

# **Chapter 6**

## **Socioeconomic Framework**

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### **6.1 Related Development Plans**

#### 6.1.1 Central Planning Policy

Since 1960, Syria embarked on eight consecutive five-year economic development plans, the last of which was completed in the year 2000. The ninth 5-year plan is reported to be under preparation. However in discussions with representatives from the ministries of industry and transportation it was explained that the government is considering preparation of short term plans instead of the five-year plans. Details on the ninth five-year plan could not be collected and relevant ministries explained that they do not have plans stretching beyond 2-3 years.

Planning on a regional basis is lacking and the Ministry of Environment has proposed a specific study for regional planning in its environmental strategy. There are some development plans but all on city basis and cover urban areas. Plans exist for the cities of Damascus, Daraa, Tartous, Lattakia and Aleppo to name a few. The Ministry of Local Government is responsible for commissioning these plans in association with related governorates.

In 1980 the development strategy up to the year 2000 was conceived. The main policy issues were:

- ⇒ Reliance on comprehensive planning
- ⇒ Determining priorities of economic projects based on market requirements
- ⇒ Considering the principle of integrated Arab economy
- ⇒ Placing importance on rural development
- ⇒ Better utilization of natural resources and improvement of operation conditions
- ⇒ Encourage private sector participation in industry sector
- ⇒ In the mining sector increase exploitation of petroleum and gas, phosphate production and iron ore

## 6.1.2 Development within the last thirty years

## (1) Demography

The population data by governorate for the years 1970 and 1997 are reviewed in Table 6.1.1.

Table 6.1.1 Population Data by Governorate

Governorate	Population (1000)		Growth rate (%)		Population density – (1997) (cap/km <sup>2</sup> )
	1970	1997	1970	1997	
1. Damascus	831	1,403	4.56	1.80	14,429
2. Damascus Rural	547	1,310	4.88	4.59	105
3. Homs	655	1,546	3.15	3.16	32
4. Hama	583	1,494	3.28	3.30	117
5. Tartous	383	759	3.18	2.19	328
6. Lattakia	467	975	2.79	2.36	346
7. Idlib	490	1,353	2.60	3.48	163
8. Aleppo	1,382	3,922	3.24	3.61	181
9. Raqqa	163	634	3.17	3.59	32
10. Deir el-Zor	337	1,056	2.84	4.36	24
11. Hassaka	352	1,079	2.87	3.31	48
12. As'sweida	202	392	3.45	2.30	51
13. Daraa	267	734	5.30	4.03	183
14. Qunaitra	13	350	3.28	4.88	29
SYRIA total	7,073	17,008	3.35	3.30	82

Source: Central Bureau of Statistics

Compared to the 1970 population, that of 1997 has more than doubled reaching 2.5 times for the whole country. By governorate, the population in the last 30 years has more than tripled in the northeastern governorates of Hassaka, Raqqa and Deir el-Zor and there appears to be more room for population growth as evident by the population densities there which are around half the average in the country as a whole. Year 1997 populations in the three neighboring governorates of Aleppo, Idlib and Hama have also increased by more than 2.5 times their respective 1970 populations, i.e. more than the national average. On the other hand, the increase in populations in Damascus, Damascus Rural, Tartous, Lattakia and Homs is less than the national average, but the population densities in the three governorates of Damascus, Lattakia and Tartous are very high.

## (2) Agriculture

Table 6.1.2 shows the structure of the gross domestic product in 30 years.

Table 6.1.2 Structure of Gross Domestic Product (at current prices) (%)

Sectors	1970	1980	1990	1995	1998
1. Agriculture	22	21	28	28	29
2. Mining and manufacturing	20	15	20	14	22
3. Building and construction	3	7	4	4	4
4. Wholesale and retail	20	25	23	26	19
5. Transport and communication	11	7	9	11	12
6. Finance and insurance	11	6	4	5	4
7. Social and personnel services	2	2	2	3	2
8. Government services	11	17	10	9	8
9. Private non-profit services	0	0	0	0	0

Source: Statistical Yearbook, 1999, Central Bureau of Statistics

Agriculture is the largest sector, contributing 29% of GDP in 1998, a share that has remained almost unchanged in the last ten years. The main agricultural crops of cereals, especially wheat, and barley have significantly increased in the last ten years, as well as the industrial crops such as tobacco and sugar beet. However less than one third of the country is cultivated because of aridity and poor soils. With the exception of the cultivated lands along the Euphrates River, approximately 80% of the agricultural land is still dependent on rain-fed sources. And rainfall variability causes fluctuations in grain production that affect the yields.

