the institutions is accelerating. In spite of these conditions, teaching staff numbers have not been reduced.

Staff/student ratios in compulsory elementary and secondary schools is 1:10 (1:14 in Japan), and 1:8 in kindergartens (1:13 in Japan). Thus they seem to be favorable. However, low pay has caused teachers to lose their passion for education causing the quality of education to continue to deteriorate.

The problem of surplus teaching staff can also be seen in institutions of higher education (graduate schools, universities). In these institutions the staff/student ratio is 1:3.3 (1:6 in Japan), two times that of Japan. Due to budget shortages, low wages, and insufficient research funds, the quality of education is deteriorating.

Compared to the days of the FSU, university student numbers have tended to drop in recent years.

A shift in the numbers of students in higher education institutions including private schools per population of 10,000 is shown in Table 2.2.3.4.

Table 2.2.3.4 Numbers of Students in Higher Educational Institutes
(per 10,000 population)

	1991	1993	1995	1997
Numbers of Students	181	124	97	92

(Source: CIS Statistics 1998)

The number of students attending institutions of higher education has halved in 6 years, reflecting the economic conditions. Furthermore, among the fields of study, technical courses are not popular except for computer-related subjects, and in the liberal arts, applicants focus on fields such as management and accounting. Since there are virtually no opportunities to utilize in the workplace the knowledge and skills they have learned with considerable effort, with time these skills become obsolete. So, even if they graduated from a technical department, six or seven years spent working only in commerce without any chance to work in technology means they are no longer engineers. In addition, although actual figures are not available, it is estimated that students studying abroad, including those escaping military service, are rising steadily.

While on the one hand, there is a surplus of teachers concentrated in urban areas, in rural areas the shortage of teachers is worsening. The poor condition in these rural areas is causing an outflow of labor force, including teachers, to Yerevan and abroad, and the education there is hollowing out.

In earthquake prone regions such as Gumri, there are modern primary schools set up by the US, UK and France and that operate and teach in English and French.

American University, a graduate university established in Yerevan in 1991, has an MBA course, and has successively produced manpower that has contributed to the creation of a market economy.

Private schools are single-mindedly pursuing expansion and are complementing the education of the cash-strapped state education institutions.

Table 2.2.3.5 illustrates the change in numbers of private higher education institutions.

Table 2.2.3.5 Numbers of Non-State Higher Educational Institutes in RA

	1995	1996	1997	1998
Numbers of Non-State Higher Educational Institutes	42	76	-	87

Source: CIS Statistics 1998, Ministry of Education and Science

Included in these numbers of private schools are many that are universities in name alone and whose sole purpose is profit-making whilst they lack right-minded teachers and curriculums. To

prevent students being the victims of these schools, it is vital to grasp these conditions and distinguish between adequate and inadequate institutions. Already there are tens of thousands of graduates who are currently not recognized as university graduates.

In early 1999, the Law on Education of the republic of Armenia was established. According to this law, all higher education institutions must receive authorization from the state, regardless of whether they are nationally or privately run. In the case of state schools, this comes in the form of a permit, whilst private schools are obliged to pass a screening of their qualifications. The graduation certificates of graduates from schools without such approval are not officially recognized.

Approval will be granted based on whether the educational content and standards at each institution satisfy the standards for education set down by the state, however, these educational standards are still in the process of being legislated. It is recommended that legislation be passed as soon as possible in order to improve the quality of education and to establish proper status for private institutions of higher education.

(6) Business Supporting Systems

In the CIS, Armenia is one of the countries adopting the most liberal trade and investment policies. It belongs to numerous international organizations and promotes internationalization and market-opening policies. Armenia has few systems and organizations that specifically support private sector development and private businesses, with the exception of aid programs sponsored by international organizations and donors.

1) International agreements/treaties

a) Armenia has initiated or signed tax conventions and other agreements/treaties for the avoidance of double taxation with various countries as follows:

Ratified; 6 countries: Bulgaria, China, Ukraine, Iran, Romania and Russia

Signed; 3 countries: Turkmenistan, Georgia and France

Initiated; 13 countries: Moldova, Latvia, Lithuania, Estonia, Uzbekistan, Greece, Indonesia, Cyprus, the Netherlands, Belarus, Egypt, Belgium and Kyrgyzstan

b) Armenia has signed bilateral free trade agreements with 28 countries including Russia, Ukraine, Moldova, Kyrgyzstan and Tajikistan.