The total cultivable area is estimated at 5,988 thousand hectares (source: Central Bureau of Statistics, 1998) and that actually cultivated is 4,805 thousand hectares, or 80%. Agriculture is mainly in the hands of the private sector, with 51% of the cultivable area owned by that sector, 47% by the cooperatives and only 2% by the public sector. Since the natural conditions of climate, soil and water limit the areas suitable for agriculture there is not much room for horizontal expansion of this cultivable land. However much is being done to expand vertically through improvement of irrigation systems, soil conditions and development of crop growing regimens.

The cultivable area distributed by governorate shows that 60% of the total area is located in the three northern governorates of Hassaka, Aleppo and Raqqa. Figure 6.1.1 shows the distribution of the remaining cultivable areas by governorate. Raqqa has the largest area at 290,000 hectares followed by the four governorates of Hassaka, Aleppo, Hama and Homs with areas of between 100,000 to 150,000 hectares for each.

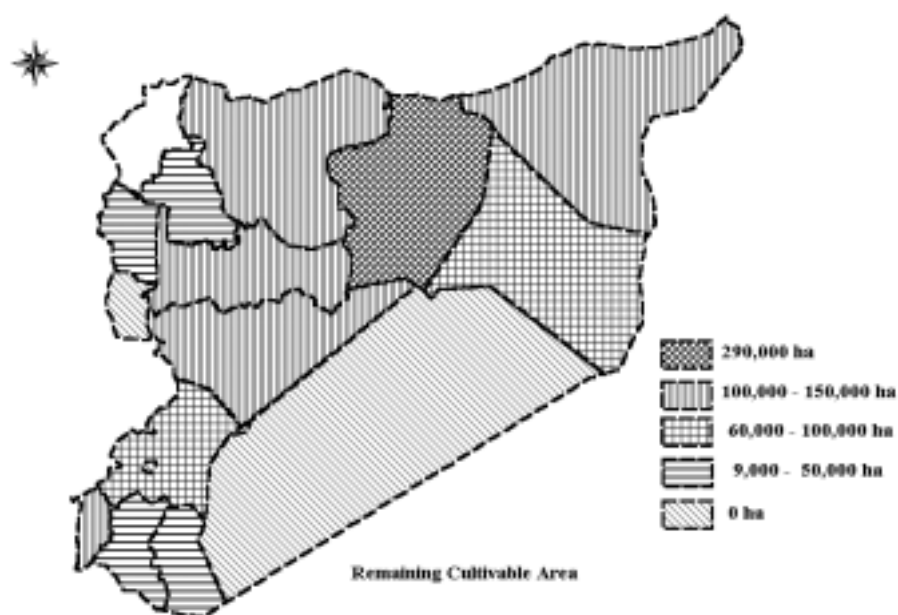


Figure 6.1.1 Cultivable Land Area by Governorate

### (3) Industry

As shown in Table 6.1.2 mining and manufacturing sector had a share of 22% of GDP in 1998. This is the highest share in the last 30 years. Many of Syria's industries are agrarian based – such as food processing and textiles. In the mid 1960's the government began a policy of rapid industrialization, especially in iron and steel and other heavy industries. This industrialization has encouraged large migration to urban areas.

Although Syria is not a major petroleum producer by Middle East standards, nevertheless petroleum presently accounts for some 40% of total exports and a petrochemical industry has developed around the main refineries. A major oilfield was discovered in the Deir el-Zor region in the mid 1980's. Two refineries located at Baniyas and Homs produced 12,221 thousand tons of petroleum products in 1999, 85% of which was consumed locally.

The public sector operates over 100 factories in Syria and its share of the industrial GDP (manufacturing, mining and oil exploitation and electricity and water supply) in 1998 was 63%, with the remainder operated by the private sector. However if the manufacturing category only was considered the private sector share would be 57% of the total. The private sector operated factories are mostly small scale with a smaller number of workers. Table 6.1.3 shows the public sector factories distributed by governorate.

Table 6.1.3 Public Sector Factories Distribution by Governorate (1998)

Governorate	Industry Sector						Total
	Cement, construction materials	Chemicals	Textiles	Sugar	Engineering goods	Food-stuffs	
Damascus & rural	2	10	8	2	9	6	37
Homs	1	1	2	1	2	1	8
Hama	2	2	2	1	1	2	10
Aleppo	4	5	6	2	3	5	25
Lattakia	1	0	2	0	3	1	7
Tartous	1	0	0	0	0	2	3
Idlib	0	0	1	1	0	1	3
Raqqqa	0	0	0	1	0	0	1
Hassaka	0	0	1	0	0	1	2
Daraa	0	2	0	0	0	1	3
As'sweida	0	1	1	0	0	1	3
Deir el-Zor	0	1	2	0	0	1	4
Total	11	22	25	8	18	22	106

Source: Ministry of Industry

The largest numbers of factories are in Damascus and Damascus Rural governorates followed by Aleppo. The urban-industrial axis of Aleppo – Hama – Homs and Damascus has the largest number of factories with about 75% of the total factories concentrated along it.

Table 6.1.4 shows the shares of each industry category for the years 1970, 1984 and 1990 from the net domestic product (NDP) of the industrial sector. Manufacturing industries fell from 80% in 1970 to 33% in 1990 as the mining and crude oil exploitation industry gained foot jumping from 13% in 1970 to 65% of the total in 1990.

Table 6.1.4 NDP shares by industry category (%)

Industry category	1970	1984	1990
Manufacturing industry	80%	46%	33%
Mining and crude oil exploitation	13%	53%	65%
Water, electricity and gas	7%	1%	2%

Source: Economic Growth Factors in Syria, 1950 – 1990, Moheib N. Saleha

### 6.1.3 Future Development Trend

In the agriculture sector it is expected that efforts will be intensified towards vertical expansion of the existing cultivated land area and horizontal expansion in the remaining cultivable

land areas, especially in the northern governorates of Raqqa, Hassaka and Aleppo. The private sector is expected to continue to play the major role followed by the cooperatives.

The industrial sector will continue to develop from an agrarian base to a mineral and petroleum base. The past practices of locating factories based primarily on ease of transport for raw materials supplies and finished products, have lead to encroachment upon agricultural lands, urban migration and environmental pollution problems near urban centers. It is expected that more attention will be paid to locations of new industries and already a law has been issued providing incentives to industries that locate in remote areas. In this sense new private sector factories may be located in remote areas. On the other hand the public sector has plans for expansion of some of its existing facilities but plans concerning new plant construction are not clear.

It is possible at this stage to make some basic forecasts for the future without going into quantified projections. If peace prevails in the region then Syria's development will be very much associated with its surrounding countries.

Under this scenario the southern governorates close to Palestine and Jordan, and those to the northeast bordering on Turkey and Iraq have a potential to rapidly develop. The southern governorates will serve as a conduit to Syria and allow the population there to grow as the military confrontation is diffused. Normal conditions will return. The northeast governorates will continue to produce raw materials and it is foreseeable that processing industries will develop there to make use of the close proximity to the raw materials producing regions and the wide land areas. Under this scenario both regions would require an improved transportation system.

The country's coastal region will continue to serve maritime transport and there is a possibility of constructing Export Free Zones most likely in Lattakia, or perhaps in Tartous or Baniyas. The improvement of the GESR Homs – Tartous – Lattakia – Aleppo line will be an area of consideration.