c) Armenia has signed investment protection treaties with the following 16 countries:

Germany, USA, China, Greece, France, Canada, Georgia, Egypt, Iran, Cyprus, Kyrgyzstan, Romania, Turkmenistan, Ukraine, Argentina and Vietnam

d) Armenia is a member of the following international organizations and a signatory to the following multilateral agreements:

BSEC, CCC, CIS, OSCE, EBRD, ECE, IAEA, IBRD, ICAO, IDA, IFAD, ILO, IME, INTELSAT, INTERPOL, IOC, ITU, NACC, NAM, UN, UNCTAD, UNESCO, UNIDO, ESCAP, UPU, WHO, WIPO, WMO, ADB, WTuO, European Council, NATO, PFP and WTO (acts as an observer of the underlined organizations)

Armenia is making a bid to become an official member of WTO by the end of this year.

2) Trade and foreign investment promotion organizations

a) Armenian Development Agency

The Armenian Development Agency (hereinafter "ADA") was launched as a state joint stock company (investors: Ministry of Industry and Trade and Ministry of Finance and Economy) by the presidential decree no. 219, dated on April 2, 1998 following the reorganization of EDIPA. ADA was established to implement government trade and investment policies enacted by the State Investment Promotion and Protection Board headed by the Prime Minister.

ADA primarily aims at reinforcing the competitiveness of Armenian businesses at home and abroad. Specifically, ADA's major roles are; 1) formulating the republic's economic development strategy, 2) creating an environment for enhancing the competitiveness of Armenian businesses, 3) promoting and implementing development, especially advancing foreign direct investment and export projects. ADA is also expected to play a role as a "one-stop shop" for foreign investors and domestic exporters.

During the one-year period from its inauguration, ADA has actively participated in the implementation of 40 projects, including the following activities.

- Materialization of an agricultural product processing project with ANDRE Group, a Swiss international corporation
- Establishment of an international network of Armenian jewelry dealers scattered all over the world
- Implementation of UNDP's exports promotion T/A
- Implementation of the World Bank's Enterprise Support Fund (US\$1 million, export promotion, investment promotion)
- Counterpart of JICA's T/A "study on master plan for development of private sector "
- Publication of "Armenia Today", a newsletter for investors, and establishment of a home page
- Organization of investment seminars in Amsterdam, New York and other cities
- Participation in machinery trade fairs in Toronto, Marseilles and other cities
- Participation in numerous other international conferences and training sessions

- Guide books concerning investment, tax, custom, investment projects, banking & finance

Nevertheless, ADA has a severe shortage of funds and human resources, and therefore carries out these activities with only a small staff. In particular, ADA does not have experts on issues concerning international rules for investment, marketing, finance, international settlement and export. As such, it is not adequately playing a role as a "one-stop shop" for foreign investors and domestic exporters seeking the necessary, and detailed, information and data.

b) Trade Point

Trade Point has opened the home page "<http://www.tpa.am>" in offering for a charge a service that introduces Armenian enterprises' inquiries concerning purchase and sale via UNCTAD's (Switzerland) Global Trade Point Network on the Internet. Offers from abroad are being made in response to Armenian enterprises' purchase inquiries, and some enterprises use Trade Point to find foreign makers and sellers. However, Trade Point is not used for the most part because there are no responses from abroad to sale inquiries.

e) Other

- **Armenian (State) Investment Company** was established in December 1998 as an Armenian company handling the project investing in a US\$6.1 million agricultural product processing (canning) factory by Switzerland's ANDRE Group. The company has yet to specifically undertake activities.
- Besides the above-mentioned companies, there are no public organizations engaged in the promotion of export and investment.

3) Financial support system

The development of the private sector, especially the manufacturing sector, is hindered by the following factors:

- Private financial institutions in Armenia are weak
- Interest rate is high, standing between 40 to 60%
- Loans primarily consist of short-term loans
- The interest rate paid by end users of the World Bank 2-step loan program extended through private financial institutions is between 15 and 21%.

In order for the private sector to enable to compete with foreign enterprises on an equal footing under open market, it is essential that the feasibility of procuring long and short-term funds and other conditions such as cost be established on an equal footing with those offered to foreign producers.

The resolution of these problems calls for the introduction of systems that specifically support entrepreneurs and investors, including public financing and insurance schemes that have clear objectives. This issue is discussed in section 5.3.1.(5) in Chapter 5.