Finally the two cities of Damascus and Aleppo will continue to be major players. However it is hoped that the development plans set for the future protect these two historic cities from industrial pollution and urban sprawl by controlling the population growth rates there.

Based on the above description the development potential by governorate is shown in Table 6.1.5.

Table 6.1.5 Analysis of Existing Development Factors in the Syrian Governorates

Development Aspect	Damascus	Damascus Country	Aleppo	Homs	Hama	Idlib	Latakia	Tartous	Raqqqa	Hassaka	Deir el-Zor	Daraa	As'sweida	Qunaitra
1. Further population growth capability (High, Medium, Low)	L	M	M	H	M	M	L	L	H	H	H	M	H	H
2. Economic activity potential (High, Medium, Low)														
Agriculture	L	M	H	H	H	M	L	L	H	H	M	L	L	H
Industry	L	M	L	M	L	L	M	M	H	H	H	M	M	L
Mining and quarrying	L	L	L	H	M	L	L	L	H	H	H	L	L	L
Services (general)	H	H	H	H	M	M	H	M	M	L	L	M	L	L
Tourism	H	M	H	H	M	L	M	M	L	L	L	M	L	M
Export Processing Zone establishment	M	M	H	M	L	L	H	H	L	L	M	H	L	M
3. Availability of urban facilities (High, Medium, Low)														
Educational facilities	H	H	H	H	H	L	H	M	M	L	L	M	L	M
Public sanitary facilities	M	M	M	M	H	M	H	M	L	L	L	M	L	L
Recreation	M	M	M	M	M	M	H	H	M	M	L	L	L	M
4. Outside transport links														
Railway network (Connected, Indirect connection, No connection)	C	C	C	C	C	I	C	C	C	C	C	C	I	N
Road network (Highway, Main road, Secondary road)	H	H	H	H	H	M	H	H	M	S	M	M	S	S
Maritime routes (Available, NA)	NA	NA	NA	NA	NA	NA	A	A	NA	A	A	NA	NA	NA
4. Environmental conditions (Severe, Medium, Fair)														
Air pollution	S	M	S	S	S	F	M	M	F	M	M	F	F	F
Surface water pollution	S	M	M	M	M	L	H	H	M	H	H	F	F	F
Green areas encroachment	S	S	S	S	S	M	M	F	F	F	F	F	F	M
6. Natural conditions														
Climate (Severe, Fair)	F	F	F	F	F	F	F	F	S	S	S	F	F	F
Topography (Hilly, Flat)	F	F	H	F	F	H	F	F	F	F	F	F	H	H
7. Social conditions (High, Medium, Low)														
Literacy levels	H	M	H	H	H	M	H	M	M	L	L	M	L	M
Urban population	H	M	H	H	H	L	H	H	L	M	M	M	L	L
Close social fabric	M	M	H	H	M	H	L	M	L	L	L	M	L	L

Note: H; High potential, M; Medium potential and L; Low potential



## 6.2 Economic Future of Syria

### 6.2.1 Econometric Model Formulation

This econometric model is prepared to foresee the future of Syria. Data used are for the years 1989 till 1999. The prices are adjusted to 1995 constant prices using GDP deflators. Unit of population is 1,000 persons and that for money is one million Syrian Pounds unless otherwise stated. Major concern is to estimate GDP up to the year 2020. Control variable of this model is the increase rate of Government Fixed Capital Formation (referred to as “Rig”). Control to Increase of Government Fixed Capital Formulation is the “Debt”. The maximum Debt Service Ratio to Export is limited at 20%.

The model has four sectors, which are the Economic Sector, National Finance Sector, Monetary Finance Sector, and Population Sector. In the model suffix -n means n years old from that dependent variable at present.

#### (1) Economic Sector

Formulas (R square in parenthesis)

$$GDP = C+I+X-M$$

$$C = CG+CP$$

$$CG = 0.101826EX+59779 (0.845)$$

$$CP = 0.299149GDP+209567 (0.927)$$

$$I = IG+IP$$

$$IG = IG(-1)*(1+Rig)$$

*Rig = Rate of annual increase of IG*

$$IP = 0.149734GDP-36688Dummy+1337,$$

*Dummy=1 when 1997 and 1998, else Dummy=0 in other years (0.826)*

$$X = 0.00000049GDP*GDP-0.28733GDP+82968 (0.969)$$

$$M = 0.173631CG+0.248404CP-27421Dummy+104990,$$

*Dummy=1 when 1998 else Dummy=0 (0.796)*

GDP is expressed in expenditure point of view. Increase rate of Government Fixed Capital

Formation (Rig) is used as a control variable as mentioned above. Increase of IG is given by the rate of increase (Rig) of IG. Average Rig in the last decade is 1.08. In the model 1.08 is the default value.

Other variables are Private Investment (IP), Government Consumption (CG), Private Consumption (CP), Export (X), and Import (M). CG is the function of Government expenditure (EX). IP, CP and X are functions of GDP, and M is explained by CG and CP.

(2) National Finance Sector

Formulas (R square is in parentheses)

$$TAX = 0.020308GDP(-1) + 7.391813P - 7286Dummy - 58898, (0.994)$$

$$Dummy = 1 \text{ when } 1992 \text{ else } 0$$

$$GS = 3.611153P - 38864 (0.946)$$

$$VAR = 0.129163GDP + 8503 (0.953)$$

$$EX = GXO + GXD$$

$$GXO = 9.179266P - 46324 (0.909)$$

$$GXD = 0.758553REV - 38515 (0.941)$$

$$REV = TAX + GS + VAR$$

$$LG = 0.040905P + 164 (0.982)$$

Revenue of the Syrian Government (REV) consists of tax (direct and indirect, TAX), Government Services (GS) and Various Revenues (VAR). TAX is explained by GDP of the former year. GS is the function of population (P). VAR consist mainly of various surpluses and foreign donations. It fits with the GDP.

On the other hand, Government expenditure (EX) consists of ordinary expenditure (GXO) and development expenditure (GXD). GXO is explained by P, and GXD is the function of REV. Government Employees excluding Military Service (LG) is the function of Population (P).

(3) Monetary Finance Sector

Formulas

$$F = EX - REV$$

$$F = SD + LD$$

Necessary amount of borrowing (F) is the difference of EX and REV. Limit of borrowing for the short-term debt (SD) is assumed as 10% of GDP of the year in question. Deficits of F after borrowing SD are provided by the borrowing in long-term debt (LD). Repayment rule of SD is 80% of the total in the same year and 20% in the next year. Repayment schedule for LD is 10% p.a. Interest rates are 3% and 2% for SD and LD, respectively.

(4) Population Sector

Method:

- Cohort: Classified into; less than 1 year old, 2 - 4, 5 - 9, 10 - 14, 15 - 19, 20 - 24, 25 - 29, 30 - 34, 35 - 39, 40 - 44, 45 - 49, 50 - 54, 55 - 59, 60 - 64, and more than 64 years.
- Estimation Years: 2000, 2005, 2010, 2015, 2020

Method of Estimation:

- For Year 2000: Extended from 1999 population using trend between 1994 and 1999 by cohort.
- Other years:

Less than 1 year old:

Total number = Summation of cohort from 15 - 19 till 45 - 49 of (fertility rate of cohort x number of female of the cohort of five years ago) and

Number of female (male) infants = Total number of infants x infant sex ratio of female (male)

Other cohorts' population:

Number of female (male) of the Cohort = increase/decrease ratio of the cohort x number of female (male) cohort of 5 years younger

### 6.2.2 Fitness of the Model

Fitness of the model was examined by comparison of; a) forecasts between 1990 and 1998 using data of 1989, and b) actual data from 1990 to 1998. Fitness of major indicators is good as shown in Table 6.2.1.