4) Other

For a discussion of legal systems, taxation systems, foreign investment incentives, and other matters not covered above, please refer to the relevant sections.

2.2.4. Infrastructure

(1) Geography

Armenia has a total area of 29,774 square meters and has borders with Azerbaijan, Turkey, Georgia and Iran. It has no access to the sea.

The terrain is mountainous and has almost no forests. About 20% of the land are arable and 20% is in pastures.

There are different climatic zones depending on the altitude. It is generally cold in the winter and hot in the summer. There are many varieties of plants and wildlife. There is good fertile soil in the Arax river valley.

There are problems caused by chemical pollution in some areas and the water level in Lake Sevan is declining due to hydroelectric and irrigation use.

The region is subject to earthquakes. The 1988 quake killed over 25,000 people and destroyed several industrial complexes (including power plants and water supply systems), housing and infrastructure such as roads.

(2) Transportation

Armenia has 888 kilometers of railroad with 4 international crossing points. However, only the one to Georgia works. The borders with Azerbaijan and Turkey are closed due to the blockade by them. The width of the tracks in Armenia is Russian. Turkey has the smaller European gauge. When crossing the border, the wheels of the railcars need to be changed to fit the smaller gauge.

There are 11,296 kilometers of road connecting Armenia to all neighboring states. However, only the roads to Georgia and Iran are presently in use. The Georgian ports of Poti and Batumi on the Black Sea and the Iranian port of Bandar Abbas are open for trade.

The transportation costs for imports and exports are very high and the problem is aggravated by delays at the borders and bribes on the road, especially in Georgia. Corruption among customs officials, police, and rail and port officials are reportedly the biggest impediment and greatest cost

factor.

Iran limits the use of Armenian trucks in Iran. Membership to T.I.R. will reduce the problems. Establishing a transnational transport company would also alleviate problems. Armenia's Ministry of Transport has developed a business plan that Armenia has several mid-sized ships based at the port of Poti. It aims to increase the volume of Armenian freight to the Volga and Danube rivers and raise the loading rate, in turn improving the Service Payment Balance and increasing revenues. Negotiations with involved countries are proceeding smoothly, and Armenia is aiming for a successful conclusion very soon.

Transport volume by rail is only 8% of ten years ago. Both rail and road systems need repairing, but owing to insufficient budgets many places are in poor condition. Repairs on the main road that crosses the country from north to south are proceeding quickly with help from Kerkorian funds (grant portion).

Urban transport in Yerevan relies on a subway, on trams, trolley buses, buses and mini-buses. The electric powered systems are state owned, in financial difficulties and in need of repair. The buses are mostly private and in bad physical shape. Traffic in town is not congested, but could rapidly become so with an increase of cars. Drivers lack discipline and are outright dangerous. The traffic system and layout will have to be rethought.

(3) Air transportation

Air cargo is mainly for imports. Armenian Airlines has 4 cargo planes.

Zvartnots Airport in Yerevan is a Category II international airport of International Civil Aviation Organization (ICAO) and can accommodate any current size airplane. A new cargo terminal was completed to handle 80,000 to 100,000 tons of cargo per year. This terminal is three times larger than currently needed. Tenders for exploiting the terminal have been initiated. The ground handling and Armenian Airlines are to be privatized.

Scheduled Armenian Airlines flights operate weekly between Yerevan and Amsterdam, Athens, Beirut, Delhi, Dubai, Frankfurt, Fujairah, Istanbul, Kiev, London, Moscow (daily), Paris, Sofia, Thessaloniki and Tehran. British Airways and Swiss Air operate a twice-weekly flight between Yerevan and London and between Yerevan and Zurich respectively.

(4) Telecommunications

There are about 17.7 telephones per 100 people. International calls with FSU and the rest of the worlds are both difficult and expensive. Although ATT provides high-quality international telephone service, it is more expensive than service in former socialist Eastern European countries, as Table 2.2.4.1 shows.

Table 2.2.4.1 International Telephone Tariff to Tokyo for 3 minutes
(without VAT in US Dollars)

Yerevan	Prague	Budapest	Sofia	Bucharest	Warsaw	Moscow
9.93	2.4	1.9	5.76	4.59	6.2	8.97

(Source: East Europe News Letter Vol.9 No.3 (JETRO))

The above Yerevan fees are those charged under a direct contract with ATT, and the fee for a three-minute call from a hotel is US\$13.50 (addition of the 20% VAT raises the caller's bill to US\$16.20).