Table 6.2.1 Fittings of the Actual Data and the Model Output (1995 Constant Price in MSP)

Item		1990	1991	1992	1993	1994	1995	1996	1997	1998	R <sup>2</sup>
GDP	(A)	389,469	420,242	476,850	501,546	539,929	570,975	612,896	628,148	677,173	0.988
	(M)	440,123	462,962	487,856	514,991	544,568	576,807	611,947	650,250	692,000	
Consumption	(A)	386,208	396,028	446,509	450,970	426,431	454,852	471,474	469,108	496,228	0.844
	(M)	485,306	497,576	510,045	522,644	535,295	547,915	560,419	613,780	594,080	
Fixed Capital Formulation	(A)	92,434	95,836	127,039	128,856	155,530	155,504	155,045	147,256	152,140	0.939
	(M)	132,020	141,755	152,190	163,333	175,181	187,722	200,936	183,566	189,042	
Government Revenue	(A)	103,074	117,626	114,003	129,193	133,774	156,913	160,125	171,059	185,443	0.991
	(M)	109,226	116,896	117,739	133,592	142,686	152,326	162,552	173,407	184,940	
Government Expenditure	(A)	89,810	114,233	119,386	149,120	153,798	162,040	166,830	177,875	201,945	0.981
	(M)	96,861	110,309	121,315	136,827	148,315	160,331	173,106	186,726	201,248	
Development Budget	(A)	35,271	36,657	46,514	74,852	72,507	74,099	81,151	91,581	101,781	0.959
	(M)	44,111	49,626	49,913	61,530	67,956	74,726	81,860	89,383	97,320	

Note: (A) Actual data, (M) Model output

### 6.2.3 Population Projection

Population was projected using the simplified cohort method. The estimation method is described in section 6.2.1. In this section, projected population is tabulated (refer to Table 6.2.2).

Table 6.2.2 Population up to 2020

(Unit: 1,000 persons)

Age Group		Increase/Decrease		2000		2005		2010		2015		2020	
From	Till	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
0	0			232	249	294	270	344	315	402	368	469	430
1	4	4.916	4.825	966	1023	1140	1202	1445	1301	1689	1521	1974	1778
5	9	1.506	1.496	1244	1309	1455	1531	1716	1799	2176	1947	2543	2276
10	14	1.100	1.104	1168	1234	1368	1445	1600	1690	1887	1986	2393	2150
15	19	0.941	0.924	943	980	1099	1141	1287	1336	1505	1562	1775	1836
20	24	0.926	0.908	748	760	874	889	1018	1035	1192	1213	1393	1418
25	29	0.976	0.978	625	636	730	744	853	870	993	1013	1163	1186
30	34	0.956	0.956	510	519	597	608	698	711	815	832	949	968
35	39	0.886	0.902	382	396	452	468	529	549	618	641	722	750
40	44	0.928	0.949	305	324	355	375	419	444	491	520	573	608
45	49	0.855	0.856	225	238	261	277	304	321	359	380	420	446
50	54	1.068	0.990	209	206	240	236	279	274	324	318	383	377
55	59	0.871	0.924	153	161	182	190	209	218	243	253	283	294
60	64	1.194	1.244	158	173	183	201	218	237	250	271	290	315
65	+	1.662	1.819	228	270	263	314	304	365	362	431	415	493
Total				8097	8478	9492	9892	11220	11466	13304	13257	15746	15324

Note: Increase/Decrease in 5 years = (number of an age group of n+5~n+9 in 1999) / (number of an age group of n~n+4 in 1994)  
Source: Statistical Abstract 1999

#### 6.2.4 Economic Projection

##### (1) Independent variable

The independent variable of this model is the rate of increase of Government Fixed Capital Formation (Rig). The actual Rig on average between 1989 and 1998 was 1.09. The Study Team assumed the maximum Rig to be 1.09. Control measure of Rig is Debt Service Ratio (DSR, sum of repayment and interest payment over export). The Study Team set the maximum limit of DSR at 0.2. Rig is controlled to keep DSR under 0.2 and Rig itself not more than 1.09. Population excluding projected years of 2000, 2005, 2010, 2015 and 2020 are estimated using the interpolate method.

##### (2) Simulation Result

Table 6.2.3 summarizes the simulation output. Export kept its high rate of increase (14.0% p.a.). GDP also maintained its high rate of increase (7.2% p.a.) led by the increase in exports, but GDP/capita showed relatively low increase rate (4.3% p.a.) because of high growth of population (3.2% p.a.). Development Budget showed a slightly high increase (8.7%) to GDP. In contrast, Import and Consumption showed stagnant growth, 3.1% and 0.7% respectively.

It is noteworthy that this econometric model reflects present economic structure such as strong import control and socialist oriented economy. Sub-article (3) of this section; a case study to loosen import control policy (excluding car import control) is discussed for reference.

Table 6.2.3 Major Output from the Model (1995 Constant Price)

Year	2000	2005	2010	2015	2020	Annual Increase 2000~2020
Population (1000psn)	16,576	19,384	22,686	26,501	31,070	1.032
GDP Output (mil SP)	817,548	1,112,026	1,560,806	2,248,509	3,312,116	1.072
GDP/Capita (SP/person)	49,321	57,368	68,800	84,846	106,601	1.043
Export (mil SP)	182,231	374,199	751,962	1,413,217	2,508,263	1.140
Import (mil SP)	229,717	255,505	267,762	328,812	422,746	1.031
Consumption (mil SP)	606,622	653,545	686,019	697,567	699,492	1.007
Government Ex- penditure (mil SP)	232,388	340,384	506,550	762,217	1,155,592	1.087
Development Budget (mil SP)	117,394	178,617	271,489	413,780	625,527	1.087

## (3) Case study to loosen control policy

Total production (equal to total consumption) of a commodity type consists of domestic production and import. In the forecast of future production and consumption (explained in Chapter 7) the Study Team projected total consumption first. Then the import as a difference of consumption and production was calculated. The case considered here is the case to approve to import goods as necessary to supply that shortage only (excluding cars). Major changes from Table 6.2.3 are shown in Table 6.2.4.

Table 6.2.4 Changes of Export, Import and Consumption by Change of Policy

(Unit: million SP in 1995 Constant Price)

Year	2000	2005	2010	2015	2020	Annual Increase 2000~2020
Export	158,442	315,757	676,315	1,294,738	2,313,427	1.146
Import	229,917	237,610	321,818	446,351	627,425	1.065
Consumption	564,049	642,813	706,525	721,378	719,722	1.012

### 6.3 Railway Development Budget

#### 6.3.1 Transport Sector Budget between 1991 and 2000

The national budget in the transportation sector for the last ten years was collected. The budget is categorized into Administration Budget and Affiliated Bodies' Budgets. In the last decade (1991 ~ 2000), as seen in Table 6.3.1, the Syrian economy suffered stagnant years during 1994 to 1996. That condition is reflected in the budgets.

The share of total expenditures for the transport sector to GDP is 1.5% and the share of railways to total transport sector is 10.2%.

Table 6.3.1 Budget of Transportation Sector (1995 Constant Price)

Organization/Year	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Transport and Communication	4569	5314	10172	7412	7837	7798	9684	15449	17073	13503
Administration Services	2258	1944	1976	2011	2402	2648	3168	3092	3092	6922
Ministry of Communication	1327	1311	1168	1373	1624	1813	2046	2193	2209	4771
Ministry of Transportation	930	632	807	638	778	835	1121	899	965	2149
Central Administration	368	98	104	91	63	120	237	209	99	117
Gen. Directorate of Air Trans.	521	474	609	461	614	619	776	576	763	1733
Gen. Directorate of Sea Trans.	38	55	90	82	95	90	103	108	96	297
Vocational Schools	2	3	3	3	4	4	4	6	6	2
Affiliated Companies	2310	3370	8196	5390	5435	5149	6516	12357	13899	14928
Petroleum Product Trans.	215	259	422	155	146	141	203	352	664	608
Crude Oil Transportation	53	53	65	57	64	88	133	168	123	213
Telecommunication	977	1167	6093	3520	3812	3162	3479	3893	5330	6124
Post	20	38	43	39	26	44	67	70	56	66
Syrian Railways	472	769	501	526	600	621	758	2255	1854	3995
Al Hejaz Railway	2	3	5	1	1	3	6	5	3	158
Syrian Air Service	26	52	44	40	81	124	737	4002	4752	682
Tartous Port	101	308	196	149	116	133	126	121	97	654
Lattakia Port	134	231	174	149	136	133	126	121	78	969
Shipping Agent	2	3	8	7	6	8	14	15	10	17
Marine Transport	40	70	152	99	7	22	21	21	4	378
Storage and Cooling	47	51	54	113	43	62	71	25	20	28
Grain Silos	67	59	218	359	295	532	716	1242	854	942
Damascus Urban Transport	60	57	49	29	24	13	12	12	12	40
Aleppo Urban Transport	37	28	16	0	6	10	8	10	7	17
Homs Urban Transport	9	14	16	9	7	8	11	8	8	16
Lattakia Urban Transport	12	25	18	8	8	4	4	17	16	18
Al Karnak for trans. and tourism	20	166	109	121	57	35	2	6	0	0
Military Trans. Establishment	6	5	4	0	0	0	0	0	0	0
Sea Transport	0	1	0	1	0	0	15	6	4	1