ArmenTel, the Armenian Telephone Company was purchased by OTE, a Greek company with a 15-year exclusivity.

(5) Energy

The capacity of hydroelectricity is currently 85% of total capacity, whereas it was 30% in 1991. In 1991, the total annual production was 15 billion kW, of which 3 billion kW was exported. Current production and consumption are 6 billion kW. This decrease is due to the lack of industrial needs. While industrial use was formerly 60% or 7.2 billion kW, it is now less than 25% or 1.5 billion kW. Household consumption has increased. All regions of Armenia are electrified and the country has a balanced distribution network, but the large transmission losses and frequent malfunctions due to aging equipment constitute one reason for deficits of electric companies.

The power transmission system is to be revamped with financial aid from the World Bank and Japan's OECF (the latter will provide a long-term, low-interest loan of 6 billion yen).

During the Azerbaijan crisis the gas supply was cut off. Only recently some natural gas deliveries have resumed. The gas transportation and distribution network has been out of use for 6 years and is quasi impossible to repair, especially the distribution system. The population will continue to use the more expensive electric energy.

The technology of most power stations is obsolete. There is currently a reserve of 600 MW that could satisfy new industrial needs. Currently the industrial electricity rate is 17 AMD/kWh, and the residential rate is 21.8 AMD/kWh. Rates were raised 20% in January 1999.

The thermal power station at Vanadzor does not work. The Yerevan station with a capacity of 550 MW has simultaneous steam production of 250 MW. Having lost the customers for steam use, the station can no longer produce electricity in the steam/electricity units.

A 300 MW station has been under construction since 1988 in Hrazdan, but needs \$ 90 million to be completed.

There is a potential in Armenia to develop 400 MW in hydro and 15 MW in wind energy. There are also some sources of geo-thermal energy and potential areas for oil and gas exploration;

however, they all require time and money to find and exploit.

The energy sector is in the process of privatization and has been restructured. In the past there were 2 companies: Armenergo, which controlled energy from production to consumption, and Armgazprom, which controlled gas from transport to consumption.

They are now divided (restructured) into:

IPP: Independent Production Plants (self-funded)

IMT: Independent Means of Transportation

IDC: Independent Distribution Companies

Dispatch Center: Former Armenergo, contracts between each other, wholesale buyers and sellers

All of them are in the process of privatization, except nuclear technology and Armenergo. Nearly the same is happening in the gas sector.

(6) Education

See Section 2.2.3.(5) Human Resources.

(7) Tourism

Armenia was a major tourist destination for the FSU and Eastern European countries in the Soviet era. About 700,000 to 800,000 tourists visited Armenia in the late 80's. One hundred thousand of them came from countries other than the USSR. After the Soviet Union's collapse, and due to the intensification of regional conflicts, Armenia's tourism industry faced problems including a precipitous drop in tourists, the concomitant suspension of business or virtual bankruptcy of hotels, spas, and associated industries, and hefty fare increases, which worked to further decrease tourists. Since that time the number of visitors to Armenia has gradually recovered, mainly from the Diaspora and business.

In 1997, 30,000 tourists visited Armenia and in 1998, about 40,000 to 45,000 were expected. 50 % of the visitors were Diaspora, 30% were religious and historical tourists and 20% were business and other visitors.

Armenia has many tourist attractions that can be developed:

- 1,600 sites with historical, architectural or religious interest
- Mountains and natural settings for hiking, climbing, camping, skiing and horseback riding
- Lakes such as Sevan
- Located on the ancient "Great Silk Road"

Currently the infrastructure is in need of upgrading, repair and expansion. Armenia has 60 hotels with a total of 9,120 beds, but nearly all of them are state or municipally managed, with highly

inferior facilities and services that are holdovers from the Soviet era. Sale of the hotels "Armenia" and "Ani" to foreign companies in international bidding will likely be a good start and example for the normalization of Armenia's tourism industry.

Sites and monuments of architectural and historical significance need repairs, as do the roads leading to such places. This also holds for restaurants in the surrounding areas, as well as the cafes, restaurants, and other facilities along the roads.

Except for one or two slightly better companies, existing tourist agencies are not organized in a way that allows them to accommodate foreign tourists, and they are not in any condition to provide services such as tour planning.

Armenia has not a single decent tourist bus.