Note: Increase Rate is calculated from Budgets of 1000 SP unit

## 6.3.2 Share of Budgets in Government Expenditure

It is reasonable to consider that the shares of each budget to total Government Expenditure are stable. These shares are calculated and summarized in Table 6.3.2.

Table 6.3.2 Share of GESR and GEHR Budgets to Government Expenditure

(Unit: in 1995 prices, million SP)

Item/ Year	1991	1992	1993	1994	1995	1996	1997	1998
Gov't Expenditure (GE)	114,233	119,386	149,120	153,798	162,040	166,830	177,875	201,945
Syrian Railways (GESR)	472	769	501	525	600	621	758	2255
Al Hejaz Railway (GEHR)	2.7	3.8	5.5	1.6	0.5	3.3	6.7	5.1
Share of GESR in GE	0.00413	0.00644	0.00336	0.00341	0.00370	0.00372	0.00426	0.01117
Share of GEHR in GE	0.00003	0.00005	0.00001	0.00000	0.00002	0.00004	0.00003	0.00002

The regression analysis of GESR budget and Government Expenditure, and the GEHR budget and Government Expenditure result in the following outputs.

GESR (in MSP of 1995 constant price)

$$\text{GESR budget} = 6000 / (1 + 97.79165 \exp(-0.0000165 \text{Government Expenditure})), r^2 = 0.791$$

GEHR (in MSP of 1995 constant price)

No statistically assured formula was obtained due to random nature of data.

Based on the formula mentioned above, the future budget for GESR was estimated as shown in Table 6.3.3. The total GESR budget for the master plan period (2002 – 2020) is 165,469 million SP (2000 Constant Price).



Table 6.3.3 Budget Estimates of GESR

Year	1995 Constant Price, million SP.		2000 Constant Price, million SP.	
	Gov't. Expenditure	GESR Budget	Gov't. Expenditure	GESR Budget
2002	270,103	2,811	439,477	4,574
2003	291,542	3,340	474,361	5,434
2004	314,912	3,892	512,385	6,333
2005	340,384	4,426	553,830	7,201
2006	368,149	4,898	599,006	7,969
2007	398,413	5,279	648,248	8,589
2008	431,401	5,559	701,921	9,046
2009	467,358	5,748	760,425	9,353
2010	506,550	5,865	824,195	9,544
2011	549,270	5,933	893,704	9,653
2012	595,835	5,969	969,468	9,711
2013	646,591	5,986	1,052,051	9,740
2014	701,914	5,995	1,142,067	9,754
2015	762,217	5,998	1,240,184	9,759
2016	827,947	5,999	1,347,132	9,761
2017	899,593	6,000	1,463,705	9,762
2018	977,687	6,000	1,590,769	9,762
2019	1,062,809	6,000	1,729,270	9,762
2020	1,155,592	6,000	1,880,235	9,762
Total	11,818,700	104,033	19,229,906	169,269