Immigration procedures at the airport are time consuming. A worldwide communications effort, with focus on tourist development, will be made for the major religious event, the 1700th anniversary of the first Christian nation in 2001. If Armenia can increase the number of tourists to over 100,000, and assuming that each visitor spends an average of US\$500-1,000 during his or her stay in Armenia, the tourism sector would generate 2.5 to 5% of the 1998 GDP.

To Armenia this is an important area for development because it would not only be a major source of foreign currency inflow, but also develop a variety of related industries and create employment.

2.2.5. Research and Development Institutes

Several scientific research institutes (SRIs) were located in Armenia, during Soviet era. Some were of the highest level in Soviet Union. These SRIs were run using the budget of the Soviet Union and operated for military and industrial development of the Soviet Union as a whole.

The following are some data on these SRIs in 1990.

- Number of SRIs : 256
- Number of staff employed by SRIs: 58,000
- Number of Ph.D.:820
- Number of candidates: 8,200

Such SRIs have come under the control of the Government of Armenia and are run using their budget because of the collapse of the Soviet Union. Economic confusion after independence has caused almost all SRIs to suffer from a severe lack of funds. Funds used for the operation of SRIs comes from the governmental budget, aid funds such as Soros Foundation, loyalty income or fees of entrusted research work from foreign enterprises. Annual budget including all sources is usually

around a couple of tens of thousand US dollars. Therefore, they cannot purchase new equipment necessary for research work and the payroll for scientific worker is very low (less than a hundred US dollars a month). Due to these bad economic conditions, several SRIs ceased their activities in fact.

Since most SRIs stopped hiring new researchers which was further supplemented by bad performance of the Armenian industry, young scientific researchers do not have any opportunities for jobs. Recently, there has been a decrease in number of students majoring in natural science. Further, since a lot of young bright scientists have left Armenia, majority of those remaining are aged. According to a report by the Armenian Academy of Science, average age of Ph.D. in Armenia is 71 years old and average age of candidates is 54 years old.

2.2.6. Natural Resources

Armenia has variety of metallic and non-metallic resources that were created by the volcanic and tectonic activity on the Armenian plateau in the past. The existence situation of the natural resources is summarized in Table 2.2.6.1 in the following page.

Among businesses concerning natural resources, Agarak copper and molybdenum Combinat and Kapan copper Combinat have been severely affected by the low price of raw materials in the international market and their hardships have already grown to the problems of whole Siunik region. The Government is facing the issues in relieving both Combinats from the difficulties and in restoring their sound operations. On the other hand, the full-scale production in the Zod mine out of the 3 sites gold mine joint venture project between the Armenian Government and the First Dynasty Mines of Canada will start from the third quarter of 1999. The gold production is expected to generate a substantial cash inflow into Armenia.

Table 2.2.6.1 Natural Resources existing in Armenia

	Location	Explored Deposits	Operations	Accompanying Metals
[Nonferrous/Precious Metals]				
Copper/ Molybdenum	Kadjaran	Potentiality for 100 years	Largest mining Enterprise	Gold, Silver, Rhenium, Bismuth, Selenium, etc.
Copper	Alaverdi	Copper content 12-20%	Restoration by 2000	
Copper	Kapan		30-40% Operation in 1998	Zinc, Polymetallic ores
Gold/Silver	Zod	43 mln ton Grade 7.42g/ton	Full operation in 4 th qtr., 1999	
Gold/Silver	Meghradzor	0.8 mln ton Grade 9.58g/ton	Start operations by 2001	
Lead/Zinc		Lead 1.5-3.0% Zinc 2.0-6.0%		Cadmium, Bismuth, Selenium, etc.
[Iron Ores]				
Iron Ore	Abovian	400 mln ton 28%		Rare Earth
Iron Ore	Hrazdan	150 mln ton 32%		Rare Earth
[Earth/Stone]				
Tufa, Granite, Marble Gypsum Bentonite	Parakar Sarigyugh	High quality	Construction materials Started in 1998 Composite component of fodder, fertilizers	
Perlite	Aragats/ Jzaber	156,000 m ³ High quality	Concrete Additive Filtration material	
Zeolit	Noyemberian	150-170 mln ton	Filtration material Catalyst	
Diatomite		16,000 m ³	Filtration material	
Obsidian, Agate, Jasper, etc.	Hrazdan, etc.	Insufficient exploration	Jewelry, Art works	
Salt Mineral Waters	near Yerevan Jermuk, etc. 700 springs/ wells	150-200 bln ton High quality	17% of locations studied	